Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012

Technical Report
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Executive summary

Background

Context. The fifth assessment report of the UN Intergovernmental Panel on Climate Change (IPCC), warns that climate change (CC) presents a growing risk to the well-being and security of humanity and the stability of the world's economy. Both mitigation (avoiding or reducing GHG emissions) and adaptation (minimising the inevitable impacts of CC on human society) are therefore essential, and are becoming an integral dimension of Switzerland's official development assistance (ODA). There is growing acceptance in the international development sector that progress made towards fulfilling the Millennium Development Goals (MDGs) is unsustainable without effective action on CC. Swiss International Cooperation in CC has, during the past decades, contributed to CC mitigation and adaptation through a considerable number of diverse and innovative global projects and interventions. In light of this increasing engagement in climate action, it is timely to assess the effectiveness and results of Switzerland's international activities in CC.

Purpose. This *Report on Effectiveness* (RoE 2014) assesses the Swiss ODA/CC portfolio in the years 2000-2012, in terms of its results and overall effectiveness. The report assesses the mitigation and adaptation effectiveness of the climate-relevant projects implemented as part of the CC portfolio, and analyses changes in portfolio-wide effectiveness over time. The report aims to provide the portfolio's designers, managers and ultimate financiers (i.e. Swiss tax-payers and their parliamentary representatives), with an accountable and transparent assessment of the projects undertaken using public funds. The RoE 2014 also accounts for the use of additional funding for CC-relevant interventions based on the 2011 Parliamentary Bill with the aim of raising Swiss ODA contributions to 0.5% of gross national income (GNI), with some of this additional funding being classified as Fast Start Financing (FSF) under the United Nations Framework Convention on Climate Change (UNFCCC). The RoE 2014 is presented in two forms: (a) a Technical Report in which the data and analysis of the portfolio results and effectiveness are presented; and (b) a Public Report designed to communicate evidence-based result statements to the target and more general audience.

Methodology. The methods used to produce the RoE 2014 comprised: (a) portfolio appraisal, which provides an evaluation of all the projects for which sufficient information and data was available (classified by specific themes, i.e. by the groups of projects defined by their common approaches to mitigation and adaptation outcomes); (b) detailed investigations, including interviews with knowledge holders, of 30 projects during field visits to six countries (Nepal, South Africa, Perú, Mongolia, Serbia and Albania), desk studies of six projects in Vietnam (with interviews), and desk studies of 25 additional projects selected to ensure balanced coverage across the various themes and modalities within the portfolio; and (c) analysis of the full portfolio by theme, and to determine adaptation and/or mitigation effectiveness scores for the 423 projects (covering 83% of all projects within the portfolio and at CHF 1.32 billion 92% of the total budget) with the aim of identifying results and estimating the overall effectiveness of each thematic approach and of the portfolio in general, both as a whole and to compare its 2000-2006 and 2007-2012 parts.

Content. Following the introductory chapter, Chapter 2 presents a brief account of the methods used, including the connection in our approach with the Result Chain (RC) framework in the ToR, while Chapter 3 provides the main findings on the nature and effectiveness of the CC-relevant portfolio. Here a thematic approach is taken in response to the main aims and approaches identified within the portfolio, with the main themes being: CC mitigation through renewable energy and energy efficiency, cleaner production, and ecosystem management; and CC adaptation through risk management, the strengthening of ecosystems and societies, and knowledge management. A final section in Chapter 3 addresses the issue of contributions to international organisations, with attention to the aims, capacities and reputations of the institutions involved. The analytical approach combines thematic descriptions of each part of the portfolio with illustrative case studies and evidence in the form of effectiveness scores for each project and contribution where these could be defensibly obtained. Chapter 4 presents key CC results from the assessment and reviews large-scale patterns in effectiveness across the portfolio. Chapter 5 presents findings on the FSF portfolio, and is designed to be read as a stand-alone document since it may be of particular interest to parliamentarians concerned with the results obtained through additional funding released by the 0.5% Bill. Chapters 3 and 5 include case studies from the CC portfolio highlighting for each section relevant projects,

making statements of key CC results, reasons for high or low effectiveness and lessons learned. Chapter 6 presents conclusions and lessons learned from the study as a whole.

Key findings and conclusions

Concrete CC results

Although quantitative data on mitigation and adaptation is scarce within the portfolio's documentation, among the 61 projects that were reviewed in depth a number of concrete results can be discerned. While such a small sample of results is hardly representative of the portfolio as a whole, these findings do shed important light on what could be documented if all 508 projects were subjected to the same level of investigation, and also what could be achieved with a more systematic emphasis on baselines and monitoring, reporting and verification (MRV) in future. Among the 61 projects that were reviewed in depth, the following concrete results were found in thematic sectors.

- **Mitigation through renewable energy (RE) and energy efficiency (EE) in the Balkans**, which by rehabilitating hydropower, improving energy efficiency and promoting renewables led to reduced imports of electricity (from countries that use fossil fuels to generate it), increased power reliability (thus avoiding GHG emissions from generators), and reduced emissions from domestic thermal power plants.
- **Mitigation through cleaner production in Perú, South Africa and Vietnam**, which in Vietnam resulted in savings among partner companies of 7% in electricity, 7-20% in various kinds of fossil fuel, 18% in water and 25% in chemicals, and in Perú and South Africa led to tens of thousands of tonnes per year in reduced GHG emissions by audited companies.
- **Mitigation and adaptation through ecosystem management**, which used multi-stakeholder forest management, REDD+, biotrade-based conservation and organic farming to generate mitigation gains (and, often, adaptation ones), for example in Vietnam by increasing the land area of FSC-certified forests by over 60% while also strengthening livelihoods, and in Mongolia by generating and distributing knowledge about how graziers can access financing to reward conservation of soil carbon and reversal of grassland degradation.
- **Adaptation through risk management**, which is providing real benefits to large numbers of people in places that include Tajikistan, Haiti, Mongolia and China through disaster risk reduction planning, early warning and insurance, including the exemplary development and hand-over of monitoring and early warning systems for glacier lake outburst floods that are a serious CC-related risk in some mountain areas.
- **Adaptation through knowledge management** and by mainstreaming CC into decision making, which through demonstration projects and knowledge sharing at community, local government and central government levels led to strengthened CC adaptive capacity and resilience (and replication and leverage effects) in many economic sectors in Perú, China and India.
- **Adaptation and mitigation through institutional contributions**, in which Swiss contributions to multilateral institutions show high overall effectiveness (both for mitigation and adaptation), including those to the Forest Carbon Partnership Facility, the Partnership for Market Readiness and the UNFCCC Adaptation Fund (in relation to which we note that strong Swiss support for CC adaptation in developing countries is unusual among donors).
- **Adaptation and mitigation synergies**, which project designers sometimes explicitly sought, for example through community-based forest management in four of Nepal's poorest districts, thereby improving the extent, sustainability, livelihood utility and protective functions of forests, and in Mongolia and Bangladesh where a similar approach was applied to grasslands and agroforests respectively.

Other key findings and conclusions on CC effectiveness based on the portfolio review as a whole are presented in the summary table below. In this review, the largest number of projects (n = 198) were scored as moderately effective, and this holds for both mitigation (46% of CC mitigation-relevant budget) and adaptation (52% of CC adaptation-relevant budget). Most of the rest were scored as strongly or very strongly effective, with about 20% and 20-25% of the total budget respectively, and again this holds for both mitigation (n = 114) and adaptation (n = 121) projects. Few projects (n = 44), accounting for approximately 10% of total budget, showed weak, very weak or no effectiveness.

The CC effectiveness of the portfolio and reasons for high/low effectiveness

The key findings and conclusions on CC effectiveness are presented in the summary table below.

Key findings	**Conclusions**
1. The 423 projects assessed here as a whole show moderate to strong overall effectiveness (making use of a seven-point scale where a score of '1' was given to projects with no CC effectiveness at all and a score of '7' was given to those with extremely strong CC effectiveness). This finding was equally applicable to CC mitigation, CC adaptation, and to the strengthening of enabling frameworks for CC action in developing countries.	**The finding of moderate to strong overall CC effectiveness implies that public funds allocated to CC action in developing countries have in general been used in an effective manner**, and have produced results that support low-carbon and climate-resilient development in partner countries.
2. CC effectiveness has improved over time as illustrated by a comparison of the 2000-2006 and 2007-2012 parts of the CC portfolio. Although exceptions were found among the 61 projects reviewed in depth, this positive trend holds overall for both adaptation and mitigation although it is more marked for adaptation.	**The finding of improving CC effectiveness implies institutional learning and may reflect the increasing policy priority given to CC.** A more marked improvement in adaptation effectiveness presumably reflects a steeper learning curve as adaptation has moved up the policy agenda with the acceptance of the inevitability and consequences of CC, and the trend is expected to continue within the FSF portfolio (2010-2012) which strongly emphasises adaptation.
3. The in-depth review of 61 projects sought evidence for both CC effectiveness and CC design quality, and found a correlation between the extent to which CC was considered in project design and the later strength of projects' CC effectiveness. Comparing the 2000-2006 with the 2007-2012 parts of the portfolio, there is a clear increase over time in the extent to which CC was considered in project design.	**The finding of improving project design is consistent with the hypothesis that greater attention to CC aspects has been required at SDC and SECO,** as a result of increased priority being given to CC and the introduction of the OECD-DAC Rio Climate Markers over the same period.
4. **The FSF portfolio of about CHF 140 million was built strongly around projects already in the pipeline and existing interventions,** with the aim of allowing timely and effective implementation and with potential for up-scaling.	Based on the types of interventions within the FSF portfolio (and a comparison of the effectiveness of similar interventions in the total portfolio), a strong emphasis on adaptation and global (multi-bi) initiatives, and CC mainstreaming efforts making use of the Climate, Environment and Disaster Risk Reduction Integration Guidance (CEDRIG) tool by SDC, **the FSF portfolio is expected to show strong CC effectiveness when it is assessed in future.**

5. Thematic groups of projects with particularly strong scores for mitigation effectiveness were found to include: projects that targeted the rehabilitation of hydropower systems, the promotion of diverse and locally-appropriate RE systems (small hydro, wind, biomass, etc.), the rehabilitation of power systems with direct EE benefits and enabling impacts for RE promotion, the strengthening of MRV capacity and carbon market readiness, the use of knowledge sharing among cities and companies, the rehabilitation and re-deployment of used Swiss trams to other countries, the promotion of cleaner production (especially through a combined approach involving knowledge sharing, green credit facilities and risk management in collaboration with UNIDO and IFC), and the safe disposal of environmentally damaging wastes (ozone depleting substances and e-wastes).	**Effective mitigation projects tend to be ones that**: (a) minimise new GHG emissions by avoiding new construction or by re-using facilities and equipment in which GHG emission costs have already been incurred; (b) build strategic capacity to manage and share knowledge and to leverage change by exploiting new opportunities created by mitigation investments; and (c) join together complementary initiatives in a structured way to promote synergy and long-term change.
6. Thematic groups of projects with particularly strong scores for adaptation effectiveness were found to include: projects that targeted disaster risk reduction through protection against specific threats (including early-warning systems), disaster risk insurance at all levels from inter-governmental risk sharing to micro-insurance for small-scale farmers and microcredit borrowers, the strengthening of knowledge bases for adaptation planning and decision making, the establishment of networks to promote the flow of knowledge about potential adaptation solutions, the promotion of ecosystem-based approaches with local participation, water resources management, physical and institutional rehabilitation of water systems, and payment for ecosystem services	**Effective adaptation projects tend to be ones that**: (a) promote the reduction or sharing of disaster risk; (b) promote the management and sharing of knowledge on vulnerabilities and adaptation solutions; and (c) reward the sustainable management of ecosystems and ecosystem goods and services through local empowerment and financial rewards.
7. Thematic groups of projects with particularly strong scores for both CC adaptation and mitigation effectiveness were found to include: projects that targeted the promotion of multi-stakeholder forest management, that enabled key REDD+ initiatives, that promoted desertification-resistant grassland management and livelihood diversification, organic farming (including certification, links to Swiss markets, and trade financing during financial crises), CC-informed policy dialogue and policy development, knowledge sharing on local coping strategies, local empowerment, and comparative research, or that involved contributions to highly effective organisations, research, charitable, financial and UN institutions.	**Projects with both adaptation and mitigation effectiveness tend to be ones that**: (a) leverage investments in the conservation of forest, grassland and soil ecosystems; (b) promote the flow of knowledge into policy development processes; and (c) offer core funding to allow selected, effective, institutions to improve the programming of their CC-related activities.
8. Thematic groups of projects with particularly weak scores for CC adaptation and mitigation effectiveness were found to include those with: poor awareness and communication of CC impacts; a lack of	**Active screening and testing through logical framework formulation and sensitivity analysis against clear CC-related**

attention to the social and institutional underpinnings of public and private services for the delivery of water and power; a lack of CC-related criteria for cultivar selection; inappropriate choice of biotrade targets; and a focus irrelevant to climate change.	**objectives can help minimise the share of ineffective CC projects** and strengthen systematic learning of lessons.

Lessons learned

Swiss added value. Project reviews, field missions and interviews consistently revealed a general appreciation of Swiss technical competence in their chosen fields of intervention and a satisfaction over the timeliness of aid delivery. The assessment notes a number of specific areas where Swiss CC expertise is particularly appreciated by developing country partners and where Swiss inputs could provide particular added value in meeting future CC challenges. Thus, Swiss technical expertise in areas such as renewable energy (in particular hydropower), disaster risk reduction through early warning and protection against specific threats, disaster risk insurance at all levels, and engaging business in CC and ecosystem management, all provide opportunities to develop and up-scale very strong CC effectiveness. With regard to thematic expertise, several interventions also revealed important opportunities to harness synergies between mitigation and adaptation more systematically. For example, Swiss-funded interventions in hydropower have the potential to combine mitigation with adaptation benefits through improved dam safety and management of water resources that responds to changes in CC risk profiles. Several interventions in the areas of ecosystem management and livelihood strengthening have the potential to achieve both mitigation and adaptation benefits more systematically, without administrative overload. The portfolio also contains a large volume of contributions to international organisations showing overall strong mitigation effectiveness, and moderate to strong adaptation effectiveness, and these are particularly valued by the beneficiaries.

Insufficient quantitative data to support reliable aggregations. Multiple lines of evidence were used to support the aggregate results statements above, but quantitative data on GHG emission reductions and adaptation benefits remain scarce overall. In the case of emissions, this is because few data were collected and baselines were seldom defined. In the case of adaptation, this is because no agreed international standards for measurement yet exist. This conclusion is based on our in-depth reviews of 61 projects, which covered global and regional interventions as well as projects in Azerbaijan, Bangladesh, China, Ethiopia, Ghana, Haiti, India, Mozambique, Nicaragua, Niger, Tajikistan and Vietnam. It is further confirmed by findings from field missions to projects in Albania, Mongolia, Nepal, Perú, Serbia and South Africa, although in all six places there were some early signs of improved CC-specific baseline formulation, indicators and monitoring procedures as well as the reporting of CC-relevant results. However, in light of the general weakness in data availability, consolidated quantitative assessment of RE or EE achievements and emission mitigation results (in tonnes of CO_2e) is not currently possible at a portfolio level.

Coordination and mainstreaming potential. Combining the findings from this assessment with our knowledge of other donor agencies suggests that better coordination and CC mainstreaming within and between SDC and SECO can contribute to strengthened CC effectiveness, while also allowing for improved knowledge management and synergy in the CC portfolio. This would also serve developing country partners in strengthening their MRV capacity, which is critical in accessing international climate finance and integrating CC into national and local development strategies and actions. Several developing country stakeholders expressed during the assessment their appreciation of Swiss efforts in this latter area, an aspect which will be of increasing importance given that all countries (including developing countries) are expected to sign up to a binding climate commitment at the 21st UNFCCC Conference of the Parties (CoP21) in December 2015.

Acronyms & abbreviations

AAD	Adaptation against disasters
ACD	Assistant Country Director
AfDB	African Development Bank
ADFO	Assistant District Forest Officer (Nepal)
AdMit	Adaptation to and/or mitigation of climate change
ADRB	Association pour le Développement Rural du Batha (Chad)
AEM	Applied ecology for mitigation
AF	Adaptation Fund
AFIP	Agro-Forestry Improvement Partnership (Bangladesh)
APIDEL	Association pour la Promotion des Initiatives de Développement Locales
AsDB	Asian Development Bank
ATM	Applied technology for mitigation
AWF	African Wildlife Foundation
BAWI	Swiss Federal Office for Economic Affairs
BEDE	Biodiversité: Échanges et Diffusion d'Experiénces
CABI	Commonwealth Agricultural Bureaux International (former name)
CAMP	Central Asian Mountain Partnership
CBA	Cost-benefit analysis
CBM	Capacity building for mitigation
CC	Climate change
CCA	Climate Change Adaptation
CCM	Climate Change Mitigation
CDM	Clean Development Mechanism
CEDRIG	Climate Environment DRR Integration Guidance
CER	Certified emission reduction
CFA	Carbon Finance Assist
CFC	Chlorofluorocarbon
CFU	Carbon Finance Unit (of the World Bank)
CGIAR	Consultative Group on International Agricultural Research (former name)
CH	Confoederatio Helvetica (Swiss Confederation, Switzerland)
CHF	Swiss Franc
CIFOR	Centre for International Forestry Research
CIMMYT	International Maize and Wheat Improvement Centre
CO2	Carbon dioxide
CODEP	Coping with desertification project, Mongolia
CoP	Conference of the Parties

CPC	Cleaner production centre
CRMG	Commodity Risk Management Group
CTV	Centro Terra Viva (Mozambique)
CYS	Chetan Yuwa Samuh (Nepal)
DAC	Development Assistance Committee
DADO	District Agricultural Development Office (Nepal)
DCD	Deputy Country Director
DEM	Digital elevation model
DFID	UK Department for International Development
DFO	District Forest Office (Nepal)
DRCRP	The Drin River Cascade Rehabilitation Project (Albania)
DRI	Disaster risk insurance
DRR	Disaster risk reduction
EAR	European Agency for Reconstruction
e.g.	'exempli gratia', meaning 'for example'
EDI	Energising Development Initiative
EE	Energy efficiency
ENDA	Environnement et Développement du Tiers - Monde
ESCO	Energy service company (China)
ESRM	Environmental and social risk management
ETA	Education & training for adaptation
ETM	Education & training for mitigation
FCPF	Forest Carbon Partnership Facility
FDFA	Federal Department of Foreign Affairs
FECOFUN	Federation of Community Forest Users of Nepal
FI	Faitrade International
FOEN	Swiss Federal Office for the Environment
FSC	Forest Stewardship Council
FSF	Fast Start Financing
GCF	Green Climate Fund
GCOS	Global Climate Observing System
GCTF	Green Credit Trust Fund
GDP	Gross domestic product
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System
GEP	Global Environment Program
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GLOF	Glacier Lake Outburst Flood
GNI	Gross national income
GoN	Government of Nepal
GPCC	SDC Global Program Climate Chance

GWP	Global Water Partnership
i.e.	'id est', meaning 'that is'
ICIMOD	International Centre for Integrated Mountain Development
ICRAF	World Agroforestry Centre
IDB	Inter-American Development Bank
IEG	Independent Evaluation Group (of the World Bank)
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFI	International financial institution
IGES	Institute for Global Environmental Strategies
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
IIWEE	International Institute for Water and Environmental Engineering
INGO	International non-governmental organisation
IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated pest management
IRHA	International Rainwater Harvesting Alliance
ITTO	International Tropical Timber Organisation
IUCN	International Union for Conservation of Nature
JI	Joint Implementation
KESH	The Albanian Energy Corporation
KFA	Knowledge for adaptation
KfW	Kreditanstalt für Wiederaufbau
LDC	Least Developed Country
LULUCF	Land use, land-use change and forestry
MDG	Millennium Development Goals
MG	Management Group
MIC	Middle Income Country
MIE	Multilateral Implementing Entity (of the Adaptation Fund)
MIGA	Multilateral Investment Guarantee Agency
MOA	Mainstreaming of adaptation
MODEL	l'Association de Mobilisation de la Base pour le Développement Durable du Bassin du Logone (Chad)
MOM	Mainstreaming of mitigation
MPS	Mountain Partnership Secretariat
MRC	Mekong River Commission
MRV	Monitoring, reporting and verification
MSFP	Multi Stakeholders Forestry Programme (Nepal)
NAPA	National Adaptation Programme of Action
NCPC	National Cleaner Production Centre
NEA	Nepal Electricity Authority
NEG	Non-earmarked grant
NGO	Non-governmental organisation (typically a charity)

NIE	National Implementing Entity (of the Adaptation Fund)
NMM	New Market Mechanism
NOAA	National Oceanic and Atmospheric Administration (USA)
ODA	Official development assistance
ODS	Ozone depleting substances
OECD	Organisation for Economic Cooperation and Development
OST	Transmission System Operator (Serbia)
PDR	People's Democratic Republic
PES	Payment for ecosystem services
PIDG	Private Infrastructure Development Group
PIU	Project Implementation Unit
PLAFICO	FOEN, SECO and SDC coordination platform on international cooperation and environmental issues
PMR	Partnership for Market Readiness
PMU	Project/programme management unit
PROFOR	Programme on Forests
PTDP	Power Transmission and Distribution Rehabilitation Project (Albania)
RBM	Result Based Management
RC	Result Chain
RE	Renewable energy
RECOFT	Regional Community Forestry Training Centre
REDD+	Reduced (GHG) emissions from deforestation and (forest) degradation, with sustainability safeguards
REEEP	Renewable Energy and Energy Efficiency Partnership
RFA	Resilience for adaptation
RG	Reference Group
RIE	Regional Implementing Entity (of the Adaptation Fund)
RIM	Regulations & incentives for mitigation
RMA	Research & monitoring for adaptation
RMM	Research & monitoring for mitigation
RoE	Report on Effectiveness
RRI	Rights and Resources Initiative
RSB	Roundtable on Sustainable Biomaterials
SADC	Southern African Development Community
SAP	Data Management System used by SDC and SECO
SCG	South Centre Genève
SDC	Swiss Agency for Development and Cooperation
SECE CRIF	South East Europe and Caucasus Catastrophe Risk Insurance Facility
SECO	State Secretariat for Economic Affairs
SFDCC	Strategic Framework on Development and Climate Change (of the World Bank)

SFOE	Swiss Federal Office of Energy
SIDS	Small Island Developing State
SPOC	Single Person of Contact
SSMP	Sustainable Soil Management Program (Nepal)
tCO2e	Tonne of carbon dioxide equivalent
ToR	Terms of Reference
UKCIP	UK Climate Impacts Programme
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organisation
UNISDR	United Nations International Strategy for Disaster Reduction
WBG	World Bank Group
WMO	World Meteorological Organisation
WOCAT	World Overview of Conservation Approaches and Technologies
WRI	World Resources Institute
WRM	Water resources management
WTO	World Trade Organisation
WWF	World Wildlife Fund/World Wide Fund for Nature (former name)

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1. Introduction

1.1 Swiss International Cooperation in CC

The Swiss Federal Constitution commits the country to the promotion of sustainable development and the protection of natural resources as being inherent to alleviating poverty throughout the world. Since the early 1990s, Switzerland has supported international climate action by integrating low carbon development and climate resilience into its development assistance, which has included dedicated multilateral climate funds and specific multilateral and bilateral climate programmes.

Switzerland's three federal agencies with specific roles and dedicated budgets for international cooperation on climate change (CC) – the Swiss Agency for Development and Cooperation (SDC), the state Secretariat for Economic Affairs (SECO) and the Federal Office for the Environment (FOEN) – cooperate closely on adaptation and mitigation activities in developing countries and countries in transition. In 2012, the three agencies began coordinating their activities in a joint platform, made structural adjustments to enable a better response to the challenges of CC and strengthened cooperation with stakeholders.

SDC is supporting global, regional and national CC projects and initiatives and contributes to specialized international climate funds. SDC manages approximately 57% of the Swiss international Official Development Assistance (ODA) funds specific to CC, and supports innovative actions, policy development, knowledge generation and sharing, and climate-relevant disaster risk management.

Since 1992, SECO has partnered with development banks and other specializedorganisations to pioneer innovative projects and technology transfer in the field of CC. Informed by the rich experience of Swiss research institutions and technology suppliers, SECO promotes environmentally sound technologies. SECO manages approximately 31% of the Swiss international ODA funds specific to CC.

As the agency responsible for national and international CC policies and measures, FOEN leads the Swiss participation in the multilateral CC negotiations, and is particularly engaged in policies related to climate finance architecture, innovative sources of funding, resource mobilization strategy and measurable, reportable and verifiable systems of support. In addition, FOEN is responsible for the Swiss contribution to GEF, and manages approximately 12% of the Swiss international ODA funds specific to CC.

The ultimate goal of all Swiss development assistance is poverty reduction. In its Sixth National Communication to the UNFCCC, Switzerland acknowledges the difficulty of determining the exact amount of ODA funding relevant to CC. It reports significant increases in total ODA: CHF 2.4 billion in 2010; CHF 2.7 billion in 2011; and CHF 2.8 billion in 2012.[1] The Swiss Parliament has sought to increase the level of ODA as a percentage of gross national income (GNI), partly in recognition of the country's commitment to UNFCCC Fast-Start Financing (FSF). These additional FSF resources went to SDC to expand its climate-related technical cooperation and financial assistance for developing countries, and to SECO to expand its support for economic, investment and trade policy measures in the context of CC and development cooperation. The Swiss private sector also contributes to climate finance through the export of clean technology. Efforts are currently underway to quantify these private climate finance flows, and initial studies suggest that the amounts are substantial.

The recent peer review conducted by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) recognises the high quality of Switzerland's ODA and refers to the positive influence of Switzerland's global programmes within diverse international forums, including those relevant to the CC response[2].

Switzerland maintains multiple partnerships at the multilateral, national and local levels, and within its bilateral development cooperation supports activities in mitigation and adaptation in a number of partner and priority countries and regions.[3] In its participation in international CC activities,

[1] Sixth National Communication to the UNFCCC
http://www.bafu.admin.ch/climatereporting/00551/13139/index.html?lang=en
[2] OECD/DAC peer review, December 2013
http://www.sdc.admin.ch/en/Home/News/Close_up?itemID=228601
[3] Seco partner countries: http://www.seco-cooperation.admin.ch/laender/index.html?lang=en and SDC priority countries http://www.sdc.admin.ch/en/Home/Countries

Switzerland advocates coherence in policy development and implementation, and promotes synergistic strategies with multiple benefits.

1.2 Scope and objectives of the report on effectiveness

As described in the Terms of Reference (ToR, Annex 13) and the Gaia consortium *Inception Repor*t of September 2013 (Annex 12), the purpose of the Report on Effectiveness (RoE 2014) is to assess the SDC/SECO CC portfolio[4] in the years 2000-2012, in terms of: (a) its overall effectiveness; (b) patterns of mitigation and adaptation effectiveness associated with different approaches among the 508 individual interventions that comprise the portfolio; and (c) changes in portfolio-wide effectiveness over time. This is intended to contribute to accountability of the portfolio's designers and managers to its ultimate financiers, i.e. Swiss tax-payers and their representatives within Parliament, which therefore comprise the target audience of the enterprise. The second objective of this study is to account for the use of additional funding for CC-relevant interventions based on the 2011 Parliamentary Bill with the aim to raise Swiss ODA contributions to 0.5% of GNI, and this funding being classified as FSF under the UNFCCC Copenhagen Accord.

It is important to highlight that the focus here is on assessing the CC effectiveness of the Swiss aid portfolio, rather than its achievements in relation to poverty alleviation which have been scrutinized in several other studies (such as the most recent OECD/DAC peer review). Its findings on CC effectiveness cannot therefore be taken to imply anything with regard to the over-arching poverty reduction objectives of all Swiss ODA.

Effectiveness is usually understood to mean the achievement of results that further progress towards achieving an activity's specific purpose, but it can also be defined as the extent to which outputs (the consequences of inputs) and outcomes (the consequences of outputs) help to meet objectives. The ToR present a Result Chain (RC) framework that focuses on the conceptual links between outputs and what they call immediate and intermediate outcomes. Several other CC mitigation/adaptation evaluation frameworks have been developed by others, including UNDP, the UNFCCC Secretariat, the GEF Secretariat, IIED, GIZ, WRI, UKCIP and academic groups such as those associated with the Institute for Development Studies at Sussex and the Environmental Change Institute at Oxford. While important progress has been made in recent years, numerous questions on definitions and functional linkages remain unanswered, in particular in the area of adaptation, where the kinds of intervention that might enhance adaptation under certain circumstances remain extremely diverse[5].

Moreover, the geographical distribution of the portfolio is very broad (Figure 1), implying an extremely diverse set of local and regional socioeconomic, ecological and cultural circumstances to which its constituent projects have to relate, while the fact that a large part of the portfolio comprises grants to multilateral and other organisations adds a major set of institutional effectiveness issues to the mix. Also the time perspective covered by this assessment (with a focus on 2000-2012 but with several projects starting before 2000, and others in 2012) adds a further dimension to the assessment.

Understanding effectiveness across the SDC/SECO portfolio was not, therefore, without its methodological challenges, and our response to them is described in Chapter 2, including the connection in our approach with the Result Chain (RC) framework in the ToR. Chapter 3 provides the main findings on the nature and effectiveness of the CC-relevant portfolio. Here a thematic approach is taken in response to the main aims and approaches identified within the portfolio, with the main themes being: CC mitigation through renewable energy and energy efficiency, cleaner production, and ecosystem management; and CC adaptation through risk management, the strengthening of ecosystems and societies, and knowledge management. A final section in Chapter 3 addresses the issue of contributions to international organisations, with attention to the aims, capacities and reputations of the institutions involved. The analytical approach combines thematic descriptions of each part of the portfolio with illustrative case studies and evidence in the form of effectiveness scores for each project and contribution where these could be defensibly obtained. Chapter 4 presents key results from the assessment and reviews large-scale patterns in effectiveness across the portfolio.

[4] As per the ToR, FOEN climate portfolio is not included in the analysis of the RoE 2014

[5] See for example: Guidance note 1: Twelve reasons why climate change adaptation M&E is challenging (Bours, D., McGinn, C. and Pringle, P. 2013. Monitoring & evaluation for climate change adaptation: A synthesis of tools, frameworks and approaches. SEA Change CoP, Phnom Penh and UKCIP, Oxford).

Chapter 5 describes and presents findings on the FSF portfolio, and this is designed to be read as a stand-alone document since it may be of particular interest to parliamentarians concerned with the results obtained through additional funding released by the 0.5% Bill. Chapters 3 and 5 include 24 brief case studies on projects that were studied in depth and that are relevant to each topic, clarifying key CC results, reasons for high or low effectiveness, and lessons learned. Chapter 6 presents conclusions from the study as a whole. The RoE 2014 concludes with fourteen technical annexes.

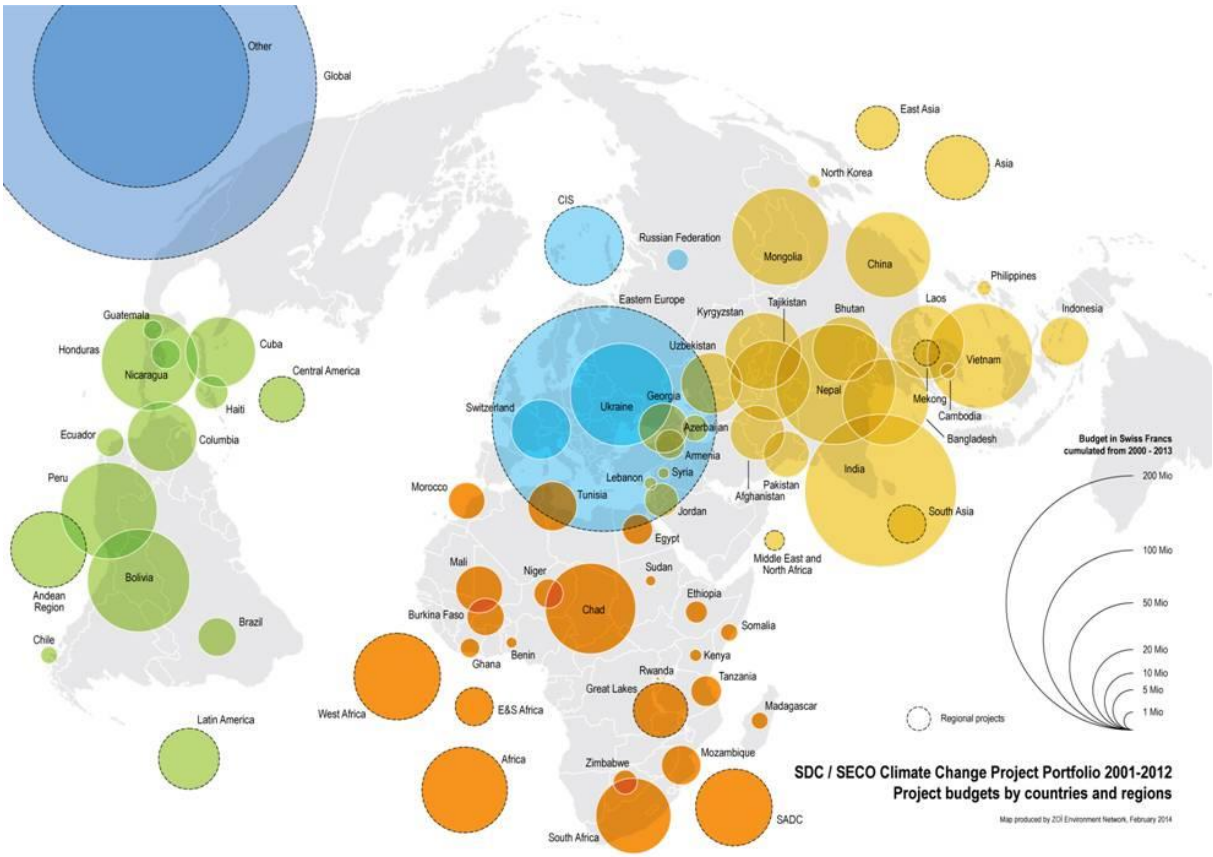


Figure 1 Geographical overview of the SDC/SECO portfolio covered by the CC effectiveness assessment.

2. Methodological approach

2.1 Overview

The methods were chosen in response to the challenge of seeking meaningful patterns of CC effectiveness in a Swiss portfolio of 508 individual projects, while also preserving the independence of the study. This meant that a fresh look would need to be taken at the evidence, rather than necessarily being bound by the analytical framework proposed in the ToR (such as the RC structure and *ex post* estimates of CC relevance, to which the study returned once the team was confident in the independence of their own analysis, see Figure 2 with the seven Result Chains). Another factor is that many of the projects concerned were not initially designed with the primary aim of achieving a CC-relevant impact. Poverty reduction was and remains the key objective of all Swiss ODA, and the CC-relevant portfolio covered by this assessment was to a large degree created *ex post* by SDC/SECO considering the projects' likely CC relevance as an additional criterion.

Since there is no accepted, standard methodology for this particular type of summative assessment over such a diverse portfolio, an innovative and adaptive approach was required. As the analysis proceeded, therefore, the details of the approach evolved in response to the team's increasing understanding of the portfolio, the quality and quantity of available data, and how evidence on effectiveness could be extracted from it with maximum reliability. The Gaia consortium *Inception Report* (Annex 12) provides an important reference in this process, in describing the origins of the validation criteria used in the portfolio appraisal, in the initial thematic classification of the portfolio (see Section 1.2), which remains in modified form in the thematic sections of Chapter 3, in the sampling protocol for selecting projects for more detailed study, and in discussing the principles and practices involved in the very different tasks of evaluating mitigation and adaptation effectiveness. The chosen methods were as follows.

- **Portfolio appraisal (Section 2.2)**. The first step was to begin an appraisal of the portfolio, which continued throughout the study as new information and perspectives arose, through which all projects for which sufficient information was available in the summaries and credit proposals (ultimately about 85% of the total) were understood and classified by theme (i.e. by the groups of projects defined by their common approaches to achieve mitigation and adaptation outcomes - such as renewable energy and energy efficiency, cleaner production, and ecosystem management), and a sampling protocol was developed to allow the choice of projects for more detailed desk and/or field study.
- **Detailed investigations (Section 2.3)**. The second step comprised more detailed investigations, of 30 projects during field visits to five countries (Nepal, South Africa, Perú, Mongolia, and Serbia/Albania treated as one destination), desk studies of 6 projects in Vietnam (chosen because of a special interest of the client), and of 25 additional projects selected to ensure balanced coverage across the various themes and modalities within the portfolio. The country-focused studies all involved interviews with knowledge holders (see Annexes 5 and 6).
- **Portfolio analysis (Section 2.4)**. The third step was to analyse the full portfolio by theme, and to determine adaptation and/or mitigation effectiveness scores for the 423 projects for which sufficient information was available, with the aim of estimating the overall effectiveness of each thematic approach and of the whole portfolio, both as a whole and to compare projects in 2000-2006 and 2007-2012. This step drew on the portfolio appraisal, detailed project reviews, questionnaires, interviews, and focus group discussions. It included separate analyses of contributions to organisations and the FSF elements of the portfolio, both supported by interviews with knowledge holders.

2.2 Portfolio appraisal

The portfolio appraisal:

- reviewed and developed an understanding of the nature of the projects within the CC portfolio;

- explored the quality of available data (i.e. the portfolio spreadsheet and credit proposals for most of the projects) in order to identify significant strengths and weaknesses therein;
- validated projects against criteria based on the Rio Climate Markers (i.e. to confirm that they addressed issues and used approaches that could reasonably be expected to yield some degree of CC adaptation or mitigation effectiveness - see Annexes 2 and 12);
- looked for groups of projects with a similar approach within the portfolio that might be used as a way to rationalise a sampling protocol, in which a manageable yet meaningful and representative sub-set of projects would be identified for more detailed assessment;
- identified the best choice of five countries from the 12 proposed in the ToR, where 30 projects (six in each country) were to be studied during the field visits; and
- further developed and refined the methodology of the assessment.

2.3 Detailed studies of selected projects

Because the 61 projects that were to be studied in depth would be investigated by different experts, a project review template (Annex 2) was designed to support consistent analysis and allocation of effectiveness scores to each project. Example reviews and guidelines on how to fill in the template were prepared, distributed and discussed within the team. The draft reviews were cross-reviewed and commented on within the team to ensure coherence. The main focus of the template, as of the RoE 2014 itself, was on evidence of CC effectiveness, divided into the following elements.

- **Evidence for direct effectiveness of the project**. Here the reviewer considered evidence such as the following. For mitigation effectiveness, evidence might include data on real GHG emission reductions (or proxies on energy efficiency), provided that some quantified baseline exists and some reasonable protocol to describe measured changes was applied. For adaptation effectiveness, evidence might include documentation and/or witness statements to the effect that environmental events and changes that are believed to be linked to climate change (e.g. droughts, fires, floods, sea-borne storms, dust-storms, cold snaps, heat-waves, or creeping salt-water intrusion) are being coped with (in any sense - including social, financial, environmental and political resilience, and early warning) better after the project than before.
- **Evidence for indirect effectiveness of the project**. Here the reviewer considered other information relevant to forming a judgement on the likely CC effectiveness of the project, or any CC-relevant side effects, and expected or unexpected consequences of it. For example: an air pollution project might target particulate and noxious vehicle emissions, but the technology used may also be expected to reduce GHG emissions; or a project to improve energy efficiency of brick making may also reduce coal imports and hence transport-related GHG emissions; or a social forestry project aimed at sustainable production might also contribute to CC adaptation by maintaining the ecological integrity of water catchments.
- **Reasons to expect this kind of project to be effective**. Here the reviewer considered other information relevant to forming a judgement on the likely effectiveness of the project. This might come from other, similar projects that they knew about where CC effectiveness had been demonstrated using the same approach, or that had been written up to demonstrate CC effectiveness elsewhere in the emerging portfolio analysis, or from applying any other kind of inference to build an explicit, evidence-based and well-reasoned case for or against likely effectiveness of this particular project.

Making use of these lines of evidence an **overall conclusion on effectiveness** was made**.** With explicit reference to the three lines of evidence already assembled from project documents, interviews and other sources, and specifying what kind of effectiveness is involved (i.e. mitigation, adaptation and/or enabling factors for CC-relevant action), the reviewer was required to provide an overall effectiveness score for the project as a whole (see Section 2.4). This score was to be seen as a judgement based on the evidence only, and had to be defensible using that evidence or reasonable inferences from it. The projects were scored making use of a seven-point scale where a score of '1' was given to projects with no CC effectiveness at all and a score of '7' was given to those with extremely strong CC effectiveness (Table 1).

CC effectiveness description	Effectiveness score
Extremely strong	7
Very strong	6
Strong	5
Moderate	4
Weak	3
Very weak	2
None	1

Table 1 Scoring protocol for overall climate change mitigation/adaptation effectiveness (n = 423).

A further section of the template required the reviewer to address two matters that were expected to contribute to a better understanding of differences in estimated effectiveness between projects, and also that might contribute to improvements in the CC effectiveness of future projects. These additional assessments thus **had a different purpose to the evidence reviews and were not considered in deriving the overall conclusion on effectiveness**. They comprised:

I. A review of **CC-relevance of the project design**, based on:
   a. An assessment of the presentation of the empirical evidence and reasoning that justified the investment from a CC point of view (hereafter *Evidence and reasoning*);
   b. An assessment of the extent to which the various parts and expected effects of the project were aligned with the CC Result Chain or pathway to which it was intended to contribute (hereafter *Pathway integrity*) and

II. A review of **general quality of the project design**, based on
   a. An assessment of the clarity with which the credit proposal explained the logical pathway from development challenge to response, and the choices within it (hereafter *Explanation clarity*), and
   b. An assessment of the extent to which research and consultation processes involving project stakeholders contributed to the design of the project (hereafter *Participatory design*) (Annex 2).

Scores for CC-relevance (including *Evidence and reasoning, Pathway integrity*) **and general quality of project design** (including *Explanation clarity*, *Participatory design*) were given for projects examined in depth (n = 61), but here a score of 7 was defined as 'excellent', 6 as 'very good', 5 as 'good', 4 as 'adequate', 3 as 'problematic', 2 as 'poor', and 1 as 'seriously deficient' (see Annex 2).

2.4 Analysis of the portfolio

Three complementary approaches were used to explore effectiveness within the full CC portfolio, and to tease out reasons for observed patterns of effectiveness across it.

- **Thematic narratives** (Sections 3.1-3.8[6], covering CC mitigation through renewable energy and energy efficiency, cleaner production, and ecosystem management, and CC adaptation through risk management, the strengthening of ecosystems and societies, and knowledge management, and Chapter 5, covering the FSF portfolio), providing an opportunity for critical explanatory discussion around the various project approaches and modalities, based on all information available from all sources (i.e. the portfolio appraisal, detailed project reviews, questionnaires, interviews, and focus group discussions – see Annex 12).
- **Overall effectiveness scores** for the 423 projects for which sufficient information was available were distributed across all themes. These scores were either 'tentative' or 'confirmed' and both represented the reviewer's judgement as to where to place the project's effectiveness in a range from 'extremely strong' (score 7) to 'none' (1; Table 1). *Tentative scores* were based on the

[6] Throughout this report, where project identification numbers are given, all those beginning with '7F-' are attributed to SDC, while all those beginning with 'UR-' or 'UZ-' are attributed to SECO.

arguments presented in the thematic narratives, and represented 'best guesses' informed by similar projects that have been reviewed in more detail (both within the portfolio during this study and in other contexts), by the number of validation criteria met during the portfolio appraisal, and (where such a reputation existed) by the reputation for effectiveness of the institution that received a contribution. *Confirmed scores* were based on the findings of the 61 detailed desk and field studies, and replaced the tentative scores in each of these cases. In a few cases this judgement transparently relied on expected effectiveness (in total 5 projects, see Annex 3). The distribution of effectiveness scores in the sample of confirmed scores (n = 61) was compared with that in the larger sample of tentative scores (n = 362), and the distributions were found to be significantly correlated[7]. This validation of tentative scores supports the conclusion that the tentative scores suggest valid patterns within the larger portfolio. While not as perfect as in-depth study of all 508 projects would have been, the use of tentative scores in the overall assessment was necessary because the portfolio is far too diverse for a sample of 61 projects to yield meaningfully representative results or aggregate results statements for the whole portfolio, even though it is an excellent source of case study material.

It can be seen from Figure 2 that the coverage of the portfolio through the thematic narratives and effectiveness scores very closely matched the distribution of projects among the Result Chains defined in the ToR, meaning that little or no information has been lost from the RC point of view by the chosen approach. An awareness of the RC pathways and their implications was maintained throughout the analysis (see Annex 2), and the resulting dialogue between the RC and thematic narrative and scoring approaches eventually permitted the ToR questions, which are couched in RC terms, to be answered (see Annex 1.). We believe that the thematic narratives presented in Sections 3.1-3.8 add value, relative to a strictly RC-based treatment, as an aid to communication and accountability, as they are likely to be clearer to others in the ODA and NGO communities, to business communities, and to parliamentarians and the general public.

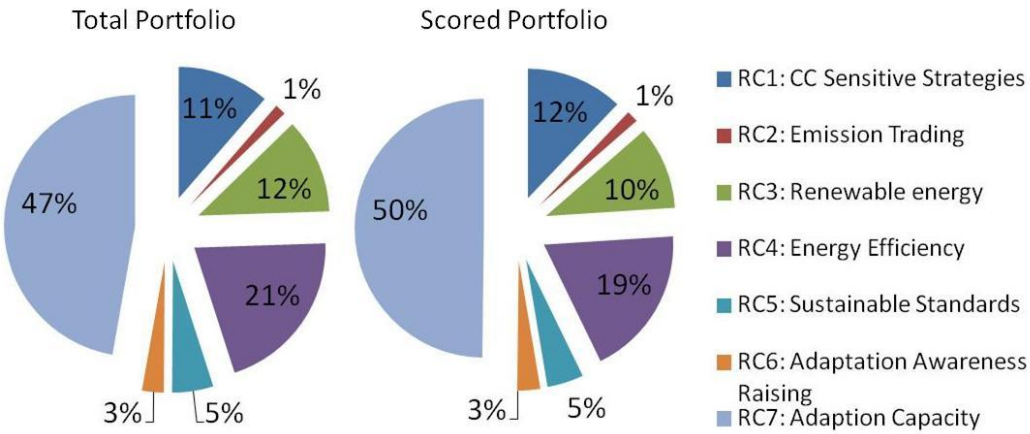


Figure 2 Overview of the Result Chain distribution of the total Swiss CC portfolio by CC budget, to the left for the total CC portfolio (n = 508 projects) and to the right for projects covered in this assessment with tentative or confirmed scores (n = 423).

2.5 Limitations and data quality

It is clear that a great deal of effort was invested by SDC/SECO in compiling project data into a master Excel spreadsheet that included 508 projects, and also documents associated with each project, including the Credit Proposals and, for in-depth reviews, relevant evaluation reports and the like. As noted, these sources of information proved adequate to summarise, describe and score the effectiveness of more than 83% (n = 423) of the projects in the portfolio. There were, however, data gaps that could not ultimately be filled for the other 17% (n = 85) of projects (including missing credit

[7] A chi-squared test was used to confirm the correlation. While a small factor in this correlation is due to the influence of some confirmed scores on some of the tentative scores (i.e. through a 'proxy effect'), we believe that our approach is robust enough to allow the tentative scores to be used validly in portfolio analysis.

proposals and other documents), and there were also inconsistencies and other issues (e.g. budget-less disbursements, disbursement-less budgets, un-named and un-summarised projects, at least one project located in a non-existent country, projects assigned to erroneous Result Chains, those with anomalous start or end dates; see Annex 10). Many but not all of these could be resolved through a certain amount of research effort and the application of 'common sense'.

It is not surprising that there should be data irregularities in the records of a worldwide portfolio of 508 projects considered over a period of 12 years (and in some cases extending back into the 1990s), and the 17% of projects for which insufficient information was available is both consistent with this expectation and, based on the team's experience with other donor agencies, not unusually excessive in size. Additional research could probably reduce the uncertainty considerably, but this would be a task for the knowledge managers of SDC/SECO and could not be fully addressed with the resources available to this study. Meanwhile, the team notes that the 83% sample of portfolio effectiveness obtained is extraordinarily larger than anticipated initially, and provides a sound basis for identifying patterns in effectiveness scores, including through the use of statistical tests where appropriate. It makes it possible to produce aggregated result statements for the portfolio as a whole, for its various main themes, and for the periods 2000-2006 and 2007-2012, which would not have been possible using in-depth desk and field study data alone.

3. Nature and effectiveness of the CC portfolio

3.1 Mitigation through renewable energy and energy efficiency

Introductory remarks. *The review in this section covers 85 projects, with 15 having confirmed effectiveness scores based on in-depth analysis (see Annexes 3 and 4 for consolidated information of scored projects and distribution of scores across effectiveness categories).*

3.1.1 Renewable energy

Overview. Potential sources of renewable energy (RE) are very diverse and include wind (on-shore, off-shore), solar (thermal, electric, domestic, industrial), tidal (barrage, lagoon, sea-bed turbine), wave, hydroelectricity (micro, big dam, run-of-river), geothermal (domestic, industrial), and biomass. It is notable that the Swiss projects in area of RE are tightly focused on hydroelectric and biomass-based forms of renewable energy, presumably reflecting traditional experience of these systems in a mountainous country with a rural population historically experienced in the ways of local self-sufficiency.

Hydroelectricity. Although large dams use large amounts of concrete, the manufacture of which is a major GHG emission source, and have various other limitations and drawbacks (e.g. vehicular GHG emissions during construction, replacement of natural ecosystems by the dam lake, earthquakes caused by the weight of the dam lake, siltation of the dam lake especially where catchment ecosystems are degraded, and disruption of migrations and dispersion among aquatic wildlife), in the long term they can have the net effect of reducing GHG emissions when compared with other ways of generating electricity. The Swiss portfolio, however, is mainly concerned with rehabilitating hydropower systems in which the major sunk costs of construction have already occurred (e.g. in Bosnia-Herzegovina, Albania (case study 1), Bulgaria, North Korea and Tajikistan), or else with promoting small-scale hydropower in the context of decentralised electricity systems (e.g. in Nicaragua, India, Morocco, Nepal and Pakistan). Both of these approaches are likely to be relatively effective in CC-mitigation terms and we accord a proxy estimate of *strong effectiveness (score 5)* for the projects in the hydroelectricity sector.

Case study 1: UZ-00574.01.01: The Drin River Cascade Rehabilitation Project (DRCRP 1994-2007) helped to rehabilitate four large hydropower plants on the Drin and Mat rivers in Albania. The priority was improving energy production and reliability, access and energy security with the prolongation of life span of utilities, and improving dam safety and optimization of usage of water. Within the support by several donors and lenders, the Swiss grant contribution focused on the delivery of hydro-mechanical equipment for the Fierza hydropower (HPP) plant being first in the cascade. The analysis confirms the attainment of key project goals, in particular: i) improved reliability and outages declined, even during recent extreme floods, ii) efficiency improvements at the Fierza power plant in the range of 3-4 percent, and iii) considerable extension of lifespan of Fierza HPP. While climate change and more specifically GHG reductions were not explicit goals of the intervention, the assessment identifies co-benefits in climate change mitigation that can be attributed to the entire DRCRP intervention (with multiple donors involved) through avoided GHG emissions that would have been caused by electricity import (with higher CO2 intensity in all neighbouring countries) and additional use of other non-renewable energy sources (including diesel generators) without this intervention *(moderate CC mitigation effectiveness score 4)*. The field mission also revealed that this intervention (and its follow-up activities) have contributed to addressing dam safety in a more systematic manner, which will certainly serve future CC adaptation efforts in Albania. A more detailed analysis of this intervention is available in Annex 5.

Biomass, biogas and biofuels. The point of using energy derived from the burning or fermentation of biomass is that these fuels are 'carbon-neutral'. This is because the process involves returning to the air carbon recently absorbed from it, rather than carbon that had been sequestered from the biosphere in the distant past. At an industrial scale, drawbacks can include the large-scale replacement of natural ecosystems (e.g. rainforests by oil-palm plantations to produce 'biodiesel') or food-producing systems (e.g. farmlands converted to maize or sugar cane to produce 'bioethanol'). In an effort to off-set this, the Swiss portfolio includes a project (UR-00339.01.01) to develop and promote the adoption of principles and criteria for environmentally and socially sustainable production and trade in biofuels. This supported the *Round-table on Sustainable Biofuels* at a time (2008-2012) when huge controversy surrounded the consequences of US and EU efforts to force an increased proportion of bioethanol and biodiesel in gasoline and fuel oil. In this context the idea of

exploring ways to make production and trade in biofuels more sustainable was potentially useful and may have contributed to policy reviews by the EU and US, and the deliberations of the Round-table on Sustainable Palm Oil (RSPO) and its Indonesian equivalent (*score 4, moderate effectiveness)*. There is also a project (7F-07802) designed to explore the development of a sustainable charcoal trade in Tanzania, a country with many Village Land Forest Reserves that could be meeting urban demand for charcoal for the benefit of rural communities. Unfortunately, resistance by traders in illegal and unsustainable charcoal seems to have prevented implementation, so effectiveness remains low and the project is considered only *weakly effective (score 3)*. Otherwise, the portfolio emphasises the use of waste biomass (e.g. for an urban combined heat and power or CHP system in Serbia and a pilot fertiliser/biogas plant in Bolivia) and small-scale biomass energy applications in Cuba, India and Mali. Both approaches are likely to be effective in CC-mitigation terms, and a detailed study of an urban CHP plant (project UR-00516.01.01) considered it to be *very strongly effective (score 6),* but the large scale of its impact relative to pilot and small-scale initiatives suggests that the latter should be considered slightly less effective *(score 5, strong effectiveness)*.

Mixed renewables. A group of projects focused on facilitating investments in unspecified renewables (small hydro, wind, biomass, etc.). These included three earmarked contributions to the World Bank/IFC Renewable Energy Programme, UR-00458.01.01 to deploy technical assistance in Vietnam (*scored 5, strong for mitigation effectiveness because* of anticipated synergies with cleaner production initiatives in that country - see Section 3.2); UR-00481.01.01 to advise on four pilot projects in different renewable energy sectors *(score 4, moderate);* and a more strategic investment in SREP (Scaling Up Renewable Energy Program in Low Income Countries, UR-00429.01.01) to help show that developing a renewable energy supply is feasible and beneficial in low-income countries, by supporting them in expanding energy access through scaled-up renewables deployment, and by triggering change in the renewables market through government support for market creation, private-sector implementation, and productive energy use (also *scored 5, strong for mitigation effectiveness* because of its likely leverage effects). There was also a small group of projects (7F-01587, and four under UR-00123), initially administered by SDC and later by SECO, which involved the funding of joint work by SECO, SDC, FOEN and SFOE through a platform known as REPIC, to develop a common strategy on CC policies and renewable energy and energy efficiency in international cooperation, and to initiate strategic partnerships with private enterprise and Swiss civil society to encourage deployment of renewable energy and energy efficiency systems and technologies (again *scored 5, strong for mitigation effectiveness because of anticipated leverage effects)*.

3.1.2 Energy efficiency

Overview. Regardless of how a power system is fuelled, a key objective in CC mitigation terms is to minimise the release of GHGs per unit of energy that is used productively by end users, be they citizens cooking or heating their homes, the powering of public transport, or the creation of goods and the provision of services. Attention must be paid to efficiency at every stage, from power generation (to minimise emissions at source) to transmission (to minimise energy wastage in power lines and transformers) and end use (to minimise energy wastage in obsolete equipment, poorly-insulated buildings, etc.). At the same time, one must be alert to various side issues that can be very important, for example unreliable power generation and transmission will increase the use of fossil fuels in generators or to heat houses, as well as having negative economic effects in most economic sectors. The Swiss energy efficiency portfolio is correspondingly diverse.

Power system rehabilitation and sustainability. A significant part of the Swiss energy efficiency portfolio targets the quality of power generation and transmission, largely through the replacement of obsolete or war-damaged equipment at power plants and control and transmission systems in Macedonia, Serbia, Tajikistan, Kosovo, Kyrgyzstan and Albania. In many cases, an additional aim is to modernise managerial and financial (e.g. billing) arrangements to ensure that revenues are at least sufficient to maintain the power system in the future. These projects were assessed by SDC/SECO as having a CC relevance that ranged from 10% (one project), to 25% (nine projects), 50% (seven projects) and 100% (four projects). In addition to a wide variety in CC relevance within this part of the portfolio, depending on the success of project implementation and how integrally CC impacts have been reported and monitored, we estimate a wide variety in CC effectiveness scores among these projects. Case study 2 below highlights a very successful EE project in Serbia with strong CC effectiveness, but with some challenges in net implications from a CC perspective.

Case study 2: UR-00269.01.01 Modernisation of the Monitoring and Control System at Nikola Tesla Thermal Power Plant B, Serbia (2009-2015). While the Serbian economy will, at least in the mid-term, remain heavily dependent on coal for energy production, immediate measures aiming at reducing pollution of coal fired power plants will be critical. The project has already contributed to improved energy efficiency and reliability at the plant, thereby reducing outages and emissions of CO2 and other pollutants (*CC mitigation effectiveness score 5).* The new monitoring and control system also serves as a pre-investment for the installation of filters and other equipment (financed amongst others by KfW and EAR) for more efficient energy production and environmental protection. While initial estimates of annual CO2 emission reductions in the range of 90,000 tonnes can be attributed to the Swiss-funded intervention, it corresponds to some 2% of the annual total CO2 emissions at Unit TENT B1., serving to showcase the trade-offs between clearly positive environmental and socio-economic impacts of this project, and the considerable extension of the life-span of coal fired power production, thanks to a number of projects and rehabilitation activities at the facility. This case study also exemplifies the challenges in making net assessments of GHG emission impacts, the importance of understanding the overall context, and the role of assumptions and system boundaries when making net assessments. A more detailed analysis is available in Annex 5.

Climate-friendly buildings & building materials. The building sector is another major source of GHG emissions, both directly (through manufacture of construction materials) and indirectly (through design that can increase or reduce the need for heating and cooling systems as a function of insulation). Another speciality theme of the Swiss energy efficiency portfolio is a focus on lower-energy brick-making, with projects in Nepal, Vietnam, Afghanistan, Pakistan, Latin America and South Africa. Projects 7F-07198 in South Africa and 7F-01898 in Nepal (case study 3) were assessed by the field missions and were both given an overall mitigation effectiveness *score of 4 (moderate)*, which is used as a proxy for the others. Another theme is the promotion of energy efficiency skills among architects, builders and regulators in India and South Africa, and the latter project (7F-07681) was assessed by the field mission and given an overall mitigation effectiveness score of *5 (strong)*, although a related monitoring capacity building project (7F-07512) had start-up issues and received a *score of only 4 (moderate)* On the financial incentives side, one project (UZ-01150.02.07, with the IFC) was to encourage and enable homeowners to access financing for energy efficiency modernisations of multifamily buildings in Ukraine, and was *scored 4 (moderate).*

Case study 3: 7F-01898 Vertical Shaft Brick Kiln (VSBK) Project / Clean Building Technologies for Nepal (2001-2011). The project had two components, one focusing on energy efficient VSBK technology and the other on Cost-effective Socially- and Environmentally-Friendly Building Materials (CESEF). VSBKs are 30-40% more energy efficient than traditional brick production technologies and produce 70-80% fewer particulate emissions, thus offer clear environmental and climate benefits. The project contributed to building 26 VSBKs but about a third of them are not functioning and half are operating at less than their full capacity due to low economic feasibility. The VSBKs have significantly lower return on investment than traditional kilns and their operation requires additional skills and higher-quality raw materials. The project targeted these disincentives by promoting policy reform but was not successful at that. The CESEF component of the project promoted environmentally-friendly building materials and construction techniques with potential to reduce emissions by up to 40% through more material- and energy-efficient building techniques. The CESEF technologies were transferred to close to 300 users in various categories and with various adoption rates. The limited success of the project shows the importance of considering the quality of the business environment before implementing activities targeting technical development. In situations where policy reform is needed to make technological solutions viable, the primary focus should be on facilitating the policy reform, and the technology development could be supported as a tool to meet the new requirements. The project was rated as moderately effective (score 4). A more detailed analysis of this intervention is available in Annex 5.

Working with businesses, cities and consumers. If ways can be found to leverage CC relevant behavioural change among large numbers of people or companies, or to deliver energy efficiency improvements to population centres, then much can be achieved through strategic investments. These projects represent attempts to do this by promoting knowledge sharing on energy efficiency among small enterprises in India (7F-03063, 7F-01727) and five cities in China (7F-07515), while also influencing consumer preferences in favour of more energy-efficient products in China (UR-00432.01.01), rehabilitating city-wide heating systems in Romania and Ukraine (UR-00304.01.01/UR-00304.02.01 and UR-00469.01.01), and facilitating the use of financial mechanisms for industrial energy efficiency investments in South Africa (UR-00399.01.01, with UNIDO). All are considered likely to be very strongly effective approaches in terms of CC mitigation, and are accordingly s*cored 6 (very strong).*

Box 1: The role of cost-benefit analysis (CBA)

Conducting CBA on the Swiss-funded interventions was not within the scope of this assessment, but the assessment team reviewed its applicability in the context of one of the projects covered during the field mission to South Africa (project 7F-07198.01, Energy Efficient Building Programme, Vertical Shaft Brick Kiln (VSBK) Project, South Africa – presented in more detail in Annex 5)

The project aimed to reduce approximately 1.1 m tons of CO_2 emissions in the production of clay bricks over a ten year period. This was supposed to be achieved by anchoring the VSBK technology in the existing brick sector infrastructure and achieving a switch to the new technology in 18-20 VSBK sites with 180-200 shafts in total. The project received total funding of CHF 2.91 million in its first phase from Nov 2009 to Oct 2013.

The project facilitated the construction of one pilot facility in Langkloof with six shafts. The plant in Langkloof started construction of an additional 18 shafts in May 2013, and these should be operational by March 2014. The initial 6 shaft pilot plant will then be shut down and upgraded depending on demand. This resulted in a total emission reduction of about 3,200 tCO_2 up to Nov 2013. With the other shafts in Langkloof being implemented this will result in a total reduction of about 42,000 tCO_2 by 2023. Two more kiln operators are currently evaluating a switch to VSBK and it is expected that the second phase of the project will (with additional funding) convince even more operators to use this advanced technology.

However, for the purpose of a CBA on the first phase, we limit our calculations to the emission reductions achieved to date and those that have a very high likelihood of being achieved over the next ten years as the shafts are already constructed. Therefore, calculating a per tonne cost of the emission reductions achieved by the 18 shafts implemented as a tangible result of the first phase until 2013 results in about 69 CHF/tCO_2 reduced. This is much more than abatement costs in the EU ETS (around €30 at its peak, €3-6 in 2013) or in the CDM (around €20 at its peak, below €1 in 2013), but less than the cost of abatement in Switzerland which is estimated to be above 100 CHF/tCO_2. Another project reviewed in Peru (Cleaner Production Centres (UF-00988) provides an estimate (based on CC relevant investment made and emission reduction achieved) in the same range, i.e. of about 70 CHF/tCO_2 reduced (see Annex 5).

In cases where a solid baseline for GHG emissions can be established, and reliable data on achieved (or forecasted) emission reductions as well as associated costs can be obtained, CBA can serve to inform the decision making process from the perspective of economic efficiency of the GHG tonne mitigated. However, in the context of development cooperation it is good to note the major challenges that exist in obtaining sufficiently reliable data as well as the generally much broader development and poverty reduction objectives that the respective interventions have – and for that reason any comparisons (such as those presented above) should be understood in that context. The CDM has provided important lessons about the economics of GHG mitigation, including the pros and cons of applying CBA to projects - see e.g.

http://unfccc.int/essential_background/background_publications_htmlpdf/items/2625.php

Air quality. Reductions in pollution levels can be achieved through improved cleaning or filtering technologies ('pollution control') or through increasing the efficiency of a process, and thereby reducing the amount of pollution generated at its source ('pollution prevention'). Emission sources for many air pollutants are the same as those for GHGs (e.g. worn-out, poorly-maintained, obsoletely-designed or dirtily-fuelled power units), so pollution prevention investments in particular can also reduce GHG emissions. These clear interlinkages exist, for example, in the transport and power generation sectors where improved energy efficiency technology will reduce particulate, noxious and GHG emissions simultaneously. Five air quality projects are considered here, in Bolivia, Perú, Ecuador, Chile and Vietnam, of which the last (7F-03833, case study 4) was included in a detailed desk study and given an overall mitigation effectiveness *score of 4 (moderate)*, which is used here as a proxy score for the others.

Case study 4: 7F-03833 Swiss-Vietnamese Clean Air Program (SVCAP, 2006-2008). The project aimed at mitigating further degradation of air quality in and around Hanoi, by developing an air quality management system through capacity building and institutional strengthening in the areas of policy reform, awareness raising, pilot projects and managing air pollution and emission data. The project was reasonably effective in particulate matter emission reduction and GHG emission reduction through improved energy efficiency and strengthened emission policies. The work on national and regional policies created a solid basis for future activities targeting emission reduction and prevention in Vietnam, especially in Hanoi. The project also conducted awareness raising campaigns and pilot projects for CC mitigation, e.g. eco-driving training for truck and taxi drivers, resulting in 15-25% fuel savings in the participating companies. Improvements in energy efficiency at a food processing plant also contributed to CC mitigation. Knowledge transfer and increasing awareness of energy efficiency benefits had probably the single greatest GHG mitigation effect. The project also developed an emission database, crucial for planning and monitoring. The know-how and practice gained in the process of creating this database also improved local emission-monitoring capacity. The project was rated as moderately effective (*score 4*, moderate). A more detailed analysis is available in Annex 6.

Tram rehabilitation and re-use. Trams are large and heavy items of equipment that are expensive, in terms of GHG emissions, both to manufacture and to scrap. Despite the GHG emission consequences of one-off long-distance transport, rehabilitating and re-deploying used Swiss trams to

Romania, Serbia and Ukraine is an inherently attractive prospect because of subsequent emissions savings. Improving public transport services is also an important measure to reduce private car use, so has a beneficial effect on urban quality of life, GHG emissions, air quality, etc. Thus we are inclined to see the four projects in this sub-cluster as likely to be effective in CC mitigation, and suggest an overall effectiveness *score of 6 (very strong)*.

***Concluding remarks**. The analysis indicates a clear majority of renewable energy and energy efficiency projects as being moderately to very strongly effective in CC mitigation terms.[8] However, some cases of weak and very weak mitigation effectiveness were identified, and are covered in the project reviews (Annexes 5-7) as well as in our analysis of reasons for excellence and weakness later in the report. The confirmed scores for projects reviewed in depth as well as distribution of scores in effectiveness categories are presented in Annex 4.*

3.2 Mitigation through cleaner production

***Introductory remarks**. This review covers 41 projects, with 7 having confirmed effectiveness scores based on in-depth analysis (see Annexes 3 and 4 for consolidated information on scored projects and distribution of scores across effectiveness categories).*

3.2.1 National Cleaner Production Centres

The common theme of these projects is to create centres of expertise (or in some cases training networks) on how to achieve cleaner production in real-life circumstances, typically within factories but also through government advisory roles, in ways that offer cost savings, whether from efficiency or regulatory compliance (e.g. the avoidance of environmental penalties imposed by the authorities), and worker, public and environmental health and other benefits. There is little direct reference to CC mitigation in the project summaries, other than UZ-01101.01.01 and UZ-01101.01.02 in India where a focus after 2010 was on verifiable accounting of GHG emission reductions in six industrial sectors. But the global network of national CPCs (NCPCs) developed since UNCED in 1992 has founding principles and purposes which include seeking direct and indirect GHG emission reductions in the context of a broader Sustainable Consumption and Production (SCP) agenda. Moreover there is evidence from UNIDO[9] that national CPCs (NCPCs) are associated with reducing GHG emissions:

- NCPCs and other institutions in nine Asian countries collaborated in a three-year project that demonstrated the application of CP methods for achieving energy savings and GHG reductions in the pulp and paper, cement, iron and steel, chemicals and ceramic sectors, with GHG emission reductions being verified for 38 demonstration plants as just over 1 million tCO_2e per year;
- The implementation at a small lead foundry of several CP options in Perú, suggested by the NCPC, reduced the lead content in waste by 19%, enabled the recovery of nearly 350 tonnes of lead per year and reduced water and energy consumption, with total GHG emissions reduced by 270 tonnes annually, and investment costs being recovered within several months;
- With the assistance of the NCPC in Sri Lanka, a desiccated coconut mill reduced its waste output by 18 tonnes per year, which achieving considerable reductions in water and energy use, and reducing total GHG emissions by almost 1,000 tCO_2e per year, all due to an investment of less that US$ 17,000 that yielded annual cost savings of more than US$ 315,000; and
- A paper and tissue products manufacturer in Kenya, with the assistance of the NCPC, implemented a programme to increase waste water recovery and recycling, achieving a 25% reduction in energy consumption, a 50% reduction in water consumption and a 60% reduction in waste water and other wastes, yielding annual savings in excess of US$ 600,000, with negligible total investment.

The role of an NCPC is to provide a place where companies, government departments and others can go to find ideas, guidelines, skills and standards with which to clean up their activities. Reasons why clients may wish to pay for these services are based on: *cost saving* (by taking the NCPC's advice, a company can make savings in energy or raw materials, while also having healthier employees and a better relationship with society); *regulation* (laws that require environmental and other standards to

[8] This section also covered one project which, in addition to the mitigation score, was assessed based on its adaptation effectiveness (SDC 7F-07789 Project on Biomass in India), see Annex 3, table A3.3.
[9] http://www.unido.org/en/how-we-work/convening-partnerships-and-networks/networks-centres-forums-and-platforms/ncpc/principal-achievements.html (consulted 5 Feb 2014).

be met, with the NCPC being available to advise on how to meet them and to certify compliance with them); and *incentives* (such as grants or tax relief targeting cleaner investments). Thus, if an NCPC is to be sustainable its technical capacity must be developed alongside marketing, supporting government to devise appropriate regulations, and finding ways to incentivise cleaner production. While there is no doubt much variation among the NCPCs and in their contexts and challenges, their general influence in favour of mitigation (and their contribution of numerous collateral environmental and other benefits) seems likely to be significant and increasing. We give this group a mitigation *effectiveness score of 4 (moderate)* overall (as we did with a more detailed review of UR-00029.02.01 in South Africa and UZ-00987.03.01 in Vietnam, case study 5), while recognising the noted potential for improving scores.

Case study 5: UZ-00987.03.01 Vietnam National Cleaner Production Centre

Cleaner production options proposed between 1999 and 2011 by the Vietnam NCPC to 227 companies in six sectors were accepted by most companies and implemented by many of them, resulting in resource savings and financial benefits for companies and a positive impact on the environment. They led to average savings of 7% in electricity, 9% in coal, 7% in fuel oil, 20% in gas, 18% in water and 25% in chemical consumption. Such changes also have multiplier effects, since reducing industrial water use affects the energy costs of pumping, heating and treating water, while well-managed recycling can save a lot of energy, and changing energy mixes (e.g. from coal to methane) can greatly reduce GHG emissions (*CC mitigation effectiveness score 4*). A more detailed analysis of this intervention is available in Annex 6.

3.2.2 Green investment incentives

Three of these interventions involve the financing of Green Credit Trust Funds (GCTFs) in Vietnam 2007-2017 (UR-00050.03.01, case study 6), Colombia 2003-2005 (UR-00050.01.01 and UR-00050.01.02[10]) and Perú 2003-2018 (UR-00050.02.01). The purpose of the interventions is to finance investment in cleaner production technologies by guaranteeing 50% of applicable bank loans, and reimbursing a share (up to 25% in Vietnam, 25% or max. 200,000 in Colombia and Perú) of investment costs depending on previously-defined resource consumption and emission indicators. In all cases, the transactions are managed by local banks, and the environmental improvements sought and the indicators for them are determined and verified by the NCPC concerned, thus creating a powerful synergy between the NCPC and GCTF interventions. The GCTF in Vietnam was given a CC relevance estimate by SDC/SECO of 100%, while those in Colombia and Perú were estimated at 50%. The Vietnam intervention started later than the others, so it is possible that lessons had been learned or that priorities had changed, but given that cleaner production is not just about GHG emissions we assess that 50% CC relevance for all of them would be a more appropriate estimate. Because of the intimate connection with the NCPCs, we suggest a similar mitigation effectiveness *score of 4 (moderate)*. The fact that the GCTF in Perú, which has been longest in implementation, received a higher *score of 5 (strong)* following detailed study is indicative of the cumulative effectiveness to be expected of this kind of intervention.

Case study 6: UR-00050.03.01 Vietnam Green Credit Trust Fund

A total of 15 GCTF-backed projects were underway by August 2013, including investments in new and more efficient equipment in the plastics, paper-making and steel recycling sectors, where major savings in the use of energy and water, and in GHG emissions, have been achieved. These GCTF-backed credits can contribute to multiple improvements; for example, new arrangements for recycling scrap steel have had major effects on reducing electricity consumption as well as on the emission of toxic materials such as dioxins (*CC mitigation effectiveness score 4, moderate)*. A more detailed analysis of this intervention is available in Annex 6.

The fourth project in this group comprises overlapping interventions in Russia, UZ-00689.01.01 (1995-2005) and UZ-00689.01.02 (1995-2007), focusing on making grants to subsidise various forms of pollution abatement. According to the Implementation Completion Memorandum (ICM), there were numerous problems with the project but some partially quantified reductions in the release of noxious and/or toxic wastes were achieved at a few factories, as well as some increase in energy efficiency in others. The ICM confirms that the closing date of the Grant Agreement was extended in 2001, 2003 and 2007, and in 2009 the remaining CHF 4.716 million grant funds were withdrawn. In

[10] The inclusion of 'UZ01116.01.01' and 'UZ-01116.01.02' in the project titles for Colombia and Perú respectively is of unknown significance as they do not occur as separate entries in the SECO portfolio.

this case, SDC/SECO estimated the CC relevance of the budget at 25%, and we give a *very weak mitigation effectiveness score of 2* for this intervention.

Another four projects (two each under UR-00027 and UR-00576) work with IFC to train emerging market fund managers on key social and environmental development issues, risks, and opportunities for creating shareholder value, or by supporting client governments and companies in developing and implementing ways to address climate change, that create access for local producers to investors, markets and global supply chains, and/or that introduce market-based solutions to increase access to sustainable infrastructure services. A similar approach is embodied in three projects with IFC (all under UR-00593) that focus specifically on developing and implementing environmental and social risk management (ESRM) guidelines applicable to financial institutions, and building relevant consulting and training capacities in Vietnam, Indonesia, China and Thailand. The final project in this IFC group (UR-00263.13.01) focuses on technical assistance to encourage financial institutions to invest in energy efficiency and renewable energy in South Africa. All eight of these projects are considered likely to be effective because of their investment-leveraging effects (the justification for UR-00593.01.03 envisions that in Vietnam alone the project could result in US$208 billion in investments that adhere to ESRM standards), and are given *mitigation effectiveness scores of 5 (strong)*. The only one studied in detail (UR-00593.01.03 in Vietnam), however, was given a *score of 4 (moderate)* in alignment with the synergistic NCPC and GCTF projects in the same country (case study 7).

Case study 7: Synergies among UZ-00987.03.01 (NCPC), UR-00050.03.01 (GCTF), and UR-00593.01.03 (ESRM) in Vietnam

All three projects have the common challenge of meeting the needs of very numerous SMEs, which collectively drive most of Vietnam's economy but are much harder to promote cleaner production among than large companies. Progress on engaging with SMEs has been made nevertheless, and there is the sense that the ESRM, NCPC and GCTF initiatives are all moving forward together, and will become increasingly effective together over time. Although all were rated as *moderately effective (score 4),* we expect this rating to rise in future evaluations. The NCPC project is implemented with UNIDO, and draws on UNIDO's and SECO's global experience of NCPC development. The GCTF project is based on prior and similar initiatives by SECO in Colombia and Perú, where evaluations had confirmed the soundness and effectiveness of the approach. Unlike these, however, the Vietnam GCTF ran into problems in the 2007-2011 financial crisis, with banks imposing very high interest rates and stringent collateral requirements, despite GCTF guarantees, which inhibited uptake by investors until banking conditions were relaxed in 2012-2013. Finally, the Vietnam ESRM project is implemented with IFC, which is managing a regional programme that greatly enhances the leverage of expertise and the exchange of knowledge between countries. Part of this involves a Sustainable Banking Network which includes regulators or industry associations from Vietnam, China, Mongolia, Indonesia, Lao PDR, Thailand, Bangladesh and the Philippines (as well as Nigeria, Brazil, Colombia and Perú). Through their IFC-facilitated discussions, a model for sustainable emerging market banking is rapidly being developed, which is expected to amplify further the greening of businesses in Vietnam and elsewhere. We believe that this group of projects exemplifies the way forward for truly influential and effective national and regional aid portfolios that seek to promote the systematic decarbonisation of the world's economy. A more detailed analysis of this intervention is available in Annex 6.

3.2.3 Recycling and other safe waste disposal

Ozone depleting substances (ODS) include the chlorofluorocarbons (CFCs) that are used in the manufacture of insulating foam for refrigerators as well as being the refrigerants themselves. Old refrigerators therefore contain large amounts of CFCs in their insulation and heat exchangers, which are released when refrigerators are crushed for disposal. Once in the atmosphere, the CFCs erode the ozone layer and act as potent GHGs, with an atmospheric lifetime of several decades. Project 7F-07029 (2009-2014) is piloting the recycling of refrigerators in Brazil, and inaugurated the first specialised facility for doing so there in 2010. SDC/SECO estimated the CC relevance of the budget at 100%, which seems fair, and because of the high potency of the CFCs as GHGs we suggest a *mitigation effectiveness score of 7.*

Project UR-00139.03.01 supported a series of feasibility studies, in three cities in India, Brazil and South Africa, the aim in each case being to improve public health and employment by establishing a public-access knowledge base on electronic waste (e-waste) recycling, analysing the feasibility of sustainable e-waste recycling schemes, and establishing an exemplar[11]. E-waste is a major issue, with

[11] Another project in the portfolio (UR-00535.97.97) targets e-waste recycling in Ghana, South Africa, Egypt, Colombia, Perú, Brazil and India, but with no disbursements its effectiveness cannot be assessed.

a total volume that is currently about 50 million tonnes annually and expected to grow by a third over 2014-2018. This waste contains significant amounts of hazardous material (including heavy metals and ODS residues), and can cause serious health and environmental impacts if not properly disposed of or recycled. The project was estimated by SDC/SECO to be 50% relevant to mitigation, which seems fair as there are other issues than climate change involved, and we *score the project 5 (strong)* for CC effectiveness.

***Concluding remarks**. A clear majority (approximately 75% of projects in the Cleaner Production Centres and Green Investment Incentives theme) show moderate mitigation effectiveness, with 20% attaining a stronger CC effectiveness score. The confirmed scores for projects reviewed in-depth, as well as distribution of scores in different effectiveness categories are presented in Annex 4.*

3.3 Mitigation through ecosystem management

***Introductory remarks**. The review in this section covers 54 projects with 14 projects having confirmed effectiveness scores based on in-depth analysis (see Annexes 3 and 4 for consolidated information of scored projects and distribution of scores across effectiveness categories).*

3.3.1 Natural ecosystems and plantations

Overview. Many of the values of natural ecosystems[12] are not universally appreciated. Particularly hard to understand are some of their 'public goods' roles, for example in sustaining small and/or unknown organisms, and providing ecological services as water catchments (primarily an adaptation service) and carbon stores (primarily a mitigation service which can also be provided by artificial ecosystems such as plantations and farmlands). Experience has taught that unappreciated public goods tend to be neglected, or else actively destroyed in the course of private or communal enterprise, so nature conservation is primarily about finding ways to create a constituency with an interest in protecting natural ecosystems or managing them more sustainably than would otherwise be the case. This can be done in many ways, including through environmental education, and by making (through law, policy and commerce) tenurial and benefit-sharing arrangements that reward sustainable behaviours. The Swiss ecosystem management portfolio contains abundant examples of these approaches, which in many cases promote both CC mitigation and adaptation by helping to ensure that forest, grassland, plantation and other ecosystems continue to provide ecological services.

Multi-stakeholder forest management. An important theme of projects in this group is to involve, educate and reinforce through policy and law the role of local people in forest ecosystem management, variously with an emphasis on biodiversity (e.g. 7F-05448 in Bolivia, 7F-02493 in Haiti), agrobiodiversity (e.g. 7F-05450 in Lao PDR), protected areas and their buffer zones (e.g. 7F-02138 in Ecuador, 7F-07735 in Slovakia), water catchments (e.g. 7F-02993 and 7F-03445 in India, 7F-08038 in Chad), coastal reforestation (e.g. 7F-01013 and 7F-07693 in Bangladesh), and community-based forestry (e.g. 7F-02165 in Bhutan, 7F-03128 in Nepal, case study 8) and/or national forestry systems that usually have a social forestry dimension (e.g. 7F-00369 in Kyrgyzstan, 7F-04039 in Vietnam, 7F-07309 in Nepal). Typical of the holistic approach used here is project 7F-02164, aiming to raise awareness of local and national authorities, and private users, of the value of mountain forest ecosystems in Perú, Bolivia and Ecuador, and to increase their capacity to conserve them by supporting the design of appropriate policies, regulations and instruments.

Case study 8: 7F-03128 Nepal Swiss Community Forestry Project (NSCFP, 1990-2011). This project aimed to achieve sustainable improvements in the living conditions of forest users and disadvantaged families in four of Nepal's poorest districts. The project supported Community Forestry User Groups in adopting sustainable forest management practices through inclusive governance. Although no studies were made to measure the direct climate effectiveness of the project, the field study showed that the project was highly successful in improving sustainability of forest management practices and significantly contributed to poverty reduction by generating new income from forest products for disadvantaged groups. The project was especially successful in poverty reduction by promoting forestry-related employment and entrepreneurship and extending the benefits of community forestry to the poorest households. The village governance work within the project has also created a model where the best practices from community forestry are introduced more widely to local democratic

[12] i.e. those not grossly disturbed by people and retaining most of their native species, gene pools, ecological relationships and evolutionary processes.

processes.

Studies show that community-based forestry management in Nepal contributes to less dependency on forest resources, decline in slash and burn practices and forest fires as well as reclamation of landslide areas and river banks. These results have a direct effect on enhancing the CC adaptation capacity of communities. The project also led to increased new forest area by nearly 33% and improved quality of existing forest by 20%, both achievements contributing also to CC mitigation. The project was rated as having strong effectiveness on climate change *(score 5, strong)*. A more detailed analysis of this intervention is available in Annex 5.

With rather more emphasis on applied biodiversity research and conservation are three projects (7F-03786, 7F-04289 and 7F-05222), undertaken through the Centre for International Forestry Research (CIFOR) and the World Agroforestry Centre (ICRAF), that address the sustainable development of entire landscapes in Lao PDR, Tanzania, Madagascar, Indonesia, and the transboundary zone of Congo-Brazzaville, Northern Cameroon and the Central African Republic. Continuing the holistic and people-centred but biodiversity-oriented approach is project 7F-06872, aiming to strengthen strategy, planning and implementation capacity for nature conservation in Macedonia among national, regional and municipal stakeholders through the elaboration and approval of a National Strategy on Nature Conservation, a regional Spatial Plan and Strategy for Tourism, and ecological gap analyses and sensitivity maps, coupled with increased public awareness and the promotion of positive economic links between conservation areas and society. All the multi-stakeholder forest management projects have so many 'moving parts' (ecosystems, individuals, communities, businesses, governmental institutions, NGOs, etc.), any and all of which can influence outcomes, that it is not possible to score their effectiveness definitively without more comprehensive study in each case. We recognise the sound approach overall, and give an *effectiveness score of 4 (moderate)* for this group of projects, noting also that forest conservation outcomes inherently have both mitigation and adaptation consequences.

Biotrade-based conservation. The biotrade-based conservation portfolio is concerned with adding economic value to natural ecosystems by promoting the sustainable harvesting and marketing of high-value materials (cosmetics, foodstuffs, edible oils and novel products) from them, in South Africa, Ghana, Burkina Faso and Perú. There is also a global project (UZ-01174.02.01) with UNCTAD's Biotrade Facilitation Program to enhance sustainable bioresources management, product development, value adding processing and marketing. The expectation is that natural ecosystems upon which local people and businesses depend, and which generate revenues for the state, are less likely than they would otherwise be to be cleared to make way for another land use. This makes sense, yet the particular biotrade-based conservation projects investigated in South Africa and Perú were *scored 1 (none) and 2 (very weak)* respectively for mitigation effectiveness. In South Africa, this was because the target tree species was locally 'sacred' and according to local informants would never be felled regardless of the intervention. In Perú, it was because although some of the species involved were forest-dwelling, others required non-forest habitat, and there was a lack of evidence for CC effectiveness. We therefore see biotrade-based conservation as a valid concept, but one that has very specific design requirements if it is to be effective in mitigating climate change.

Bamboo and forest plantations. The woody grasses known as bamboos are among the fastest-growing tropical and sub-tropical plants, and the uses to which their strong woody tissues have been put by people are extremely diverse. Prominent among them is their use as a construction material. Two projects seek to promote bamboo planting, harvesting, processing, use and sale as a pro-poor strategy, 7F-04301 in Cuba and 7F-05697 in Vietnam and Lao PDR. The first was anomalously assigned by SDC/SECO to RC3: Renewable Energy, but in both cases there may be some CC relevance as planting bamboo on degraded land could result in a net increase in woody biomass while stabilising slopes and regenerating soils, and substituting bamboo for cement or steel would probably reduce the carbon footprint of buildings. The effectiveness would depend on the scale, the details of planting systems and sites, and the use of materials, and we provide a *moderate mitigation score of 4*. The other projects in this group concern promoting the management of *Acacia* tree plantations in Vietnam to credible international standards as defined by the Forest Stewardship Council (FSC), and in the process increasing revenues and benefits flowing to rural people by exploiting price premiums and market access opportunities offered by timber certification (case study 9). This approach would be expected to contribute to allowing more durable and equitable management of forest plantations. A forest carbon accounting exercise in Vietnam by several FSC partners concluded that significant net carbon sequestration was feasible and expected within FSC-certified forests over three harvesting cycles (36 years). These calculations suggest that an overall mitigation *effectiveness score of 4*

(moderate) would be appropriate for now, but much will depend on replication effects and the extent to which forest stakeholders comply with FSC principles in the long term.

Case study 9: UR-00015 Linking Trade Demand and Sustainable Forest Management (2007-2011). The project aimed to create market linkages between production forests in Vietnam and companies with responsible purchasing policies in Europe, thus encouraging legal and sustainable forest management. By facilitating export-driven compliance with credible international standards of forest management, the project also aimed to provide policy input to the dynamic regulatory frameworks of the forestry sectors of Vietnam, Laos and Cambodia. One of the key components was to facilitate compliance of smallholder forests, mainly *Acacia mangium* plantations, with FSC standards in sustainable forest management. By December 2013 the project contributed to registration of 2,000 ha of FSC-certified smallholdings, creating a price premium of up to 43% for *Acacia* wood. The project also targeted institutional development of State Forest Enterprises in Vietnam and facilitated two Lao companies to receive FSC Chain of Custody certification, thereby increasing the land area of FSC certified forests from 50,000 to 81,600 ha.

The desk study and interviews show that enabling smallholders to practice sustainable forest management proved an effective way to enhance the sustainability of timber production and trade. Project activities within state-owned companies were less effective mainly due to the lack of decision-making authority at the company level. The project was rated as *moderately effective (score 4)*. A more detailed analysis of this intervention is available in Annex 6.

Grasslands and desertification. These closely-related subjects are addressed by a portfolio of six projects, four in Mongolia and one each in Chad and Bolivia. The context of the approach is that drylands cover nearly half of the Earth's land area and are extremely vulnerable to human pressures and to climate change, with up to 20% of the world's drylands already being degraded. Desertification marks the final stages of land degradation, in which soil structure and nutrients, and often the soils themselves, are wholly lost. Most of the drylands threatened by this are found near the five main desert areas of the world, which include the Gobi Desert in China and Mongolia, the Sahara/Sahel in Chad, and the Altiplano and semi-arid Chaco in Bolivia. Pastoralism is central to Mongolian society, culture and economy, and 40% of Mongolians earn a living as herders. Livestock-based range management continues to be their main productive activity and the land use with the greatest impact on environmental services in the country. Desertification already affects over 70% of Mongolia's grasslands, mainly due to overgrazing, yet grassland management has the potential to sequester carbon to the extent of 0.11– 1.50 tCO_2/ha per year[13]. This can be achieved by controlling grazing intensity through regulation of the animal stocking rate, by enhancing rotational grazing, and by limiting grazing time by season over the year. The Mongolian sub-portfolio amounts to a strategic intervention covering all aspects of the dryland-overgrazing-desertification nexus, and the projects (7F-05405, 7F-06465 and 7F -03461, case study 10) were investigated through field mission and given *adaptation effectiveness scores of 3(weak), 5 (strong) and 6 (very strong)*. We use these to support a proxy adaptation score of 5 for the other two projects in the portfolio as well.

Case study 10: 7F-03461 Pasture Ecosystem Management: Green Gold, Mongolia. The rangelands, which comprise 70% of the total national territory, are the backbone of the rural economy and provide food security for the entire nation. According to recent estimates 70-80% of all rangeland is moderately degraded or worse. In the last decade many stakeholders in Mongolia have come to consider climate change as the main cause of land degradation, erroneously replacing an appreciation of human factors such as overgrazing resulting from unregulated and open access to pastures. The main goal of Green Gold is to encourage and enable communities of herders to preserve, protect and nurture their pasture ecosystems. The project has been effective both in achieving its stated aims and in building increased community resilience to the consequences of climate change *(CC adaptation effectiveness score 6, very strong)*. In addition, through improved rangeland practices (covering 21.7 million hectares of pastureland, or some 20% of national land area) the project is also contributing to carbon sequestration, exemplifying an intervention with considerable CC co-benefits and important adaptation and mitigation synergies. A more detailed analysis of this intervention is available in Annex 5.

REDD+ with multiple stakeholders. It was agreed at the 16th UNFCCC Conference of the Parties that REDD+ investments must be adequately safeguarded to avoid injuring the land and other rights of indigenous people, and to encourage and enable their participation in designing and implementing such investments and in benefit flows arising from them. Obtaining this participation across so many peoples over the Amazon was hard but necessary, and contributed to the feasibility of the Amazon Fund, which is the largest dedicated fund supporting efforts to reduce emissions from deforestation

[13] *The Economics of Climate Change in Southeast Asia: a Regional Review* (Asian Development Bank, Manila, 2009).

and degradation in the Amazon. It is managed by the Brazilian Development Bank with US$1 billion in funding from the government of Norway, and technical assistance from Germany. Project 7F-08110 in Brazil supported indigenous peoples in networked dialogue to allow the expression of their independent opinions on REDD+ and its implementation in the Amazon Basin. On the assumption that this contributed to unlocking the potential of the Amazon Fund, we suggest a *mitigation effectiveness score of 7 (extremely strong)*. The other projects in this portfolio, 7F-08269 in the Mekong region and 7F-05664 in Madagascar, are presumed to be effective but clearly lack the leverage of 7F-08110, so are scored a more modest *5 (strong)*. Recognising that forest conservation motivated by carbon financing will have both mitigation and adaptation consequences, we suggest an equal score for both aspects.

3.3.2 Organic farming

The organic farming theme is represented by nine projects: one each in Burkina Faso, Ukraine, Ethiopia, Ghana, Kyrgyzstan and Mali, two in Central America, and a global finance initiative. Eight are assigned by SDC/SECO to RC5: Sustainable Standards, which is a pathway to reduce GHG emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. All the area-specific projects aim to reduce environmental impacts of conventional farming by reducing the use of biocides and/or to improve farmer livelihoods through marketing support, the latter often aimed at promoting the export of organically-certified commodities involving domestic or regional buyers (UR-00045.02.01, UR-00196.04.01, UR-00168.04.01) or buyers in European markets such as Switzerland (UR-00366.04.01 for cocoa, UR-00164.02.01 and UZ-01193.03.01 for cotton, and UR-00152.01.01 for coffee). The approach used variously focuses on transferring knowledge about organic techniques and niche market potentials, developing the standards needed to support trademarking and certification, improving the services available locally to organic farmers, and forging relationships between producers and buyers. One of the two Central American projects (7F-02202) is concerned with reducing (but not eliminating) the use of biocides through integrated pest management (IPM). Finally, the global finance project (UR-00419.01.01) aims to provide for the continued availability of trade finance for organic produce from developing countries, by contributing to a guarantee facility in the wake of the 2009 financial crisis.

Organic farming is known to increase the carbon content of soils. According to UNEP[14], in Uganda CO_2 emissions per hectare are up to 68% less on organically than on conventionally farmed land, and organic fields sequester 3-8 tonnes more carbon per hectare; there are also co-benefits in terms of biodiversity, water and health. A 2009 review of the evidence by the UK-based Soil Association[15] found that "organic farming produces an average of around 28% higher soil carbon levels than non-organic farming in northern Europe after around 15 years of organic management", while also improving soil structure and quality, thus supporting CC adaptation "by reducing the impacts of flooding, droughts, water shortages and desertification". The same source estimated the carbon sequestration potential of widespread organic farming to be on the close order of 1.5 billion tonnes (5.5 billion tCO_2e) per year, or about 11% of annual anthropogenic GHG emissions.[16] Considering known mitigation potential, organic farming presents likely adaptation benefits and numerous co-benefits in terms of human and ecosystem health, we provide a *mitigation/adaptation effectiveness score of 6 (very strong)* for this family of interventions, including UR-00419.01.01 which is particularly strategic. A lower *score of 4 (moderate)* is proposed for 7F-02202 because of the more diffuse mitigation/adaptation effects of IPM relative to fully organic farming.

Concluding remarks. *As noted above, projects covered in this section often have the potential to provide both mitigation and adaptation benefits. With regards to mitigation, a clear majority (close to 90%) of projects show moderate mitigation effectiveness with a fraction of projects reaching strong CC effectiveness, and a couple of projects remaining at very weak effectiveness (also highlighted in our analysis of reasons for excellence and weakness later in the report). With regards to adaptation the overall picture on effectiveness is stronger, with around one third of projects reaching very strong effectiveness levels and the majority of projects showing moderate to strong*

[14] http://www.unep.org/pdf/greeneconomy_successstories.pdf
[15] http://www.soilassociation.org/LinkClick.aspx?fileticket=SSnOCMoqrXs%3D&tabid=1326
[16] The positive impact of organic farming on CC mitigation is clearest when compared per hectare farmed. However, when yields are considered, the net benefits compared to traditional farming methods are lower due to lower yields per hectare (e.g. FAO 2014, Wani et al. 2013).

CC adaptation effectiveness. The confirmed scores for projects reviewed in-depth as well as distribution of scores in effectiveness categories are presented in Annex 4.

3.4 Adaptation through risk management

***Introductory remarks**. The review in this section covers 31 projects, with 7 of them having confirmed effectiveness scores based on in-depth analysis (see Annex 3 for consolidated information of scored projects and distribution of scores across effectiveness categories).*

3.4.1 Disaster risk reduction

Overview. A warming biosphere means that we are confronted by an increasingly unstable world in which ever more people are exposed to severe storms, floods, droughts, heat-waves, bouts of extreme cold, rising sea levels, and progressive changes to, for example, long-term ice conditions on mountains that can desiccate or temporarily obstruct river systems, creating water shortages and acute flood risks. The Swiss have developed a portfolio of interventions designed to help people anticipate, prepare for and cope with such disasters ('disaster risk reduction', DRR), and to devise insurance-based mechanisms to share risk and compensate for calamity ('disaster risk insurance', DRI).

Protection & early warning against specific threats. Set against the fact that sea-borne cyclonic storms take their energy from oceanic warmth, and become more intense as that warmth increases, are four projects that focus on protecting coastal communities from storm surges and other storm-related phenomena such as mud-slides: two to build cyclone shelter towers in Bangladesh (7F-06215 and 7F-06902), one to adapt school buildings into disaster refuges in the Philippines (7F-07178), and one to restore beach dune systems and build a sea-wall to protect a port city in Mozambique (7F-07923). Bangladesh and the Philippines are very vulnerable to cyclonic storms, with inundation of densely-populated flatlands being the chief threat in the former, and collapsing deforested hillsides being a particular hazard in the latter. Beach dunes can offer considerable protection against storm surges (as well as tsunamis), and sea walls are a proven engineering solution to harden exposed sea-fronts and harbours. Other projects in the DRR portfolio comprise:

- 7F-07130 to develop a Drought Early Warning System in Syria (appropriate because of the slow onset of drought and the subtle and complex interplay of water, soils, seasons, crops, aquifers, farm prices and other factors involved as a serious drought unfolds);
- 7F-08216 to develop an integrated flood risk management system in the Changjiang river system in China (appropriate because flood risks have complex drivers that include the integrity of catchment ecosystems, land use in floodplains and the extent of canalisation of rivers, as well as the location, intensity and duration of rainfall);
- 7F-07572 to buffer livelihood impacts of cold-weather disasters (*dzud*) in Mongolia and then to correct shortcomings in national policy and disaster (appropriate because of a focus on over-stocking and over-grazing, the main drivers of vulnerability in Mongolia); and
- 7F-06585 to improve disaster awareness and preparedness in Tajikistan, and where possible to reduce risks from 'remote geohazards' such as glacier lake outburst floods and landslides (appropriate because the approach responds to the consequences of melting glaciers and tectonic instability in a mountainous country, and the project deploys a mixture of geological and hydrological investigation, good engineering practices, capacity building, and land use management regulations).

These projects all seem to reflect strategic choices appropriate to the context and hazards concerned, and are likely to be effective adaptation measures. While an *a priori* score of 5 can be justified for these types of projects, the two cases presented below illustrate some of the reasons for varying CC specific effectiveness in different interventions (case studies 11 and 12). This aspect is also recognized in the latest OECD-DAC peer review[17], which notes the interconnected nature of disaster risk and climate risk, and also points out steps taken to link climate change adaptation work with Swiss humanitarian programming more generally.

[17] OECD DAC peer review 2013 http://www.oecd.org/dac/peer-reviews/switzerland.htm

Case studies 11 and 12:

7F-07572 The Mongolia Disaster Relief and Prevention Project (MONDIREP)

The project responded successfully to the most urgent needs of herders affected by the 2010 cold-weather disaster (*dzud*). The project also aimed to mainstream *dzud* responses based on practical experience and to contribute to improved *dzud* preparedness and policy in the future. However, while the project was highly effective in its disaster relief component, and appreciated by the Mongolian partners, its CC adaptation effectiveness remained low, as no explicit measures were taken to analyse climate variability and in particular forecasted CC impacts into the project's prevention and preparedness measures (*CC adaptation effectiveness score 3,* weak). A more detailed analysis of this intervention is available in Annex 5.

7F-02864 Natural Disaster Risk Management (NDRM) – Muminabad, Tajikistan.

The 2008-2010 Swiss-funded project in Muminabad district, which has about 72,000 inhabitants and is located in the south of Tajikistan close to the Afghan border, has contributed to strengthened DRR capacity through introduction of integrated disaster risk management by increasing the coping capacity of local government, civil society organisations and the population at large *(CC adaptation effectiveness score 6, very strong).* Although CC is not referred to in the project design, several of the project achievements contribute indirectly to strengthened preparedness and also CC adaptation capacity. The strong local ownership in prevention activities as well as interest in energy efficiency and renewable energy solutions (including solar cookers, energy efficient stoves, and household energy saving with heat exchangers) are concrete measures that help reduce pressure deforestation pressures and soil erosion in a hilly area with elevation levels varying between 700 to over 3,000 m above sea level. These are fully in line with pro-adaptation measures. A more detailed analysis of this intervention is available in Annex 7.

Disaster risk reduction mainstreaming and capacity building. This theme is addressed through a number of approaches. First, there is the promotion of international DRR knowledge exchange (7F-04726), which was assessed as a moderately effective contribution to CC adaptation (*score 4*). Second, there is the establishment of a national centre of DRR competence in Tajikistan (7F-04346), which was given an adaptation score of 5 (*strong*) because, as well as contributing its own effects, it is thought likely to amplify the influence of other parts of the large Swiss portfolio in the country (7F-00604, UR-00064.02.03, 7F-06585, 7F-06945, 7F-00934, UR-00174.03.01 and 7F-02864, the last described in the case study above, with reasons to expect very strong CC adaptation effectiveness and a score of 6). Third, there are multi-project interventions that promote DRR analysis and risk management at all levels of society, its mainstreaming within development planning, and capacity building through training and knowledge exchange in Bolivia (7F-07312, 7F-07768, 7F-04279), Georgia (7F-04519, 7F-06937), Honduras (7F-05041, 7F-07687), Jordan (7F-05460, 7F-06841) and Tajikistan (7F-02864, 7F-06945, 7F-03729), the continuity and comprehensiveness of which suggest a high degree of effectiveness (*adaptation score 6, very strong*). Fourth, there is a single project in Lebanon (7F-06839) which focuses on similar themes, but because of its isolation might be less effective than the others (*adaptation score 4, moderate*). Fifth, there is a single project in Armenia (7F-03730) which concerns the strengthening of a decentralised disaster rescue system, a relatively straightforward task and likely to be quite effective (*adaptation score 5, strong*). Sixth, there is a single project (UR-00519.97.97) with the World Bank, designed to deliver technical assistance and capacity building with a focus on two areas, one of which concerns the financial mitigation of sovereign disaster risk (i.e. catastrophe risk assessment, fiscal risk management of natural disasters, and capacity building for disaster risk financing strategies), and scored 6 (*very strong adaptation effectiveness*) here because of its leveraging potential.

3.4.2 Disaster risk insurance

The DRI theme is represented by six projects: one focused on the African continent, one on the Southern African Development Community (SADC), one on Asian rice-producing developing countries, and one each on India, Haiti, and Mongolia. The projects are distributed by SDC/SECO among RC7: Adaptation Capacity (two) and RC6: Awareness Raising **(**four). The distinction is not convincing, however, and all are treated here as belonging to RC7: Adaptation Capacity, which is a pathway to build national capacity to undertake sectoral and cross-sectoral adaptation planning, and to deliver resources to support local adaptation efforts (see Annexes 5 and 7). These projects all aim to facilitate the compensation of disaster-related damage through insurance mechanisms, and thereby to increase socioeconomic resilience to the effects of climate change. The scale of the approach ranges from inter-governmental risk sharing in relation to macro-scale events such as region-wide droughts and floods (7F-08569), to promoting micro-insurance against disasters and other hazards for small-scale farmers (7F-07994) and microcredit borrowers (7F-07916). Index systems are also being developed that exploit known correlations between environmental conditions and livestock mortality (7F-06642, case study 13) or crop losses (7F-07807), thus simplifying and speeding insurance claims.

Such measures require both research to establish and quantify correlations (or establish causality), and environmental monitoring to detect changes that would trigger claims, a process that is explicit in project 7F-07934. This research requirement may be why 7F-07994, 7F-06642 and 7F-07807 were initially assigned to RC6: Awareness Raising (through the accretion and management of knowledge), but in our view the effect of building adaptation capacity is the dominant purpose.

Case study 13: 7F-06642 Index Based Livestock Insurance Project, Mongolia. The main objective of the project running until 2015 is to ascertain the viability of index-based livestock insurance in Mongolia in order to reduce the impact of livestock mortality for herders. In 2010, Mongolia experienced its worst *dzud* on record for which SDC together with other donors provided immediate disaster relief (see case study 11 above). Livestock insurance is an important complementary activity within the Swiss-funded Mongolian aid portfolio, providing a market-based instrument for risk management. The project, managed by the World Bank, has already shown effectiveness in reducing the impact of livestock mortality on herders, as well as reducing overall vulnerability to climate extremes. When reviewing the insurance premiums, the project also investigated forecasted implications of climate change in Mongolia. While based on the analysis no major changes to the premium were considered necessary, this is a sign that the scheme is being explicitly climate proofed, and is actively addressing weather extremes as well as the challenges of advancing climate change *(CC adaptation effectiveness score 5, strong)*. More detailed analysis of this intervention is available in Annex 5.

Insurance pay-outs are likely to support local adaptation efforts because the claimant has the opportunity both to learn from what went wrong (i.e. to understand and quantify vulnerability) and to 'build back better' (i.e. more resiliently, using capital to invest in more robust farming systems or housing, or to relocate to a safer place). This would apply at the micro- and macro-levels, including the national level where strategic adaptation decisions on major infrastructure and development zoning can be taken, and where ODA (with donors acting in effect as underwriters) can be more efficiently deployed in response to calamity both for investment and humanitarian relief purposes. Moreover, the risk-sharing nature of insurance promotes awareness of hazards, incentivises investment in hazard reduction, and encourages social solidarity, which are all likely to be important in the face of climate change. While it would require much research to establish what insurance policies were actually offered to and accepted by whom, and with what effect in the real world, we assess the approach represented by the projects in this group is an effective one, and provide an *adaptation effectiveness score of 5 (strong)* for all of them.

***Concluding remarks**. Based on our analysis, projects in disaster risk reduction and insurance tend to be strong in CC adaptation effectiveness, even in many cases where the CC aspects (be it through use of CC scenario work or downscaled climate data and explicit CC screening and proofing) are not integrally part of the project design (see analysis in sections 5 and 6). Very few cases of weak CC adaptation effectiveness could be identified in the analysis of projects in this section. The confirmed scores for projects reviewed in depth as well as the distribution of scores in CC adaptation effectiveness categories are presented in Annex 4.*

3.5 Adaptation through stronger ecosystems and societies

***Introductory remarks**. The review in this section addresses 48 projects, with 7 having confirmed effectiveness scores based on in-depth analysis (see Annexes 3 and 4 for consolidated information on scored projects and distribution of scores across effectiveness categories).*

3.5.1 Farming systems and food security

These projects concentrate on three main areas. First, they focus on managing knowledge and improving regulation and networks for the development and distribution of seed varieties with which to grow improved (i.e. more nutritious, more productive) crops (7F-03316 in the SADC region, 7F-08265 globally and 7F-03093 in Nepal, case study 14). Second, they aim to improve planting material for tree crops oriented to salt-tolerance, which is adaptation-relevant in Bangladesh, and fruit production for enhanced livelihoods (7F-03804 in Bangladesh);. Third, they encourage and enable local stakeholders to find and share through networking (and/or to learn through training) new ways to improve the resilience and productivity of their farming and food storage systems and the soils and water-bearing ecosystems upon which they depend (7F-08326 and 7F-07294 in Cuba, 7F-02188 in Central America, 7F-05733 in Niger, 7F-03149 in Nepal, 7F-01711 and 7F-02948 in Lao PDR, 7F-03046 in India, 7F-06626, 7F-05549 and 7F-05555 in Georgia, 7F-06300 in Africa, 7F-01051 in Bolivia, 7F-07746 in Somalia, 7F-07957 in Benin, 7F-00455 in Chad, 7F-05377 in Ethiopia). The

common theme is to remove knowledge-based, regulatory or organisational barriers to the flow of potential solutions to livelihood constraints in the context of deteriorating environmental conditions (e.g. saline intrusion, drought, flood, and soil depletion) that are associated with or could be aggravated by climate change. In principle, this approach is highly appropriate as a way to enhance adaptation to climate change, although the range of SDC/SECO adaptation relevance estimates (10-100%) is curious and no explanatory pattern is visible in the evidence.

Case study 14: 7F-03093 Hill Maize Research Project in Nepal (HMRP, 1999-2014) HMRP aims to increase maize supply in rural areas of Nepal through research on maize varieties, dissemination of chosen varieties to hill farmers, participatory variety selection, production of millions of tonnes of improved maize seeds, and linking farmer's feedback to policy decisions through farmers' assessments of the new varieties. The project also contributes to establishing a national research system and strengthening the capacity of farmer groups to produce maize seeds and deal with markets to obtain higher and more assured prices. Project estimates are that a 20% increase in productivity has contributed to increased incomes among about 50,000 households. The project has also contributed to an understanding of the importance of agricultural research at the national level, and has increased research capacity among national agricultural institutions contributing to sustainability and a national capacity to adapt to climate change. The maize varieties promoted through the project are resistant to drought, heat and lack of nitrogen and thus improve the climate change adaptation capacity of communities. Mitigation effects are likely to be very minor although intercropping practices introduced through the project may increase soil carbon. Project results show that activities that mainly target poverty reduction (e.g. through improving food security) can have significant co-effectiveness on climate change adaptation. Improved livelihoods are often linked to greater resilience towards changes in the environment which contributes directly to the climate change adaptation capacity of communities. The project was rated as *moderately effective (score 4)*. A more detailed analysis of this intervention is available in Annex 5.

There are also two projects with both adaptation and mitigation relevance: 7F-03804 (40% each), and 7F-05377 (25% mitigation, 75% adaptation). It could be argued that the mitigation relevance of project 7F-03804 would rely on a net increase in woody biomass resulting from replacing salt-vulnerable trees (which may die due to saline intrusion) with more salt-tolerant ones, which is possible and potentially quantifiable with adequate base-lining and monitoring. The mitigation significance of project 7F-05377 is far from obvious, however, given that its purpose is to help drought-affected pastoralist and agro-pastoralist communities recover from recent drought and increase their resilience to future natural hazard, and that all three sectoral priorities of this intervention are given as 'emergency food aid'. In any case, because of the lack of a specific CC related criterion for seed improvements in 7F-03316 or 7F-03093 we score them *2 for CC effectiveness (very weak)*. This does not apply to the other agrobiodiversity project 7F-08265, the core idea of which "is to buffer communities from climate changes risk by increasing their available portfolio of agricultural biodiversity to hedge against unpredictability of climate", and a higher *effectiveness score of 6 (very strong)* is given to it. All the other farming system and food security projects are likely to be relevant to adaptation to some extent, and in cases where no detailed study or field mission has been undertaken in the current study we accept their SDC/SECO relevance estimates as valid proxies for their likely effectiveness on adaptation. Thus, 10-25% projects are scored 4 and 50-100% projects 5, a protocol approximately consistent with the confirmed scores from detailed studies of projects 7F-03093 in Nepal (10% relevance, *score 4 - moderate*), 7F-03804 in Bangladesh (80%, *score 6 for adaptation- very strong, 3 for mitigation - weak*), 7F-05733 in Niger (25%, *score 4 - moderate*) and 7F-03149 in Nepal (25%, *score 5 - strong*).

3.5.2 Water resources management

Area based integrated WRM. The regular supply of adequate fresh water is a landscape-level challenge involving the functionality of catchment ecosystems (whether farmed or not) in capturing, holding and releasing water while retaining soils, interlinked downstream with the condition of streams, rivers and floodplains and the distribution of houses and other infrastructure. Awareness and management of factors that can cause flooding, pollution and, in the case of irrigated farmland, salinisation, are also important parts of an area-based WRM strategy. Thus among the hallmarks of such a strategy, if it is to be effective, is an holistic approach to multiple interactive issues, built on a clear understanding of the area's ecology and around the comprehension and participation of the area's inhabitants. These signs are evident in several of the projects in this portfolio, including:

- 7F-07815 in Pakistan, which targets participatory village-based improvement in water retention and irrigation, water conservation, and catchment restoration, while also institutionalising disaster risk responsibilities at the community level;
- 7F-07757 in Nepal, which rehabilitates water-management infrastructure and raises awareness on the need for catchment management and disaster preparedness;
- 7F-00934 in the Ferghana Valley of Uzbekistan, Kyrgyzstan and Tajikistan, where a landscape-wide approach is taken to promoting ecological awareness among water users and establishing cross-border cooperation in irrigation; and
- 7F-08025 in Morocco, which "includes interventions at various levels aiming at an improved and sustainable water resource management, but simultaneously representing key elements for climate adaptation: Reuse, multiple use and more efficient use of water resources, integrated water use plans, and sustainable rain water management account for conservation of scarce water resources and increase the adaptive capacity potential for droughts and flooding".[18]

Based on their features as summarised above, we anticipate good levels of adaptation effectiveness among these projects (*score 5, strong*). The other projects in this thematic group (7F-08076 in Tunisia, 7F-08368 in Egypt, 7F-07764 in Mali), however, are more focused on particular aspects of the WRM puzzle, such as water access and delivery, water use efficiency and urban flood risk management, and we estimate a *moderate adaptation effectiveness score of 4* for these.

Knowledge management for WRM. These projects concern enhancing the management of information about water resources (7F-07801 for Chad) and how to manage them effectively and sustainably, whether at a regional level (7F-02360 and 7F-05912 for Central Asia) or a national one (7F-06717 in Niger), including the provision of technical support in maintaining water systems and improving irrigation and drainage techniques (7F-06401). We expect good levels of effectiveness among such knowledge management projects (*adaptation score 5, strong*). There is also a global project (7F-07992) designed specifically to promote 'payment for ecosystem services' (PES) arrangements for water catchments, by collecting global lessons learned and best practices, and packaging and disseminating the information to various audiences. We see the PES approach as a vital part of the solution to the global crisis of sustainability, potentially applicable to other ecosystem goods and services but particularly to water, and recognise the leverage potential of this project with an *adaptation effectiveness score of 6 (very strong)*.

Physical and institutional rehabilitation of water systems. This portfolio concerns a number of related themes to do with the sustainability of water systems. Two projects (7F-02263 in Nicaragua, 7F-02239 in Honduras) concern setting standards, forming alliances with government institutions and building water-management capacity at local level, which we expect to yield good results *(effectiveness score 5, strong*). A substantial group of projects focus on water and irrigation in arid and semi-arid Central Asia, including establishing control systems for large irrigation schemes (7F-03205 in the Ferghana Valley), decentralised management of drinking water (7F-04169 in the Ferghana Valley), supporting government in developing the policy basis, design and operation of water and sanitation systems (7F-06431 in Tajikistan) and through a regional advisory intervention (7F-06436), and by helping water companies to place their businesses on a more stable and sustainable footing, by way of rehabilitated infrastructure and improved metering, billing, payment collection and financial and operational management (UR-00174.03.01 and UR-00454.01.01 in Tajikistan, and UZ-01167.03.03 in Uzbekistan). Based on the clustering of projects in this region, combined with the area-based approach to WRM noted above, we expect good levels of overall effectiveness (*adaptation score 5, strong*).

Several of these projects involve changing the ways in which water is moved over long distances, by rehabilitating and redesigning gravity systems and improving pump systems, which would have consequences for energy efficiency and by implication CC mitigation. Although little evidence for these effects is presented, it is presumably why projects UR-00174.03.01, UR-00454.01.01 and UZ-01167.03.03 are all given a mitigation relevance of 25% and assigned by SDC/SECO to RC4: Energy Efficiency. It therefore seems reasonable to add a *mitigation effectiveness score of 4 (moderate)* to recognise this aspect of these projects. The portfolio also includes a project (7F-02242 in Azerbaijan, case study 15) focused on the rehabilitation of ancient *kahriz* systems, which are an inherently sustainable way to harvest ground water that fell out of use during Soviet times, and which have much to contribute to adaptation *(tentative score 7 – extremely strong, confirmed score 5 - strong*). The

[18] Project 7F-08025, Credit Proposal, page 7.

last two projects involve rehabilitating small-scale irrigation systems in Zimbabwe (7F-07769), which is a valid adaptation response (*score 4, moderate*), and working on a water supply system for Palestinian refugees in Gaza (7F-08096, named as being located in Jordan, even though Gaza was formerly in Egypt and is now in Palestine), with an emphasis on public health (*score 3, weak*).

Case study 15: 7F-02242 Economic Development and Income Generation in Nakhchivan Rural Communities through Kahriz Rehabilitation, Azerbaijan. Much of Azerbaijan lies in one of the driest regions on earth – with approximately 100,000 m^3 per year of water supply per km^2 - and the country has far fewer water resources than other countries in the South Caucasus (e.g. 8.3 times less water per person than Georgia). The project (which started in 2002 with a fifth phase completed in 2011) has successfully supported employment and income generation in the rural areas of the Nakhchivan Autonomous Republic (an exclave of Azerbaijan separated from the rest of the country by Armenia) by enhancing communities' access to water through rehabilitation of *kahriz* systems (the rehabilitation of 42 such systems has been completed, providing drinking and irrigation water to 2,703 families, and allowing more than 200 ha of additional lands to be irrigated) downstream water management, and by supporting livelihoods and business development services related to the rehabilitation and maintenance of *kahriz* systems. The project activities contributed directly to improved DRR awareness and preparedness, and flood protection for the newly rehabilitated *kahriz* systems. However, the project included no explicit screening of forecasted CC impacts, for which reason the confirmed score *for CC adaptation effectiveness (score 5, strong*) is slightly lower than the tentative score 7 (noted above). Yet the strengthening of local livelihoods (also supported by evidence of reduced migration from the autonomous republic) and increased DRR preparedness (including an enhanced role for women in the Water Users Committees), are also no-regrets measures for strengthening the adaptive capacity of the communities concerned. This project also exemplifies an intervention where the CC relevance was estimated by SDC to be rather low (25% for adaptation) but which shows strong effectiveness when looking at the achievements in more detail (see Annex 7).

Water diplomacy & high-level capacity building. The potential for friction over shared rivers is immense, given the large number of rivers and river basins that cross national boundaries. Events inside each country's share of the catchment change the river downstream, and can include deforestation and erosion, irrigation and agrochemical use, the discharge of toxic effluents, the escape of leachates from garbage dumps, and the release of untreated sewage, as well as the building of dams and canals, and the diversion of water to cities. The scope for dispute is so great that water diplomacy is an important job of foreign ministries in many countries. This is recognised through one project in the portfolio (7F-07689), which aims to foster sustainable water management and contribute to peace-building, by promoting collaborative regional solutions in the Middle East and implementing actions on the ground in Syria and Lebanon, an approach that is no doubt very challenging but has the potential for good *adaptation effectiveness (score 5, strong)*. Many of the same issues occur within countries, as administrative boundaries often cross catchments and rivers and there is the potential for water use, dam-building, pollution, etc., in one area to impact people and businesses in another. These conflicts must often be resolved at high level within the government concerned, using its planning, arbitration and conflict resolution powers, for which capacity building is essential. This is recognised through one project (7F-05631 in Bolivia), which focuses on all necessary aspects for the implementation of a national 'watershed' (i.e. catchment[19]) plan, including capacity building on policy and legislation, establishing standards and learning networks, and in planning, execution, tracking and monitoring of implementation, all of which suggests good levels of effectiveness (*score 5, strong*).

***Concluding remarks**. Based on our analysis, projects in the Farming Systems, Food Security & Water Resources Management theme show generally strong CC adaptation effectiveness. Some of the projects contribute also to CC mitigation, but these mitigation co-benefits remain limited or are not quantifiable, as they are rarely monitored and reported on. Confirmed scores for projects reviewed in-depth and distribution of scores in CC adaptation as well as CC mitigation effectiveness categories are presented in Annex 4.*

3.6 Adaptation through knowledge management

***Introductory remarks**. The review in this section covers in total 36 projects (with 12 addressing environmental monitoring in section 3.6.1, and 24 related to policy development in section 3.6.2), including 5 projects having confirmed effectiveness scores based on in-depth analysis (see Annexes 3*

[19] Usage varies between American and UK English, but we use 'catchment' to mean an area that catches rain which flows into one river system, bounded from other catchments by 'watersheds'.

and 4 for consolidated information of scored projects and distribution of scores across effectiveness categories).

3.6.1 Environmental monitoring

The environmental monitoring theme is represented by 12 projects: two in the Sahel/Sahara region of Africa, six in the Andean region of South America, three in the Himalayan region of Asia, and one that examines air pollution issues in large Asian cities. The projects are distributed by SDC/SECO among three Result Chains:

- The RC7: Adaptation Capacity projects all have environmental monitoring and the collection, analysis and dissemination or exchange of scientific information as central to their approach, whether focused on renewable natural resources research systems (7F-02843 in Bhutan) changes in arid environments (7F-08079 in the Sahel), aquifer systems (7F-00382 in the north-western Sahara), water catchments, glacier dynamics and glacier lake outburst floods (7F-07833 in Perú, 7F-08037 in the Indian Himalayas, 7F-07733 in western China, case study 16), or biodiversity (7F-07991 in the Andes). The common theme is the use of knowledge to improve the quality of more applied actions, such as planning to reduce risks and improve early warning. Because knowledge is so necessary for adaptation planning, and because several of these projects (7F-08079, 7F-07833, 7F-08037) also promote participatory action at the local level, SDC/SECO gave them high estimates of their relevance to climate change: four at 100% for adaptation (7F-08079, 7F-07833, 7F-08037, 7F-07733), one at 75% (7F-00382), and one at 50% but with another 50% for mitigation (7F-07991) reflecting its contribution to forest ecosystem management.
- The RC6: Awareness Raising projects all concern the strengthening of environmental monitoring systems (UR-00410.01.01 and UZ-00255.02.01 in Colombia), or improving the flow of accurate information among technicians and between them and decision makers (7F-08453 and 7F-06440 in Perú), but there is overlap between these approaches. The common theme is improving the flow of relevant knowledge into decision-making systems. Because of the diverse sources and uses of this information, relevance to climate change among these projects was judged by SDC/SECO to be mixed, ranging among 50% each for adaptation and mitigation (7F-08453), 100% adaptation (7F-06440), 50% adaptation (UR-00410.01.01) and 50% mitigation (UZ-00255.02.01).
- The single RC4: Energy Efficiency project (7F-03854) is also about improving the scientific understanding of a major environmental issue (the 'Asian Brown Cloud', a large-scale aggregation of air pollutants from multiple, mainly urban, sources), and to train scientists to undertake further studies. Because of the indirect relationship between science focused on the sources and chemistry of air-borne pollution and the formulation of policy and incentives that might affect energy efficiency and GHG emissions, SDC/SECO classified this project as only 30% relevant to climate change.

Case study 16: 7F-07733 Climate Change Adaptation in China: Monitoring and Early Warning of Glacier Lake Outburst Floods in the area the Yarkant River (2010-2015). By 2050 it is estimated that glaciers in Western China might be reduced by about 27% which will have an impact on the source of water for over 300 million people along the Yangtze and Yellow Rivers. The melting ice from these receding glaciers is heightening the risk of glacier lake outburst floods (GLOFs) to critical levels. The Yarkant River is located in the southwest of Xinjiang Province, at the margin of the south-western Tarim Basin and ranks number one in Xinjiang in flood frequency and in losses caused by floods. The Yarkant floods threaten an alluvial area of 50,000 km^2 with a population of more than 1 million, and cause damage and losses of about CHF 11.5 million (RMB 70 million) every year on average. By the time of this review, the project had achieved concrete progress on flood modelling and CC monitoring and analysis (including compilation of base maps and establishment of a detailed digital elevation model of the Kyagar Glacier Lake basin, and evaluation of future scenarios for Kyagar GLOFs considering global climate change), early warning system development and establishment (including satellite remote sensing for early warning of GLOFs, installation of gauge and warning stations, web cameras, etc.), as well as increased understanding of glacier change processes under conditions of CC. Through the definition of the thresholds for triggering an alarm, the implemented GLOF early warning system has become fully automatic. There is also evidence of important capacity building, training, knowledge and technology transfer, which has been matched by commitment of Chinese partners for up-take and making efficient use of deliverables. The project has already produced interesting information about glacier development that can also serve similar projects in other parts of the world. The fact that the project is implemented under the umbrella of broader water management related activities (including dam safety, integrated flood risk management) can be expected to support successful completion of the project. Also the leading Swiss expertise in glacier monitoring and risk management as well as experience from similar types of interventions (e.g. in Perú) can be expected to strengthen the potential for good CC effectiveness of this particular project (*with CC adaptation effectiveness score 6, very*

strong). A more detailed analysis is available in Annex 7.

The utility of public science focused on environmental change lies in its ability to allow stakeholders (i.e. those with something to gain or lose from decisions) to make informed judgements about the consequences for themselves of the decisions made by their rulers or representatives. Public understanding of climate change tends to fuel voting preferences and activism (e.g. by NGOs and the media) in favour of mitigation and/or adaptation efforts becoming political priorities, and contributes to holding politicians to account for the effectiveness of those efforts. Thus public environmental science can act as a driver of political change, although its implications are frequently opposed by interest groups that have other priorities, notably those in the energy, transport, manufacturing and corporate agriculture sectors, and their political allies. Where decision makers have accepted the need to respond to climate change, however, information flowing from environmental research and monitoring can help focus and target adaptation and mitigation efforts, and allow decision makers to demonstrate that they are responding to public concerns. This suggests that in principle the effectiveness of these projects is likely to be fairly high, given the essential role of knowledge in motivating and informing wise decision making (*mitigation/adaptation effectiveness score 5, strong*). The single RC4 project is less directly linked to climate change, but air pollution is an important public concern across urban Asia, and efforts to control it are more likely than not to have positive mitigation consequences *(estimated mitigation effectiveness score 4, moderate)*.

3.6.2 Policy development

The policy development theme is represented by 24 projects, the concept underlying all of them being that solutions to climate change issues can be found, improved and better applied (whether through laws, plans, strategies or practical actions) through the sharing of knowledge and informed dialogue around policy among concerned stakeholders, or among those who will become concerned as a result of their participation in these processes. The projects are distributed by SDC/SECO among the following five Result Chains.

- The fourteen RC7: Adaptation Capacity projects concern international knowledge sharing on climate risks and adaptation and/or mitigation solutions (7F-08049 in China, 7F-06587 in Africa, 7F-07476 in partnership with ASEAN, 7F-06576 in partnership with UNDP, 7F-06610 in West Africa, 7F-02705 in partnership with IRRI and 7F-06983 in China and globally, case study 18), and/or mainstreaming adaptation measures into development decisions (7F-06983, 7F-05409 in Perú, 7F-06811 in Bangladesh, 7F-08219 in Lao PDR, 7F-08546 in Lao PDR and regionally), and/or raising climate awareness among decision makers (7F-08104 in Nicaragua, 7F-08402 in Perú and Chile, and 7F-07834 and 7F-05409 in Perú, case study 17). These are inter-linked approaches that can be expected to reinforce one another, although the entry point varies, with some projects emphasising the adaptation issue of water resources management (e.g. 7F-08049, 7F-08402), some the adaptation and mitigation issue of forest ecosystem management (e.g. 7F-06587, 7F-07476), and some the strengthening of national or local government planning in relation to adaptation (e.g. 7F-08104, 7F-05409) or both mitigation and adaptation (e.g. 7F-07834). Because of the appropriate focus and synergies involved among multiple stakeholders within each project, they tend to attract high SDC/SECO estimates of relevance to climate change. Thus they are all assessed as 100% relevant except for 7F-08402, which is given an anomalous 10% despite its deployment of the powerful Water Footprint estimator and partnerships between civil society and the private sector.
- The two RC4: Energy Efficiency projects are designed to promote the flow of knowledge about environmentally sustainable development, between cities and among rural areas (7F-03443 in China) or among institutions (7F-02203 in Central America). This is a sufficiently indirect strategy that the projects are estimated by SDC/SECO to have a 25-50% relevance to climate change. Two others are anomalously placed in RC4, and are mentioned below under RC5.
- The two RC1: CC sensitive strategies projects are based on legislative collaboration between Switzerland and China on clean air (7F-07623) and knowledge sharing between South Africa, Perú and Chile on low-carbon development options (7F-08112). Both are estimated by SDC/SECO as being 100% relevant to mitigation, which seems fair for 7F-08112 but the summary of 7F-07623 mentions only diesel particulates, which are known to be injurious to public health but have a complex and uncertain role in climate change.
- Two of the three RC6: Awareness Raising projects are based on promoting the use of economic criteria to inform adaptation decision making (7F-06543), supporting the UN's climate change knowledge service delivery system (7F-06443). Both are of global scope and are estimated by

SDC/SECO to be 100% relevant to climate change. The third (7F-08412) is a strategic research collaboration and knowledge-sharing initiative focused on rice, involving multiple rice-dependent countries, and estimated by SDC/SECO to be only 10% relevant to climate change adaptation.

- The three RC5: Sustainable Standards projects are concerned with the analysis of, and policy dialogue around, the environmental impacts of China's role in commodity markets and global product chains. They are anomalously presented in SDC/SECO materials, with UR-00094.01.01 being assigned to RC5 and estimated to be 25% relevant to mitigation, while the near-identical successor projects (both also under UR-00094) were assigned to RC4 and estimated to be 75% relevant to mitigation. It is hard nowadays to think of a more strategic issue for climate change mitigation than the powerful influence of Chinese economic and political decisions and China's participation in the global economy.

Case study 17: 7F-05409, Adaptation Program in Peru (PACC). "Programme d'adaptation au changement climatique (PACC)" was inspired by the message of the Federal Council of the Swiss Parliament stating that in vulnerable rural areas a sustained effort to adapt to the effects of CC is fundamental to sustainable development. This was the first SDC project in Latin America regarding adaptation to climate change and supported the country by developing a diagnostic tool for assessing CC vulnerability in the two focal regions and two prioritised water catchment areas in Cusco and Apurimac. This was done with the active participation of authorities and local population. Furthermore, during the first phase (2009-2012) PACC developed pilot projects in which local knowledge and adaptation practices were identified and implemented. The information gathered and the field practices implemented by the project helped build a better understanding of CC adaptation process, informed the national adaptation strategy and contributed to the UNFCCC international negotiation process in CoP 18 and 19. The project showed that it is of fundamental importance to include CC concepts (scenarios, risks, vulnerabilities, risk management, local actions for adaptation, global GHG mitigation), as well as short, medium and long term indicators right from the beginning of project design, since adaptation is a process that extends far beyond the "normal" project duration (*CC adaptation effectiveness score 6, very strong*) (see Annex 5).

Case study 18: 7F-06983 Strengthening Climate Change Adaptation in China and Globally. The project (2009-2013 with potential extension 2014-2016), has taken a holistic approach to mainstream CC into national and regional planning and management. It has been being implemented in collaboration with DFID and, building on DFID's extensive previous work in China, has helped to establish a multi-disciplinary research team in China capable of delivering solid data on CC impacts to serve as basis for vulnerability and climate risk assessments. Within this comprehensive approach, the project has helped to refine and apply the climate science basis, and mainstream CC into adaptation planning at the national and provincial level, and in multiple sectors, which has been recognised internationally as a critical bottleneck in advancing concrete adaptation and mitigation measures. In addition, the project has helped to share regionally and globally its knowledge products and experiences in undertaking integrated, policy-oriented climate risk assessments and adaptation planning, and in engaging stakeholders and informing national adaptation policy processes (a considerable amount of documentation, including manuals, training material, policy briefs, case studies, conference reports, etc., is available as evidence of outputs and deliverables). The Gaia consortium field mission to Mongolia (see Annex 5) during this assessment confirmed the appreciation of lessons learned from China in the areas of sustainable rangeland management and combating desertification. While the project is focusing on adaptation (*CC adaptation effectiveness score 6, very strong*), it is likely that by improving capacity to understand climate-related impacts, risks and vulnerabilities, the project has also helped China's policymakers understand the importance of CC mitigation to safeguard China's economic and social development (see Annex 7).

The idea that underlies all the policy development projects is that good policies are important, and that they can be found by enriching and exchanging relevant knowledge and creating influential forums where they can be discussed and decisions made. An additional step is the creation of incentives that will encourage participants in these processes to care enough about the various aspects of climate change to want to make good policies. Examples of such incentives are found throughout the projects reviewed here, including those that rely on economic arguments, peer pressure, civil society advocacy, and the enlightenment of decision makers. Thus we expect these projects to be generally effective, even if often indirect and slow-acting (and the effectiveness correspondingly hard to demonstrate), as contributions to the immense task of steering the global economy and all its parts in a lower-emission and more climate-resilient direction. We score RC7 and RC5 projects *6 (very strong),* RC4 and RC1 projects *5 (strong),* and RC6 projects *4 (moderate),* variously for adaptation and mitigation.

Concluding remarks. *Based on our analysis, projects in environmental monitoring and policy development have shown strong, and in many cases very strong, effectiveness. As many of these*

interventions also contribute more broadly to CC awareness raising (by highlighting the already experienced changes in climate variability and weather extremes, as well as forecasted impacts of climate change), they often provide input also to improved DRR as well as CC mitigation. The confirmed scores for projects reviewed in depth as well as the distribution of scores in CC adaptation effectiveness categories are presented in Annex 4.

3.7 Unclassified projects

***Introductory remarks**. Unclassified projects are those which did not fit into any of the other analytical sections (i.e. the 'projects' in thematic Sections 3.1-3.6 and the 'contributions' in Section 3.8), whether they were validated in the portfolio appraisal or not. The review in this section covers 41 projects, with 1 project having a confirmed effectiveness score based on in-depth analysis (see Annexes 3 and 4 for consolidated information on scored projects and distribution of scores across effectiveness categories).*

RC2: Emission Trading. Project 7F-05823 is about buying Certified Emission Reductions (CERs) from energy efficiency and renewable energy projects in India as a way to off-set GHG emissions from in-service air travel by the Swiss Federal Department of Foreign Affairs. The mitigation effectiveness of such an approach depends on the details of how the CERs are generated and their true additionality, but in principle a *moderate score of 4* is given.

RC5: Sustainable Standards. Project UR-00424.03.01 concerns supporting the UN Interagency Cluster on Trade and Productive Capacity in Lao PDR. This group of UN agencies comprises the International Trade Centre (ITC, which specialises in export promotion and trade efficiency), UNIDO (standards and environmentally sound production), ILO (working conditions) and UNCTAD (trade), and the focus here is on enhancing sustainable tourism, clean production and export capacity. The holistic and inter-agency approach is suggestive of enhanced coordination and synergy, so we expect good mitigation effectiveness (*score 5, strong*).

RC6: Awareness Raising. The projects in this group have the following characteristics:

- Three focus on public education, 7F-07729 on the values of forest ecosystems and the threats to them in Slovakia, 7F-08163 on climate change issues more generally in Perú, and 7F-02079 on improving the quality of schools-based environmental education in Macedonia (initially, but we believe erroneously, assigned by SDC/SECO to RC7). Environmental education can be an effective tool with which to change attitudes and behaviour, but this is conditional on factors that are unknown in these instances and include the extent of participation, the quality of messaging and delivery, duration, and the degree of amplification by the media and mainstreaming by the formal schools sector. We accord a *moderate score 4* for these three projects for adaptation and mitigation.
- Project 7F-08156 aims to familiarise African Parties to the UNFCCC with the process of accessing resources from the Adaptation Fund, and with lessons learned and best practices from the portfolio of projects supported by it (valued at US$ 190 million over 2011-2013). It seems very likely that beneficiaries have been highly motivated to participate, given the incentives involved, and to the extent that the Adaptation Fund itself is estimated as effective Swiss support, we provide an *adaptation score of 6 (very strong)*.
- Project 7F-02580 focuses on demonstrating the restoration of riverine and catchment ecosystems in Macedonia, in this case requiring the introduction of effective systems for managing sewage and other wastes and pesticides, and raising public awareness. As a demonstration project, and one that can only be effective through public knowledge and behaviour change, we believe that it should be reassigned from RC7 to RC6. Based on the remote link to adaptation effectiveness wee give a score of *2 (very weak)*.
- Project 7F-08255 aims to increase productivity and stabilise incomes among smallholder farmers by developing new business models which combine financial and agricultural advisory services based on mobile telephony. Mobile telephony and ICT are potentially very significant for the rural poor, for example because of their role in improving agrarian terms of trade, and studies by UNDP and partner organisations[20] have shown that increased mobile telephone connectivity

[20] UNDP, Ericsson, Earth Institute at Columbia University, Millennium Promise (2011) The Impact of Mobile Connectivity on the Millennium Development Goals in Africa. A report of the Millennium Villages Project. http://www.ericsson.com/res/thecompany/docs/corporate-

drives not only increased GDP in developing countries (at a rate of about 1% for every 10% increase in mobile penetration), but also progress towards lifting people and communities from poverty and therefore towards achieving the MDGs. The project was estimated by SDC/SECO to be 25% relevant to adaptation, which seems fair because of the potential for contributing to knowledge sharing for resilient farming, and is *scored 4 (moderate)* for effectiveness here.

RC7: Adaptation Capacity. The projects in this group can be assigned to the following sub-themes.

Knowledge management. Some focus on harnessing local knowledge on coping strategies and farming systems in harsh and variable climates, sharing it among localities (e.g. through farmers' organisations or pastoralist field schools), and mainstreaming it within local and national government (7F-01968 in Mali, 7F-07783 in the greater Horn of Africa and and 7F-04054 in India, case study 19). Others emphasise transferring international knowledge on adaptation into national or local systems, whether indirectly via donor agencies (7F-03850, in the case of Switzerland), or by mobilising comparative research or information exchange on mountain agriculture (7F-00867 in Latin America, 7F-02728 globally), and agroforestry (7F-04018 globally), or by introducing internationally-agreed methodologies such as Local Agenda 21 (7F-08203 in Cuba), or by supporting and informing local research on environmental issues (7F-07795 in Cuba). Yet others promote the two-way exchange of knowledge between local stakeholders and international networks (7F-03042 in India, 7F-08068 in Tunisia), or establish institutions to mediate such exchanges (7F-07202 in Afghanistan). We provide a tentative *adaptation effectiveness score of 5 (strong)*, recognizingthe strategic and practical importance of knowledge and knowledge sharing to the global struggle to adapt to climate change.

Case study 19: 7F-04054 Programme on Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Areas in India. The project (2005-2009) which builds on long-term involvement of SDC in India on issues of sustainable development and climate change, has contributed to strengthened CC adaptive capacity in several sectors, including energy, agriculture, water, land use and livestock in the project target areas of Andhra Pradesh and Rajasthan. Infrastructures have been established in the project villages as a tool to face the adaptation and location specific adaptation strategies have been developed with the participation of the communities, laying the basis for community –based –adaptation approaches and capacity to cope with the impacts of CC as well as disasters. Water user and pasture management committees have been established to ensure more sustainable management of resources and share information of best practices. However, the overall success was challenged by the overall difficulties in assessing adaptation capacity development, and data gaps in monitoring of project activities and achievements, which hamper a more detailed and quantified assessment of *adaptation effectiveness (score 5, strong)*. For more information see Annex 7.

Community empowerment. These projects aim to improve the internal organisation of communities (i.e. their solidarity, and the transparency and accountability of their governance) and hence their ability: (a) to share land and water resources; (b) to prepare for disasters, to use early warning information, and manage natural hazards when they occur; and (c) to take specific collective actions such as rehabilitating water sources and irrigation systems (7F-07658 in Kenya, 7F-04879 and 7F-05691 in Afghanistan). We give an *adaptation effectiveness score of 5 (strong)* recognizing the practical importance of community empowerment in local adaptation and disaster preparedness.

Resilience for adaptation. Another group of projects were initially hard to validate and classify in climate change terms, but were later reassessed as being of merit in terms of adaptation resilience. They variously focus on promoting the decentralised governance of natural resources and community development (7F-04491 in Bolivia, 7F-04043 in Mali), access to microfinancial credit for rural water infrastructure (7F-05829 in West Africa), stronger farmers' organisations, trades unions, and a community development oriented NGO (7F-0128 in Chad), and mobilising Swiss technology and facilitating financing for pro-poor water initiatives (7F-07944 globally). We assess these projects to have *moderate and indirect effects on adaptation capacity (score 4).*

Other projects. A final group of 14 projects defied all efforts either to classify or to validate them in terms of climate change. They comprise efforts: to double log production in Ukraine (7F-02119); to provide post-famine support in Niger (7F-08010); to promote open journalism in Cuba (7F-08194); to assess research undertaken by CGIAR (7F-06288); to promote agro-export oriented rural development in Nicaragua (7F-02248); to rehabilitate roads in Chad (7F-02027); to reform an agriculture and forestry college in Lao PDR (7F-06297); to improve farm revenues and health care in

responsibility/2010/MVP_M_&_E_Final_Report_August_31_2010.pdf (accessed 6 Feb 2014).

Afghanistan (7F-04939); to promote human rights and democratic institutions in Bolivia (7F-80002); to consolidate microfinancial and business development services in Bolivia (7F-06552); to improve access to safe water in Afghanistan (7F-05437); to issue vouchers for redemption against basic agricultural inputs in Zimbabwe (7F-08000); to provide a network service for young professionals in agriculture and rural development (7F-04963); and to provide research fellowships in agriculture, forestry and natural resource management (7F-02006). It is possible to imagine some potential CC relevance for all of them, and SDC/SECO (with greater knowledge of the projects concerned) assigned them all to RC7: Adaptation Capacity, and estimated CC relevance at 50-100% for five of them (7F-08194, 7F-08010, 7F-06288, 7F-02119 and 7F-05437), and 10-25% for the rest. All are given an effectiveness score of 3 here, since they are assumed to have some weak level of CC effectiveness even if this could not be clearly understood from the documentation available.

Concluding remarks. *The projects described in this section tend to score low in effectiveness for mitigation and/or adaptation. However, due to the variety of interventions covered cases of strong effectiveness can also be noted, such as the case study 19 from India exemplifies. The distribution of scores in CC effectiveness categories are presented in Annex 4.*[21]

3.8 Swiss contributions to organisations

Introductory remarks. *Contributions to organisations may be directed towards a general cooperative endeavour or field of activity, or else may be almost entirely free of conditions. The organisations concerned in either case may be multilateral institutions, thematic interest groups, NGOs, or research institutions. Many of these contributions are, however, ultimately designed to synergise, often at a higher, policy or global level, with thematic and site-specific projects or with clusters or series of projects. Hence it is not always clear whether a contribution, for example to a multi-donor trust fund or research institution that specialises in something relevant to a particular thematic cluster, should be treated as a 'project' within that cluster or as a distinct species of intervention. The approach used here is to distinguish between investments that have a specific intent defined by SDC/SECO (i.e. to achieve a particular set of pre-defined goals through activities that are bounded in space and time), which are covered in Sections 3.1-3.7, and contributions to entities that are allowed by SDC/SECO to spend the money according to their own priorities, which are covered here. In assessing their effectiveness, sources of information comprised: (a) the validation by the assessment team of the contribution's purpose against criteria based on the Rio Climate Markers (i.e. the number of criteria met, which is used as a proxy for anticipated effectiveness); (b) detailed project reviews, where projects involved recipients of contributions and where some light could therefore be shed on the institutions' performance; (c) synthesis reviews of existing evaluations of the CC-relevant work of three major recipients of non-earmarked contributions, these being the World Bank, UNDP and the Inter-American Development Bank (IADB), supplemented by other research and interviews; and (d) the reputation among the assessment team for effectiveness of the recipient organisation, based on many person-decades of international development experience among them. Of the 87 contributions covered in this section, 5 have been analysed in-depth and have confirmed effectiveness scores (see Annexes 3 and 4 for consolidated information of scored projects and distribution of scores across effectiveness categories). The contributions concerned were allocated to the following groups of institutions.*

Research institutions, mostly concerned with agricultural research, on farming systems, cultivar improvements, plant diseases, organic farming, and integrated pest management.

Thematic interest groups, which focus on some particular subject or advance a particular cause, some being NGOs with a relatively narrow geographical and thematic focus (e.g. rural sustainable development, or land rights and natural resource management), others being regional in scope (e.g. addressing sustainable development in the Andes and Central Asian mountains, or ecological family farming and agrobiodiversity in West Africa), but most are of global scope and concern themselves with a great variety of issues (e.g. sustainable development learning, South-South linkage and cooperation, renewable energy promotion, and action on critical water issues).

[21] This section includes only one project with a confirmed score, i.e. only one of the projects within this section was selected for more detailed project oriented review, in line with the selection criteria established during the inception phase (see Annex 12).

Swiss NGOs, with large contributions to Helvetas Swiss Intercooperation, SWISSAID, Bread for All, and the Aid Organisation of the Protestant Churches of Switzerland reflecting the diverse and empowering work of the Swiss charitable sector.

Other multilateral institutions, comprising the International Centre for Integrated Mountain Development, the Mekong River Commission, and the International Tropical Timber Organisation.

The World Bank, the performance of which was evaluated in 2010 by its Independent Evaluation Group, covering all sub-sectors that represent the great bulk of evaluable activity with potential GHG co-benefits (i.e. renewable energy, energy efficiency, forestry, urban transit, coal power, carbon finance, technology transfer, and learning and incentives). The findings of this evaluation are given in Annex 9. Swiss contributions to the World Bank Group have focused on:

- **The Forest Carbon Partnership Facility** (FCPF), which is intended to promote cooperation amongst governments, businesses, civil society and indigenous peoples, aimed at reducing emissions from deforestation and forest degradation, improving forest management, and enhancing forest carbon stocks in developing countries (i.e. facilitating REDD+ arrangements, see case study 20 below on the Indonesian REDD+ task force).
- **The Programme on Forests** (PROFOR), which was set up in 1997 to support analysis, innovation and knowledge-sharing with a view to promoting forest policies that would lead to improvements in areas ranging from livelihoods and financing, to illegal logging, biodiversity conservation and climate change.
- **The Commodity Risk Management Group** (CRMG), which is founded on the recognition of a strong link between risk management, financial stability, livelihoods of the poor, and development, and also an awareness of rising volatility in both weather patterns and commodity prices.
- **The Global Facility for Disaster Reduction and Recovery** (GFDRR), which was established in 2006 as a forum of 41 countries and eight international organisations that seek to help developing countries reduce their vulnerability to natural hazards and adapt to climate change by mainstreaming DRR and CC adaptation in country development strategies.
- **The South East Europe and Caucasus Catastrophe Risk Insurance Facility**, which aims to promote a regional catastrophe insurance market by providing access for homeowners and SMEs to affordable, but dependable and not subsidised, insurance cover against the risk of natural calamities such as earthquakes and floods, cover which has not been available in the commercial market.
- **Carbon Finance Assist**, which is a multi-donor trust fund that was launched in mid-2005 to support capacity building and technical assistance, initially focused on helping developing countries participate effectively in carbon markets, and to benefit from mechanisms established under the Kyoto Protocol (i.e. the CDM and JI), but later focusing on climate finance readiness, low emissions development, policy instruments and carbon pricing, and cities and climate change.
- **The Partnership for Market Readiness**, which provides grant financing and technical assistance for capacity building and piloting of market-based tools for GHG emissions reduction.
- The **Climate Investment Funds** (CIFs), which were established in 2008, comprise the Clean Technology Fund and the Strategic Climate Fund, and are designed to provide scaled-up financing through the multilateral development banks, including the World Bank which is involved in three capacities: as a Trustee; as one of six Implementing Agencies; and as the provider of an administrative unit to support the work of the CIF.

Case study 20: UR-00544.01.01, Swiss contribution to the Indonesian REDD+ Task Force This was a Swiss grant via the World Bank which supported the Task Force's Strategy and Financing Instrument working groups, and also consulting inputs from the World Bank on the design of the Indonesian REDD+ Financing Institution. The contribution was described in the Inception Report as an example of a relatively small grant contributing to disproportionate impacts, because "by providing less than US$1 million in 2011-2012 to support the work of the Presidential Task Force on REDD+ in Indonesia [it] helped create a 2011-2015 moratorium on new logging and plantation concessions, which in August 2013 was estimated by the World Bank to offer benefits worth at least US$500 million*" (score 7, extremely strong).*

Other IFIs, comprising the Asian Development Bank (AsDB) and the Inter-American Development Bank (IADB), with all Swiss contributions targetting multi-donor financing facilities to do with the water and sanitation sector. The IADB's AquaFund, to which SDC and SECO contribute almost

equally, was examined in most detail, and is built around four complementary programmes, which have reached or exceeded most of their goals:

- '100 Cities', to catalyse investment financing and technical assistance for Latin American and Caribbean cities of more than 50,000 people, giving priority to their poorest communities, which has actually engaged with 146 cities;
- '3,000 Rural Communities', to support communities willing to take their own financial, technical and organisational decisions and to run their local water and sanitation systems, which has so far engaged with 2,600 such communities;
- 'Water Defenders', to provide technical assistance and financing to safeguard 20 priority micro-watersheds, which has actually covered 31 of them; and
- 'Efficient and transparent utilities', to finance the strengthening of water utility management and develop a system to measure and certify their performance, which has reached its target of 90 such operators.

The United Nations Development Programme (UNDP), the performance of which was assessed by its Evaluation Office in 2008, the report covering the subject areas of project design, GEF influence, sustainability, HQ role, mainstreaming, UNDP-country relations, and UNDP capacity. It was evaluated again by the Evaluation Office in 2013, the report providing findings in the areas of effectiveness, outcomes according to the UNDP's Results Oriented Annual Report and Assessments of Development Results, and conclusions on the significance of the lack of non-earmarked contributions, the lack of institutional learning, and weak knowledge management. The findings of these evaluations are summarised in Annex 9. Swiss contributions to UNDP comprise a large, long-term core grant, and a donation to the UNDP-managed Crisis Prevention and Recovery Thematic Trust Fund, a flexible funding mechanism designed for quick action following a natural disaster or violent conflict, or when a unique opportunity arises to reduce disaster risk or prevent conflict.

Case study 21: 7F-08274 - The Adaptation Fund (AF). Thanks to its innovative source of funding, its equitable governance structure, high transparency and its direct access modality the AF is broadly accepted as a highly relevant multilateral funding instrument for CC adaptation, especially among developing countries**.** Since becoming fully operational in 2010 the fund has accredited 28 implementing entities, of which 15 are NIEs (national implementing entities from developing countries) in Africa, Latin America and the Caribbean, and Asia (3 being Regional Implementing Entities (RIEs) and 10 Multilateral Implementing Entities (MIEs). By early 2014, the fund had approved grant funding for close to US$ 200 million, to 30 projects and programmes and to nine project formulation activities, in a total of 33 countries (of countries that have received funding, 11 are Least-Developed Countries (LDCs) and four are Small Island Developing States (SIDSs). So far nine NIEs have received funding. The fact that both LDCs and SIDSs have completed the accreditation process, and one-third (five out of 15) of NIEs come from either LDC or SIDS, is an indication that the fund has been able to keep the priority on particularly vulnerable developing countries. The fact that the innovative source of funding has been eroding is a source of concern for the future of the fund that needs to be addressed to provide continuity and ensure effectiveness of fund activities. In our view the AF is a vital contribution to the international climate finance architecture *(CC adaptation effectiveness score 6, very strong)*. Its special features can encourage other institutions to look for innovative finance solutions, taking note of the gap between commitments made in international climate negotiations and actually delivered CC adaptation finance flows. The Swiss input in the AF board and in outlining the functioning of the AF has been noted with appreciation by several stakeholders in interviews and within the open questionnaire (see Annex 11) with several stakeholders making observations such as referring to "Swiss leadership in the AF [and noting] ….the Swiss having a constructive and active role…". For more information see Annex 7.

Other UN institutions, which include the following offices, convention secretariats, funds and organisations:

- **The United Nations Office for Disaster Risk Reduction**, which coordinates and manages knowledge on DRR, and jointly manages with the World Bank one of the business lines of the GFDRR.
- **The Secretariat of the United Nations Convention on Combatting Desertification**, the role of which is to promote action involving international cooperation and a partnership approach, focused on improving land productivity, rehabilitation of land, and conservation and sustainable use of land and water resources, while also preventing the long-term consequences of desertification, including mass migration, species loss, climate change and the need for emergency assistance to populations in crisis.

- **The Adaptation Fund of the United Nations Framework Convention on Climate Change**, the role of which is to be a vehicle to finance adaptation projects and programmes in developing countries that are parties to the Kyoto Protocol and that are particularly vulnerable to the adverse effects of climate change (AF case study 21 above).
- **The Global Climate Observing System of the World Meteorological Organisation**, which is designed to provide the comprehensive observations needed for monitoring the climate system, detecting and attributing climate change, assessing impacts of, and supporting adaptation to, climate variability and change, and research to improve understanding, modelling and prediction of the climate system.

Concluding remarks. An important finding of the 2013 report of the UNDP Evaluation Office was that a major reason for non-delivery of planned outputs by UNDP is the under-resourcing of programming and projects due to the earmarked nature of most of its funds, with Switzerland being an exception as a donor. It is in fact a generalizable point that for all organisations without a very secure source of income, whether from national exchequers, successful business activities or a large subscriber base, untied core funding is the most valuable and appreciated kind of funding as it allows the organisation to build its capacity and programme activities in line with its aims. This particularly applies to NGOs at all geographic levels, where so much innovation and fine-grained attention to social and environmental detail occurs, and here Switzerland is notably generous. This also applies, however, to many of the other beneficiaries of non-earmarked contributions, across the broad spectrum outlined above. But the flow of benefits from these arrangements is not in only one direction, as Swiss contributions to the Renewable Energy and Energy Efficiency Partnership (REEEP) and the Global Water Partnership (GWP), both 'thematic interest groups' in the sense used here, resulted in Swiss membership of the respective governing boards, which presumably advanced Swiss influence. A similar outcome and opportunity was achieved when a Swiss representative was elected to represent the UN WEOG group (Western European and Others Group) in the AF Board. These rewards indicate the scope of the partnership approach that is integral to the institutional contribution strategy employed by SDC/SECO.

Two research institutions (out of 10), eight thematic interest groups (out of 33), one 'other multilateral' institution (out of two), two IFIs (out of three), and three UN agencies (out of five) were judged to be highly effective by the review team. More formal evidence came from the achievements of the IADB's AquaFund, mentioned above, the five in-depth reviews covered within this section, the synthesis evaluation of the World Bank's climate change portfolio, which was broadly positive, and the 2008 and 2013 evaluations of the UNDP environment and energy portfolio and 2008-2013 Strategic Plan respectively (Annex 9). The latter sources, taken together, confirm the review team's assessment of UNDP as a benign and moderately effective institution. The World Bank and UNDP are in many ways complementary institutions, however, so both are necessary, and their relative effectiveness would need to be considered in context. We also note the evaluations' emphasis on the value of core funding, and recognise Switzerland's contributions as important programme-enabling investments that have made many other things possible.

Concluding remarks. *Contributions to organisations within the portfolio show a medium to high level of CC effectiveness, with some 25% of adaptation interventions and over 50% of mitigation interventions indicating strong or higher levels of effectiveness. The projects reviewed in-depth, indicate an even more positive picture of the CC effectiveness for these contributions, with over 50% of the project oriented reviews scoring very strongly for mitigation or adaptation effectiveness. The confirmed scores for projects reviewed in-depth as well as distribution of scores in effectiveness categories are presented in Annex 4.*

4. Patterns of CC portfolio results and effectiveness

Introductory remarks. *This chapter draws together the various parts of the analysis in order to highlight key results and large-scale patterns in effectiveness across the Swiss CC portfolio. As noted in Chapter 1, this portfolio has considerable geographical diversity, covering the main regions to the extent shown in Figure 1. This is matched by its great thematic diversity, as described in Chapter 3. It is also being reviewed over a critical period when CC forcefully entered the international development cooperation agenda.*

4.1 Illustrations of concrete CC results

Although quantitative data on mitigation and adaptation is scarce within the portfolio's documentation, since there are few defined baselines, limited MRV to date, and a lack of agreed protocols for measuring adaptation, among the 61 projects that were reviewed in depth a number of concrete results can be discerned. While such a small sample is hardly representative of the portfolio as a whole, these findings do shed light on what could be documented if all 508 projects were subjected to the same level of investigation, and also what could be achieved with a more systematic emphasis on baselines and MRV in future. Highlights are presented in the following paragraphs, to illustrate some of the real-life under-pinnings of the broader, portfolio-wide effectiveness assessments that are presented in Sections 4.2 and 4.3.

Mitigation through RE and EE in the Balkans. The Swiss CC portfolio in the Balkans exemplifies concrete results achieved through rehabilitation of hydropower, improving energy efficiency and promoting renewables. For example, the rehabilitation of hydropower production on the Drin and Mat rivers in Albania (UZ-00574.01.01, case study 1) has contributed to improved reliability and reduced outages (power cuts), 3-4% efficiency improvements at the Fierza power plant, and a considerable extension of the lifespan of the Fierza HPP. While GHG reductions were not an explicit goal of the intervention, important (but non-quantifiable, due to missing baseline information and only embryonic GHG data in Albania) CC mitigation co-benefits are evident and can be attributed to avoided GHG emissions that would have been caused by electricity import (with higher CO2 intensity in all neighbouring countries) and additional use of other non-renewable energy sources. In Serbia, the Swiss-funded intervention at a major thermal power plant (UR-00269.01.01, case study 2), involving modernisation of the monitoring and control system at Nikola Tesla Thermal Power Plant B, has contributed to improved energy efficiency and reliability at the plant, thereby reducing outages and emissions of CO2 and other pollutants. According to initial estimates, annual GHG emission reductions of about 90,000 tCO2 can be attributed to the intervention, and the project is also helping to build necessary MRV capacity in Serbia in light of more stringent emission reductions required in the energy sector.

Mitigation through cleaner production. In the area of cleaner production, based on project reviews from Perú (UZ-00988.01.01), South Africa (UR-00029.01.01) and Vietnam (UZ-00987, case study 5), including field missions to Perú and South Africa, our assessment noted savings achieved in consumption of electricity, fuels, water and chemicals among partner companies through the CPC interventions. For example, in 1999-2011, the Vietnam NCPC proposed cleaner production options to 227 companies in six sectors (metal working, food processing, textiles, handicrafts, pulp & paper, and construction materials). On average, implementation of these options led to savings of 7% in electricity, 9% in coal, 7% in fuel (diesel) oil, 20% in liquefied petroleum gas (LPG), 18% in water and 25% in chemical consumption. According to data available from Perú, in 2002-2012 NCPC activities resulted in avoided emissions totalling 35,425 tCO2/year at the audited companies, and NCPC interventions in South Africa (2002-2008) reporting emissions reductions of 25,000 tCO2/year. Another Swiss-funded project focusing on industrial energy efficiency (UR-00399.01.01 Industrial

Energy Management Standard, UNIDO) in South Africa reported total GHG emission reductions of 225,000 tCO2 (by the time of this assessment).[22]

Mitigation and adaptation through ecosystem management. Within this theme, a number of projects (including multi-stakeholder forest management projects, REDD+, biotrade-based conservation and organic farming) create in addition to mitigation results, in many cases also important adaptation benefits (see CC synergies, below). For example a project in Vietnam (UR-00015 Linking Trade Demand and Sustainable Forest Management, case study 9) has increased the land area of FSC certified forests from 50,000 to 81,600 ha, with evident mitigation benefits, while simultaneously contributing to strengthened livelihoods and enhanced sustainability of timber production and trade. Another project (7F-07809, Linking herders to carbon market, case study 23) in Mongolia has produced critical knowledge about required methodologies, frameworks and capacities for accessing carbon finance, with subsequent potential to help reverse grassland degradation, improve rural incomes and reduce herders' vulnerability to climate variability in a country critically dependant on the sustainability of its grasslands.

Adaptation through risk management. Swiss-funded interventions in the areas of risk management, disaster risk reduction (including early warning) and insurance, are providing real benefits to large numbers of people in various parts of the world. Among the 61 projects reviewed in detail, for example, an intervention in Muminabad district of Tajikistan (7F-02864, case study 12), which has about 72,000 inhabitants and is located in the south of Tajikistan close to the Afghan border, has contributed to strengthened DRR capacity through introduction of integrated disaster risk management by increasing the coping capacity of local government, civil society organisations and the population at large. In Haiti, a Swiss contribution to the Haitian Catastrophe Micro Insurance Facility (7F-07916) has helped strengthen the resilience of project beneficiaries against the impacts of climate variability (in particular weather extremes) and therefore also the impacts of CC. The facility has helped thousands of people to get back on their feet following recent disasters, through emergency pay-outs and the cancellation of their loans. In Mongolia, an index-based livestock insurance project (IBLIP, 7F-06642, with a Swiss contribution via the World Bank, case study 13) is covering tens of thousands of people with herding-based livelihoods, and the government of Mongolia has decided to implement the initiative nationwide as one of its major objectives. This initiative has immediate benefits for livelihood security for herders and their families, but is also helping to reduce drivers of desertification and through this has positive CC mitigation and adaptation impacts. Another project (7F-07733, case study 16), involving the implementation of a monitoring and early warning system for Glacier Lake Outburst Floods (GLOFs) in the area of the Yarkant River (China, 2010-2015), is targeting an alluvial area of 50,000 km² with a population of more than 1 million, where floods annually cause damage and losses of about CHF 11.5 million on average. The project has achieved significant progress on flood modelling and CC monitoring and analysis, early warning system development and establishment. By defining the thresholds for triggering an alarm, the GLOF early warning system had been fully automated by the time of this assessment.

Adaptation through knowledge management and mainstreaming. Concrete results are exemplified by the success in mainstreaming CC into decision making at various levels, as highlighted elegantly by a Swiss-funded intervention in Perú (7F-05409, case study 17) where the "Programme d'adaptation au changement climatique (PACC, 2009-2012)" developed pilot projects in which local knowledge and adaptation practices were identified and implemented. The information gathered and field practices implemented by the project helped build a better understanding of CC adaptation processes, informed the national adaptation strategy and contributed to the UNFCCC international negotiation process in UNFCCC CoP 18 and 19. Another example of a successful CC mainstreaming intervention (implemented in collaboration with DFID in China, 7F-06983, case study 18), resulted in mainstreaming CC into Chinese planning at the national and provincial level, and in multiple sectors, thereby overcoming what has been recognised internationally as a critical bottleneck in advancing adaptation and mitigation measures. In addition, a number of Swiss-funded interventions have helped build resilience at local level (such as 7F-04054, case study 19) in semi-arid areas in India, which led to strengthened CC adaptive capacity in several sectors, including energy, agriculture, water,

[22] A limited number of other projects among the 61 in-depth reviews present some quantitative data about emissions reductions (including 7F-02172, UR-00050.02.01, 7F-02164 in Perú indicating emission reductions of some tens of thousands of tCO2/year, and SDC 7F-03149, SDC 7F-01898, 7F-08073 in Nepal reporting emission reductions of some thousands of tCO2/year).

land use and livestock in the target areas of Andhra Pradesh and Rajasthan. Being one of the first community-based adaptation initiatives in India, the project is believed to have had a multiplier effect by serving as a key reference for other programmes in other highly vulnerable regions in India.

Adaptation and mitigation through institutional contributions. Swiss contributions to a number of multilateral institutions show high effectiveness overall (both for mitigation and adaptation). For example, the results achieved through the Forest Carbon Partnership Facility (FCPF, UR-00372.01.01, case study 24), the Partnership for Market Readiness (PMR, UR-00534.01.01) and the UNFCCC Adaptation Fund (7F-08274, case study 21) are clearly noted, with Switzerland contributing to the results through its funding alongside expertise and strategic guidance. With 36 developing and well-forested countries participating (including SECO priority countries Indonesia, Vietnam, Ghana, Peru and Colombia), the FCPF has become the most important process in REDD, and has successfully raised in-country awareness, contributed to south-south learning and built capacity and skills on REDD+ issues. Since the launch of the PMR in December 2010, five countries (China, México, Chile, Costa Rica, Indonesia) have completed Market Readiness Proposals, Thailand and Turkey have prepared drafts, and a platform for countries and experts to share knowledge on market-based mitigation has been created.

Adaptation and mitigation synergies. The Swiss CC portfolio has successfully contributed to both mitigation and adaptation, in some cases explicitly seeking these multiple benefits and synergies. The Nepal-Swiss Community Forestry Project (7F-03128, in 1990-2011, case study 8) aimed to achieve sustainable improvements in the living conditions of forest users and disadvantaged families in four of Nepal's poorest districts. The field mission found that the project had been very successful in improving sustainability of forest management practices, and had significantly contributed to poverty reduction by generating new income from forest products for disadvantaged groups. The project was especially successful in reducing poverty by promoting forestry-related employment and entrepreneurship, and extending the benefits of community forestry to the poorest households. The village governance work of the project had also created a model where the best practices from community forestry are introduced more widely to local democratic processes. Studies show that community-based forestry management in Nepal contributes to reduced dependency on forest resources, a decline in slash and burn practices and forest fires, and the reclamation of landslide areas and river banks. These results have a direct effect on enhancing the CC adaptation capacity of communities. The project also led to a 33% increase in new forest area and improved the quality of existing forest by 20%, both achievements contributing also to CC mitigation. Similar kinds of multiple benefits are also visible for several other projects in the area of ecosystem management, such as the 'Pasture Ecosystem Management: Green Gold' project in Mongolia (7F-03461, case study 10). This responds to the fact that 70-80% of the rangelands of Mongolia are moderately degraded or worse, yet their ability to sustain grazing provides the backbone of the rural economy. The project has been successful in encouraging and enabling communities of herders to safeguard their pasture ecosystems, thereby building increased community resilience to the consequences of climate change. In addition, through improved rangeland practices (covering 21.7 million hectares of pastureland, or some 20% of national land area) the project is also contributing to carbon sequestration, exemplifying an intervention with considerable CC co-benefits and important adaptation and mitigation synergies. Likewise a project in Bangladesh (7F-03804, Agro-Forestry Improvement Partnership, AFIP) focused in 2004-2012 on the sustainable well-being and resilience of very households in rural areas through improved access to quality planting material and related income opportunities. Although CC was not addressed in project design, concrete project achievements in poverty reduction, improved income opportunities and increased DRR awareness and preparedness have contributed to more resilient livelihoods, and beneficiaries have also become better equipped to cope with climate change impacts. Taking note of the major outreach of the intervention (the project worked with 9,042 nurseries and organised 367 sub-district associations, 25 district associations and one national association, and reached 7.2 million farmers, 45% of whom are poor, in 60 districts out of 64) these indirect CC adaptation benefits are clearly important. Moreover, while the project probably contributed indirectly to increasing and ensuring the sustainability of carbon sinks, these aims were not a focus of project design or implementation.

4.2 Overview of portfolio effectiveness 2000-2012

It is not surprising to find a wide range of CC effectiveness among the analysed projects. Looking into the consolidated results, however, we notice that the largest number of projects (n=198) were scored

as moderately effective, and this holds for both mitigation (46% of CC mitigation budget) and adaptation (52% of CC adaptation budget). Most of the rest were scored as strongly or very strongly effective, with about 20% and 20-25% of the total budget respectively, and again this holds for both mitigation (n = 114) and adaptation (n = 121) projects. Few projects (n=44), accounting for some 10% of the total budget, showed weak, very weak or no effectiveness (see Figures 3 and 4). In particular:

- **For mitigation**, 55 projects (accounting for 20% of the total mitigation budget) scored strongly (5) for effectiveness, 54 projects (24% of the total mitigation budget) scored very strongly (6), and 5 projects (2% of the total mitigation budget) scored extremely strongly (7) for effectiveness. On the other hand, 10 projects (6% of the total mitigation budget) scored weakly (3) for effectiveness, 5 projects (0.7% of the total mitigation budget) scored very weakly (2) for effectiveness, and only 2 projects (less than 0.6% of the total mitigation budget) scored "none" (1) for effectiveness.
- **For adaptation**, 72 projects (accounting for 21% of the total adaptation budget) scored strongly (5) for effectiveness, 49 projects (19% of the total adaptation budget) scored very strongly (6), but none of the adaptation projects were found to have extremely strong effectiveness. The corresponding low scores were as follows: 24 projects (8% of the total adaptation budget) scored weakly (3), 3 projects (representing 1% of the total adaptation budget) scored very weakly (2), and none of the adaptation projects were found to have no effectiveness (1) at all.

Consolidated effectiveness scores for the CC portfolio by Result Chains 1-7 are presented in Annex 1.

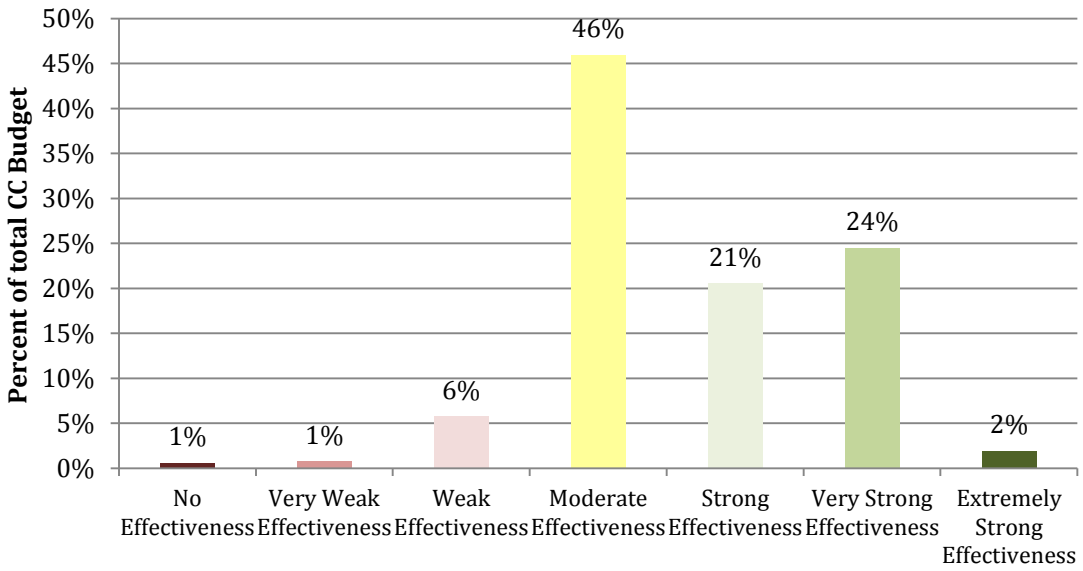


Figure 3 Mitigation effectiveness score distribution for projects (n=235), as percent of the total CC relevant budget. The budget share of projects covered in this figure amounts to CHF 672 million.

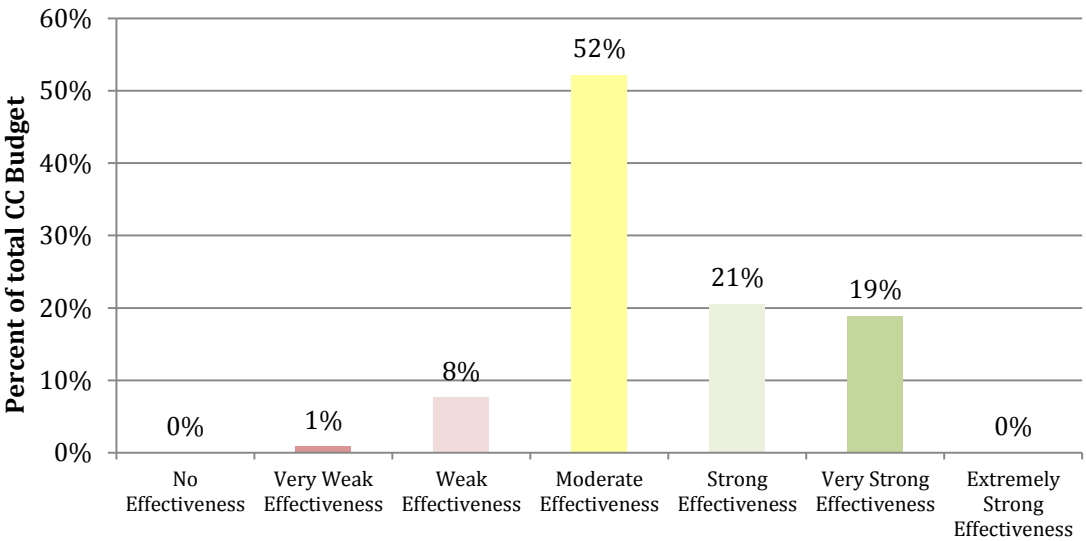


Figure 4 Adaptation effectiveness score distribution for projects (n=242)[23], as percent of total CC relevant budget. The budget share of projects covered in this figure amounts to CHF 848 million.

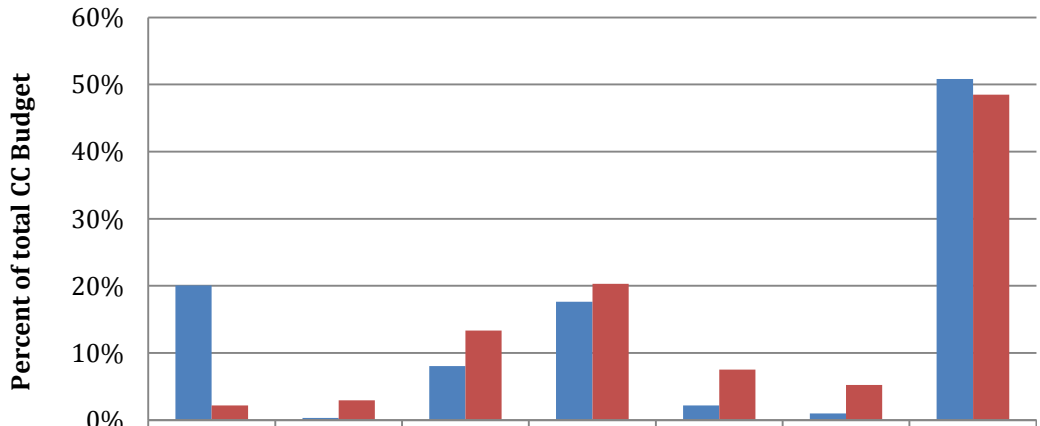
Even though the Swiss CC portfolio contains considerable geographical diversity, our analysis does not reveal any significant differences in the effectiveness scores and their distribution across the main regions covered by it.

4.3 Comparison of the 2000-2006 and 2007-2012 portfolios

This section highlights some of the key differences and trends in the portfolio evolution, using the year 2007 as milestone, coinciding internationally with the ground-breaking publication of the Stern review of the economic implications of climate change as well as the 4th IPCC assessment report[24], which gave a boost to climate action internationally, and reportedly also coincides with increased attention being paid to CC within Swiss development cooperation.

4.3.1 Thematic and Result Chain specific development of the Swiss CC portfolio

The Swiss CC portfolio has been evolving in reaction to a number of policy drivers, including increasing scientific knowledge and public awareness about climate change, as well as experience gained along the way. Such changes in emphasis are visible in the distribution of budget allocations among the seven Result Chains of the Swiss portfolio (see Figure 5). [25]



	RC1: CC Sensitive Strategies	RC2: Emission Trading	RC3: Renewable energy	RC4: Energy Efficiency	RC5: Sustainable Standards	RC6: Adaptation Awareness Raising	RC7: Adaption Capacity
Before 2007	20%	0%	8%	18%	2%	1%	51%
After 2007	2%	3%	13%	20%	8%	5%	48%

Figure 5 Result Chain distribution of the Swiss CC portfolio before 2007 and after 2007, based on CC budget (n=423). [26]

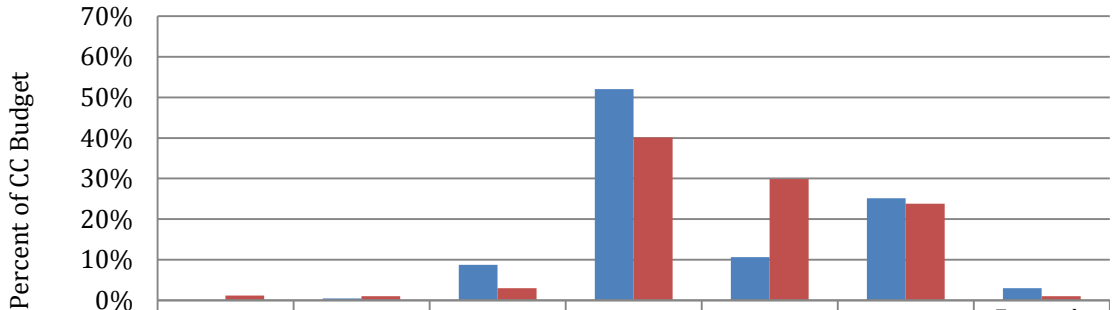
Looking into the development over time, investment in RC 7: Adaptation Capacity and RC4: Energy Efficiency projects remains roughly constant before and after 2007 (and in the case of RC4 consistent with a central theme in the FSF portfolio - see Chapter 5). The later portfolio, however, shows a marked increase in investment in RC2: Emission Trading (reflecting the birth and growth

[23] The assessment covers 423 projects out of a total 508 projects in the Swiss CC portfolio. The overlap, i.e. several projects having effectiveness scores for both mitigation and adaptation explains the diffence between 423 and 235 + 242. The overlap accounts also for the total sum of CC budget (i.e. sum being above CHF 1'320'689'550).
[24] (a) *Stern Review on the Economics of Climate Change*. Sir Nicholas Stern, HM Treasury (Cambridge University Press, 2007). (b) *Climate Change 2007: Synthesis Report - Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (edited by Pachauri, R.K. and Reisinger, A. (IPCC, Geneva, Switzerland).IPCC (2007),
[25] The group of projects "before 2007" includes all projects with a start date before 2007.
[26] The budget for the pre 2007 portfolio amounts to CHF 735,336,750, while the CC budget for the post 2007 portfolio amounts to CHF 585,352,802. See total budget presented in figure 10.

of market-based approaches to mitigation), RC3: Renewable Energy (reflecting the realisation that energy poverty and increasing energy demands have to be addressed by renewable solutions to reduce emissions while sustaining economic growth), RC5: Sustainable Standards (reflecting the growth of various certification schemes) and RC6: Awareness Raising (reflecting increased CC-related research activity), and a decline in investment in RC1: CC sensitive strategies (reflecting, perhaps, a greater attention to focused rather than unfocused investments).

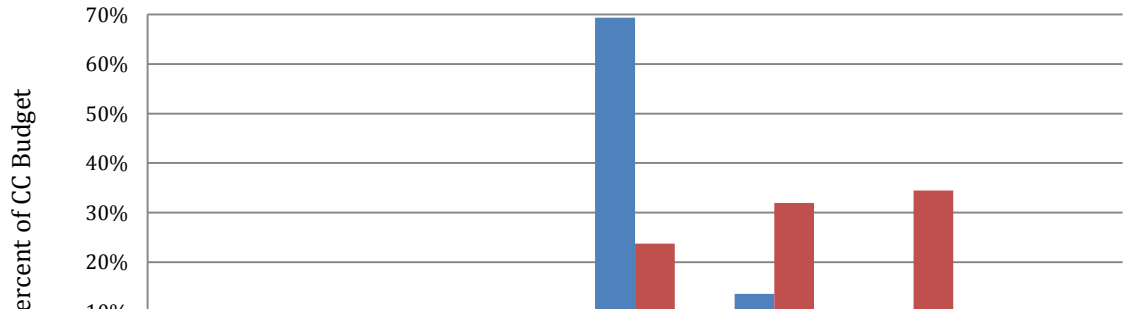
4.3.2 Trends in CC effectiveness

Our review of the Swiss CC portfolio reveals a clear trend of improving effectiveness, when comparing the earlier (pre-2007) and later (post-2007) portfolios. Although the in-depth project reviews provides cases that diverge from this overall pattern (see Chapter 3, and Annexes 5-7), this general trend of improvement is valid both for CC mitigation and adaptation effectiveness (see Figures 6 and 7). Our in-depth analysis also reveals some reasons for improved effectiveness, one of which is linked to a general improvement in CC integration in project design (see 4.3.3, below). A general increase of CC awareness in partner countries is also a likely contributing factor, highlighted also in the in-depth reviews in Annexes 5-7.



	No Effectiveness	Very Weak Effectiveness	Weak Effectiveness	Moderate Effectiveness	Strong Effectiveness	Very Strong Effectiveness	Extremely Strong Effectiveness
Before 2007	0%	0%	9%	52%	11%	25%	3%
After 2007	1%	1%	3%	40%	30%	24%	1%

Figure 6 The evolution of CC mitigation effectiveness in the Swiss CC portfolio before and after 2007 based on CC budget (n=235).



	No Effectiveness	Very Weak Effectiveness	Weak Effectiveness	Moderate Effectiveness	Strong Effectiveness	Very Strong Effectiveness	Extremely Strong Effectiveness
Before 2007	0%	1%	7%	69%	14%	9%	0%
After 2007	0%	0%	9%	24%	32%	34%	0%

Figure 7 The evolution of CC adaptation effectiveness in the Swiss CC portfolio before and after 2007 based on CC budget (n=242). The peak in the pre-2007 adaptation effectiveness score of moderate effectiveness is due to one exceptionally big intervention (7F-03576, a large, long-term core contribution to UNDP).

4.3.3 Quality of project design – increasing integration of CC aspects

In order to understand in a more comprehensive manner the projects reviewed, and potential reasons for high/low CC effectiveness, the project oriented reviews included a complementary review of certain design aspects. Looking into the results of this review, we note a clear improvement in project design CC relevance, when comparing the when comparing the 2000-2006 with the 2007-2012 parts of the portfolio. This is visible for both *Evidence and reasoning* and *Pathway integrity* (Figure 8). With regards to general quality of project design, no clear trend in any direction can be identified.

The trend in greater CC relevance in project design after 2007 is consistent with the hypothesis that greater attention to these aspects would have been required of project designers, as a result of increased priority being given to CC and the introduction of the OECD-DAC Rio Climate Markers from 2007 onwards.

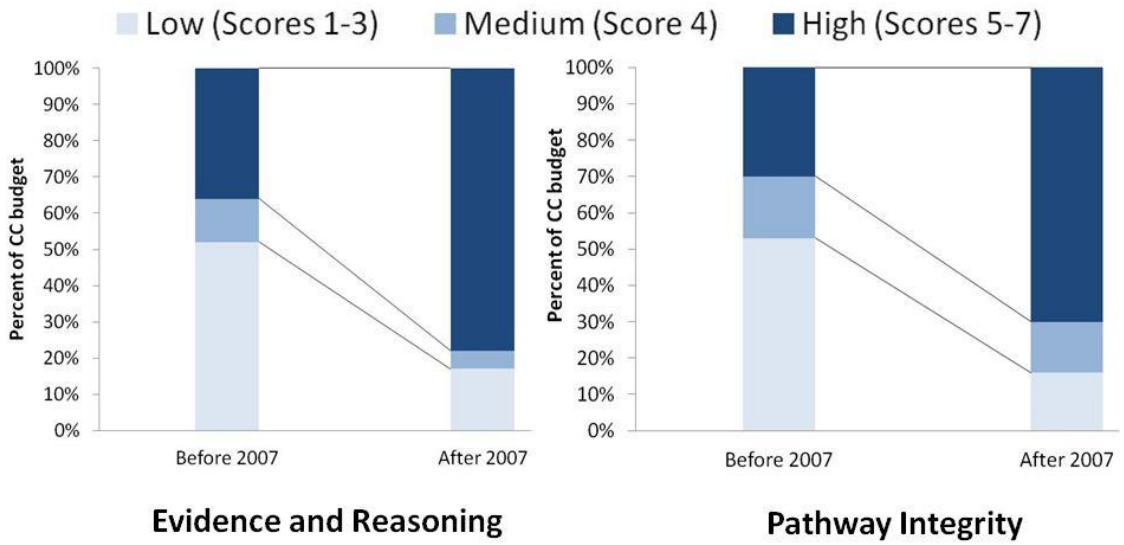


Figure 8 The evolution of CC relevance in project design in the Swiss CC portfolio (n = 61).

Our analysis and confirmed scores for 61 projects (which were reviewed for both CC effectiveness and design quality), demonstrate a clear correlation between good scores in CC relevance of project design and high scores in CC effectiveness. It is important to note, however, that high scores in CC relevance in project design do not automatically lead to projects that score strongly in CC mitigation or adaptation effectiveness (e.g. 7F-07512.01 Energy Efficiency Monitoring and Implementation Project, South Africa). Our project-oriented reviews provide several examples for good design contributing to strong CC effectiveness but also some cases where poor or problematic integration of CC aspects in design has actually not prevented a project from delivering CC benefits (eg. 7F-03128 Nepal Swiss Community Forestry Project, which has contributed both mitigation and adaptation benefits) (see Annexes 5-7).

5. The Fast Start Financing programme

5.1 The Swiss FSF portfolio

5.1.1 General observations on the FSF portfolio

One of the two key purposes of the RoE 2014 is to account for the use of the additional financing for CC measures according to the Bill to the Parliament for 0.5% ODA, which applied in 2011 and 2012. The increase in ODA for CC adaptation and mitigation was counted against the Swiss commitment under the FSF arrangements that were agreed in the Copenhagen Accord of December 2009 (Box 2) and entered into force with the decisions of the UNFCCC COP in Cancún (2010). This was an initial step towards mobilising climate finance at a level that reflects the adaptation and mitigation challenges these countries face. Here it should be noted that although the Copenhagen Accord called for a 'balanced' allocation between adaptation and mitigation, this was not intended to imply an exact, 50:50 division in terms of monetary value.

Box 2: The Copenhagen Accord commitment

The collective commitment by developed countries is to provide new and additional resources, including forestry and investments through international institutions, approaching US$ 30 billion for the period 2010-2012, with balanced allocation between adaptation and mitigation. Funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing states, and Africa.

Source: UNFCCC. Decision 1/CP.16. Paragraph 8

The Swiss share of the total US$ 30 billion was calculated as CHF 140 million based on Switzerland's share of global GDP and GHG emissions. A total of 67 interventions were identified by SDC/SECO in the overall project portfolio as part of the FSF portfolio (see Annex 8 for the FSF projects covered in this analysis). Switzerland's final report to the UNFCCC on "Swiss Fast Start Financing from Public Sources (ODA)" states that a total amount of CHF 125 million was allocated via the cooperation budgets of SDC and SECO, and that an additional amount of CHF 15 million has been attributed to Swiss FSF as part of the Swiss contribution to the Fifth Replenishment of the Global Environment Facility (GEF), bringing the additional Swiss FSF from public sources to CHF 140 million.

Based on data provided to the assessment team, the financing goals for FSF have been overachieved, with Swiss grants through SDC and SECO amounting to CHF 147 million, divided almost equally (49/51%) between them. In a normal project cycle, however, the window of 2-3 years was quite limited. Most of the Swiss-funded interventions will run beyond 2012, and only two fall completely in the 2011-2012 period. Eleven projects started before 2011 (Parliament's decision on FSF was in February 2011[27]), nine of them starting before the Copenhagen Accord and one dating back to 1996.

The FSF is an initial step towards mobilising climate finance at a level that reflects the adaptation and mitigation challenges developing countries actually face. The FSF-period was quite short, however, and various approaches were taken by different countries to deliver on the commitment. The Swiss FSF approach has been to increase overall ODA but to include existing projects in the FSF portfolio by increasing their budgets. Other approaches are illustrated by Norway, which increased its ODA to 1% of GNI in 2009 and identifies FSF on the basis of the OECD DAC Rio markers[28], and by Germany, which counts as FSF its climate-related ODA in excess of a 2009 baseline.[29]

5.1.2 Project selection criteria when establishing the FSF portfolio

Varying criteria have been used in different countries when defining their priorities in establishing their respective FSF portfolios. While the detailed analysis of the Swiss FSF portfolio later in this

[27] Bundesblatt 2011 2919.
[28] Norwegian Ministry of Environment. 2011. Report on Norwegian Climate Finance 2010.
[29] Bundesregierung 2011: Gesetz zur Änderung des Gesetzes zur Errichtung eines Sondervermögens „Energie- und Klimafonds" (EKFG-ÄndG) BGBl. I S. 1702 (Nr. 43).

chapter provides an indication of these priorities, based on stakeholder input collected during this assessment the following selection criteria were considered most relevant:[30]

- To select projects that were likely to be fast to implement and had the potential for up-scaling;
- To avoid launching new projects explicitly for the purposes of the FSF portfolio, meaning that the choice was focused on opportunities in the existing pipeline, including projects that had already started;
- To choose projects that could both build cooperation and harmonise processes with other organisations of relevance from a Swiss perspective;
- To assure continuity and complementarity with the existing portfolio;
- To focus on middle-income countries, in recognition that the 'most vulnerable' country category is not limited to LDCs, SIDS and Africa but includes large countries like China;
- To reflect other criteria such as to show global presence, to build on existing institutional priorities and to strengthen existing competencies, to innovate, to send a political signal by involving recipient countries in all decisions, to mainly focus on bilateral projects in the case of SDC, and on multilateral projects in the case of SECO, to retain an over-arching relevance to poverty relief, and to focus more strongly on market mechanisms.

The following section will show that the selection criteria were indeed followed and resulted in the intended split and balance of the portfolio.

5.1.3 Comparison of FSF with previous and parallel funding structures

In this section we compare the FSF portfolio with the portfolio of projects that started before 2011 (excluding the FSF projects with early start dates), hereafter referred to as the '*Non-FSF pre-2011 portfolio*', and the portfolio of projects undertaken in 2011-2012 but that are not part of the FSF portfolio, hereafter the '*Non-FSF 2011/12 portfolio*'. We also use a number of different 'lenses' in these comparisons, including the Rio Climate Markers, the Adaptation/Mitigation split, geographical distribution, RC perspectives, and project type.

OECD Classification – Climate Markers

In light of the Copenhagen Accord, we would expect most if not all FSF projects to have a principal/primary CC objective[31], and this was confirmed by our analysis (Figure 9). Almost 90% of the FSF portfolio by CC budget is assigned to projects that are marked as having 'principal' CC focus according to the OECD classification, as estimated by SDC and SECO. This compares to 50% of CC budget allocated to projects with a 'principal' CC focus prior to 2011 (excluding FSF projects that started in that period). Projects in the 2011-2012 period that do not belong to the FSF portfolio show a 47% share of budget in the 'principal' category.

[30] A Focus Group meeting was arranged in Bern on 20 January 2014 to collect stakeholder views concerning the Swiss FSF portfolio (see participants list in Annex 11). A preliminary analysis of the Swiss FSF portfolio was shared with the participants from SDC and SECO and discussed at the meeting. The focus group meeting also collected input on the criteria used for the selection of the FSF portfolio as well as lessons learnt from the process. Input and comments on the selection criteria received are included here, not in a jointly agreed upon order of priority but points that were made by several participants are listed first.

[31] In line with the Handbook on the OECD-DAC Climate Markers activity can only be scored as having a 'Principal' (primary) CC objective if addressing mitigation or adaptation is fundamental to its design, explicit within its aims, and if it would not have been undertaken at all or designed in the same way without this primary objective. See also Annex 12 Gaia Inception Report.

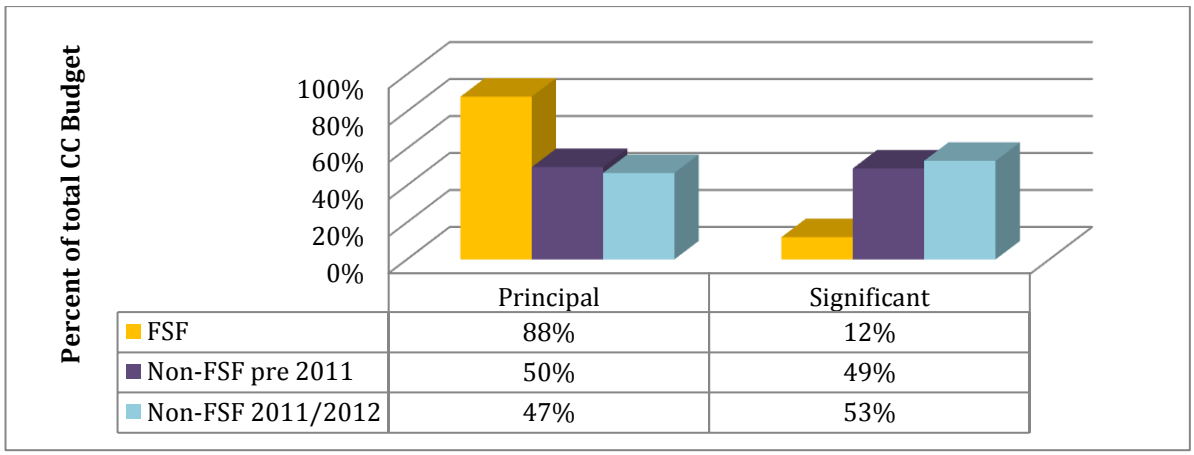


Figure 9 Share of "Principal" and "Significant" projects (by percent of budget) in the respective portfolios (see footnote for definitions).

The stronger CC focus of the FSF portfolio is also reflected in the larger share of CC-relevant budget, further illustrating the focus of the FSF portfolio on projects with high CC relevance compared to the composition of projects in the *Non-FSF pre 2011* and *Non-FSF 2011*/12 portfolios.

Adaptation vs. Mitigation

The Copenhagen Accord envisioned a 'balanced' split between adaptation and mitigation measures. In its decision, the Swiss Parliament allocated funding to different categories, namely Adaptation, Forest and Energy, with only indicative targets for the respective categories (see Table 2). These indications however were slightly stronger on the mitigation side, considering that forest projects (and especially REDD) have generally within the UNFCCC climate negotiations framework a clear mitigation aspect. What we observe however, is a somewhat stronger focus on adaptation than intended, an aspect that is further highlighted when considering the CC budgets across the full project lifetimes.

	Financial targets in Swiss FSF[32]	Share of funds disbursed in Swiss FSF (2011-12, post parliament decision) in million CHF/%		Share of funds disbursed in Swiss FSF (2010-12, whole FSF period) in million CHF / %		Share of funds budgeted in Swiss FSF (project lifetime) in million CHF/%		Share of global FSF portfolio[33]
Adaptation	20-30%	28.4	30%	30.5	31%	50.2	42%	18%
Forest	20-30%	13.9	15%	13.9	14%	16.3	14%	10%[34]
Energy	35-55%	53.2	56%	53.2	55%	53.2	44%	62%[35]
		95.5	100%	97.6	100%	119.7	100%	90%[36]

Table 2 Intended FSF allocations by Swiss Parliament and actual allocations.

While the share of funds between adaptation and mitigation overall could be considered balanced (also depending on the type of forest interventions, which in most cases present both mitigation and adaptation benefits), it can be highlighted that in comparison to other donors (with an overall share of adaption of only 18% in the total global FSF portfolio, Table 2) the Swiss FSF has an exceptionally strong focus on adaptation. When comparing the Swiss FSF portfolio with those of other countries, it

[32] "Botschaft zur Erhöhung der Mittel zur Finanzierung der öffentlichen Entwicklungshilfe", Schweizer Parlament, Feb 2011.
[33] Smita Nakhoode, et al., Nov 2013, "Mobilising International Climate Finance: Lessons from the Fast Start Finance Period", ODI, WRI, IGES
[34] REDD+ only
[35] All mitigation options
[36] 10% allocated to projects with multiple targets

is seen that Norway and Japan allocated about 10% to adaptation and Germany and the UK about 30%. Almost 50% of the Norwegian FSF is allocated to REDD+ and almost 80% of the Japanese FSF portfolio to mitigation.

Geographical distribution

The Copenhagen Accord envisioned that adaptation funding would be focused on the most vulnerable countries. Comparing the geographical distribution of the Swiss FSF portfolio with that of all FSF contributions, we see that Switzerland differs from the global average of donor countries in giving a larger share to global initiatives and a smaller share to Asia, Europe & the CIS, the Middle East and North Africa. Table 3 presents the geographical distribution of the Swiss FSF portfolio and a comparison with the global FSF distribution. According to the focus group consulted during the assessment, the geographical fund distribution reflects the objectives defined in the framework credit based on Messages on Switzerland's International Cooperation 2009–2012.[37]

Regions	Distribution of Swiss FSF Portfolio		Share of total global FSF budgets by region (%)[38]
	Number of projects (%)	Swiss CC budget (%)	
Africa	15	15	18[39]
Asia	34	28	43
Europe & CIS	1	<1	4
Global	18	35	9
Latin America	27	16	16
Middle East and North Africa	3	2	5
(blank)	1	3	4
Grand Total	100	99	100

Table 3 Geographic distribution of Swiss FSF portfolio compared to global portfolio.

Contributions to multilateral institutions

A total of CHF 85.2 million (61%) of the FSF portfolio took the form of contributions to multilateral institutions, either as core financing or as contributions to funds with specific purposes (known as 'multi-bi' contributions). The fact that mitigation projects, which are mostly conducted by SECO, focus on such contributions is in line with SECO's preference to partner with other donors[40]. The largest share of CC budgets for mitigation projects (77%) is allocated through multi-bi contributions, whereas for adaptation projects these amount to only 24%. The biggest single contribution was of CHF 17 million to UNIDO to support its Resource Efficient and Cleaner Production Programme (UR-00340.02.01). A total CC budget of CHF 11.9 million (with an FSF-specific component of CHF 3.4 million) was allocated to the Climate Change Resilience Fund in Bangladesh (7F-06811). Another CHF 8.9 million was provided as an increase in financing to the World Bank Forest Carbon Partnership Fund (UR-00372.02.01 - see case study 24 below). The fourth biggest contribution was of CHF 7 million to support the World Bank's Partnership for Market Readiness (UR-00534.01.01).[41]

Project themes and types

Comparing the *FSF portfolio* with the *Non-FSF pre 2011* and *Non-FSF 2011/12* portfolios, with regards to project types and themes, we note some similarities and clear differences. In the energy sector, the *FSF portfolio* shows a strong focus on energy efficiency (EE, with CHF 19.5 million in total CC budget allocated) and renewable energy (RE, with a budget of CHF 19.7 million). This distribution

[37] Message on countries of the South, see http://www.deza.admin.ch/en/Home/Activities/Development_cooperation_with_the_South/Message_on_countries_of_the_South_2009_2012

[38] Smita Nakhoode, et al., Nov 2013, "Mobilising International Climate Finance: Lessons from the Fast Start Finance Period", ODI, WRI, IGES

[39] Sub-Saharan Africa

[40] It was also pointed out during the focus group meeting (Focus Group meeting in Bern on 20 January 2014, see Annex 11) that some of the projects might look like non-earmarked contributions (NEGs) on the outside but had a very clear agenda to promote certain aspects of a broader initiative or even to introduce new elements to existing programs.

[41] With project oriented desk reviews of the FCPF and PMR available in Annex 7.

is similar in the *Non-FSF pre 2011* portfolio, while the *Non-FSF 2011/12* portfolio shows a slightly stronger focus on EE (with CHF 7 million in total budget) compared to RE (2.4 million). The EE theme includes 8 projects, and the RE theme 9 projects in the FSF portfolio. While some of the key RE and EE projects in the FSF portfolio are discussed elsewhere in the report, we highlight here two EE FSF projects:

- CHF 9.2 million allocated to promoting off-farm employment and income in the Great Lakes region of Africa through climate-responsive building material production (7F-08320)[42]; and
- CHF 2.6 million allocated to the "top-ten" project in China[43], which aims to enable the expression of consumer preferences in favour of purchasing more energy-efficient items by introducing an internet-based information platform which lists the ten most energy efficient products for a given product category that are available on the national market (UR-00432.01.01).

As noted above, adaptation themes are strongly represented in the Swiss FSF portfolio (representing some 56% of the FSF budget[44]), including a number of projects in ecosystem management, adaptation policy development and resilience building, and risk management, with a number of projects also providing both adaptation and mitigation benefits. Concerning adaptation projects, we observe an increasing focus on ecosystem management with a budget of CHF 12.6 million allocated to eleven projects, the three largest of which being:

- CHF 12.8 million (with FSF budget CHF 1.2 million) to reduce open-access overgrazing and degradation of pasture land by equipping herders in Mongolia with a means to work with local authorities in collectively managing livestock in a sustainable way (7F-03461 - see case study 10 in Section 3.3);
- CHF 11 million (FSF budget CHF 2.05 million) to implement and coordinate national and international efforts in Mongolia for coping with desertification and promoting sustainable livelihoods in arid and semi-arid areas, through national knowledge management, the organisation of local communities around improved management of natural resources and the use of energy-efficient stoves, public awareness-raising and education, and open-access databases on desertification coping techniques and best practices (7F-05405);[45]
- CHF 9.1 million (FSF budget CHF 1.7 million) to promote participatory water catchment management in India (7F-03445).

There are five FSF projects with a focus on environmental monitoring, receiving a total of CHF 15.5 million in CC budget, with the two largest being:

- CHF 11.75 million (FSF budget CHF 3.5 million) to support informed decision making, legislation and regulation at the national level and participatory action at the local level through environmental monitoring, analysis and dissemination of information in West Africa (7F-08079).
- CHF 4 million to promote monitoring capacity based on water management mapping in two catchments, to support glaciological studies at three universities, and to inform and support local communities in planning adaptation and risk reduction measures in Perú (7F-07833).

As noted in Section 5.1.2, a focus on market mechanisms was one of the selection criteria when establishing the Swiss FSF portfolio.[46] An effect of this is that a major divergence in the *FSF portfolio* compared to the *Non-FSF pre 2011* and *Non-FSF 2011/12* portfolios is visible for interventions in emission trading, which involves some 10% of the budget in the *FSF portfolio* but only 2% in the *Non-FSF pre 2011* and 0% in the *Non-FSF 2011/12* portfolios. Some of the key FSF interventions in this theme are:

- CHF 7 million contributed to the World Bank's Partnership for Market Readiness (UR-00534.01.01); and
- CHF 0.9 million allocated to reversing grassland degradation and reducing climate risk by exploring incentives that might be applied using carbon-conservation financing in Mongolia[47] (7F-07809 - see case study 23 below)).

[42] Note that this project is marked as "forest" under the 0.5% Botschaft.
[43] SECO UR-00432.01.01, Topten China.
[44] This percentage is higher than the figure presented in table 2, as the thematic analysis is morte fine-grained and recognizes adaptation aspects also in forestry as well as energy sector interventions.
[45] Also reviewed during Mongolia field mission, and presented in Annex 5.
[46] Focus Group meeting in Bern on 20 January 2014 (Annex 11).
[47] Note that this project is marked as "mitigation" in the overall portfolio for allocation of the CC relevant budget, but as "adaptation" in the FSF portfolio.

5.2 Lessons learned and preliminary signs of effectiveness

5.2.1 Institutional and strategic observations

The establishment of the FSF portfolio was launched by the UNFCCC negotiation process, and represents an exceptional case in the CC work of donor countries. Several stakeholders that participated in the focus group discussion[48] consider this a unique situation and as such it is difficult to draw general lessons from the process. Given the need to place the funds quickly, choices were mainly limited to initiatives that were present in the pipeline, including projects that had already started.

The focus group also drew attention to the impressive ability of both SDC and SECO to deal with this unique situation, by speedily allocating the additional funding to rational aims. The group also recognised, however, that the two institutions differed somewhat in their approach, with SDC showing a stronger focus on bilateral interventions and SECO instead targeting multilateral ones.

According to the focus group discussions, the establishment of the FSF portfolio influenced the general direction of SDC and SECO with regards to their CC portfolio and approach. Reportedly, one result was the mainstreaming of CC into project activities and programmes, and its fuller integration into development cooperation. Another was the completion of the Climate, Environment and Disaster Risk Reduction Integration Guidance (CEDRIG) tool, and its increased application across the project portfolio, not only the FSF portfolio. The process of accommodating the FSF funds and the general CC debate also led to a renewed interest in the forest sector and strengthening of the relevant divisions, to additional Swiss interventions in Latin America, and to a renewed focus on Africa. It was also pointed out that due to the FSF process the DRR teams are now in much closer contact with their colleagues that manage CC adaptation projects.

5.2.2 Preliminary results and signs of effectiveness

Observations with regards to expected results and effectiveness

The 0.5% Botschaft states that results are expected from additional climate financing in ten 'result categories' (see Annex 8, Box A8.1). The four with the highest percent of total FSF budget are VI. Energy Efficiency, II. Awareness Raising, V. Reduced Greenhouse and I. Energy Efficiency (Table 4).

Result Categories	Number of Projects[49]
I. Policy Integration (adaptation)	11
II. Awareness Raising	11
III. Local Sustainable Forestry	5
IV. Int Financing Sust. Forestry	4
V. Reduced Greenhouse Gas Emissions	11
VI. Energy Efficiency	19
VII. Financing for Cleantech SME	1
VIII. Access to Renewable Energy	8
IX. Energy Management	5
X. Insurance/Risk	5
(No Marker)	18

Table 4 Distribution of FSF projects across result categories as established in the 0.5% Botschaft.

Several interviews[50] highlighted the importance of a long-term focus to achieving success. Especially within the area of influencing policy development, the importance of developing networks and building trust is recognised. During all the field missions, the assessment team noted that the Swiss

[48] Focus Group meeting in Bern on 20 January 2014 (Annex 11).
[49] Project were given more than one Result Category, inflating the total project number above the 67 total projects.
[50] E.g. with Myriam Steinemann of INFRAS, Benjamin Lang of Swisscontact and Stefan Denzler of the WorldBank (Annex 11).

are seen as valuable contributors, not just as providers of project funding but also committed partners who typically provide high-quality technical advice and project management skills throughout a project's lifetime.

Projects that aim to develop CC adaptation measures and integrate them into policy at various levels (case study 22 exemplifying one of those) represent some 7.6% of the total FSF budget (CHF 11.2 million). According to the 0.5% Botschaft, the number of policies and strategies developed as a result of Swiss-supported projects should be taken as a measure of success for result category I. However, a lesson learned from stakeholder interviews conducted during this assessment (including stakeholder consultations during field missions) is that while the interaction at policy level provides potentially the best leverage especially in large countries, it is hard to link the influence of Swiss contributions to the broader policy development in a country and to measure (and attribute) their effectiveness.

Case study 22: 7F-08104, Reducing vulnerability and adaptation to climate change in Nicaragua. Nicaragua ranks among the countries most affected by extreme weather events that cause loss of lives and affect natural resources and livelihoods. It is in this Central American country that precipitation is expected to decline most over the next thirty years, with the Las Segovias region (where the project has been implemented since 2011) being the worst affected, to the cost of agricultural and pastoral activities practiced by mostly poor people. Expected to be completed in 2015, the project is helping to mainstream capacity and awareness on CC by developing an inclusive and comprehensive CC strategy for the Department of Las Segovias and by networking local public, civil society and private institutions to promote knowledge dissemination and sharing on adaptation principles and practices. The project has conducted CC studies that feed into the Regional Climate Change Strategy. Also infrastructure works in 10 municipalities have been completed to protect them against extreme weather events. The project has also helped involve Municipalities to leverage an additional 25% of funding for climate proofing their infrastructure activities *(CC adaptation effectiveness score 5, strong*)

As noted, the Swiss FSF portfolio contains eleven interventions that apply ecosystem management approaches, which can promote both CC adaptation and mitigation by helping to ensure that forest, grassland, plantation and other ecosystems continue to provide ecological and livelihoods services. Some of these were assessed during the field mission in Mongolia (see Annex 5). The project linking herders to carbon markets (7F-07809) *scored 3 (weak) for mitigation effectiveness* (see case study 23 below), project 7F-03461 addressing pasture ecosystem management *scored 6 (very strong) for CC adaptation effectiveness* (also noting mitigation benefits), and project 7F-05405 on combating desertification *scored 3 (weak) for adaptation* effectiveness (see Annex 5).[51]

Case study 23: 7F-07809 Linking herders to carbon markets, Mongolia. Pastoralism is central to Mongolian society, culture and economy. 40% of Mongolians earn a living as herders, and about half of the rural population lives in poverty. Livestock based range management continues to be their main productive activity and the land use with the greatest impact on environmental services in the country. The overall objective of this project (2011-2013) was to reverse grassland degradation, improve rural incomes and reduce herders' vulnerability to climate risk through supporting adoption of sustainable grassland and livestock management practices and improved product marketing by Mongolian herders. The project aimed to do this by developing a pilot carbon finance project in which atmospheric carbon is sequestered in grassland soils through adoption of sustainable grazing management practices, and using methods that meet international carbon market standards herders could be supported and incentivized by payments for the carbon sequestered. While the project has not so far contributed to reduced GHG emissions *(CC mitigation effectiveness score 3, weak*), or flow of climate finance to Mongolian partners, it has contributed to important methodological work, supporting research, awareness raising and provided useful lessons about the potential role of market mechanisms (including climate finance) in funding of GHG mitigation measures. For a country like Mongolia carbon sequestration will form a central part of GHG mitigation efforts the country will undertake - as foreseen in the National Action Programme for Climate Change and as is expected to be outlined under a forthcoming global climate agreement under the UNFCCC to be signed in 2015. For more information see Annex 5.

For mitigation, projects related to EE and RE form the biggest FSF portfolio category with 33% of total CC mitigation budget (CHF 28.0 million). As noted in several authoritative CC studies (such as IEA Energy Technology Perspectives, IPCC assessment reports) improving energy efficiency is the "cheapest fuel source" globally, and especially in many developing countries. However, a number of other mitigation project types are also included in the Swiss FSF portfolio, such as the Forest Carbon Partnership Facility (case study 24). The approach of addressing energy efficiency mostly through

[51] With projects 7F -03461 and 7F-05405 being intiatied already in 2004 and 2007 respectively.

multi-donor initiatives was seen by the focus group as essential to provide the best leverage for every CHF invested. Taking note of the central role of contributions to multilateral organisations earmarked for specific purpose within the FSF portfolio, and the generally moderate to strong effectiveness identified in the total portfolio for such contributions, this could also serve as a preliminary indication of the effectiveness that can be expected from the FSF portfolio. Among mitigation projects addressing green buildings, energy efficiency labelling and consumer education, nine of the projects were tentatively scored *extremely strong (7)*, three as *very strong (6)* and three as *strong (5) for mitigation effectiveness*. Confirmed scores will be available only upon project achievements and systematic MRV.

Case study 24: UR-00372.01.01 - The Forest Carbon Partnership Facility. The Forest Carbon Partnership Facility (FCPF) is a global partnership of governments, businesses, civil society, and indigenous peoples focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries (i.e. activities adding up to REDD+). With 36 developing and well-forested countries participating (including SECO priority countries Indonesia, Vietnam, Ghana, Perú and Colombia), FCPF is the most important process in REDD. The FCPF has two separate but complementary funding mechanisms — the Readiness Fund and the Carbon Fund — to achieve its strategic objectives, with the Swiss funding going to both.

The FCPF, launched in 2007, has successfully raised in-country awareness, contributed to south-south learning and built capacity and skills on REDD+ issues. The partnership has served strategically in raising the forestry issue onto the UNFCCC agenda as one of the priority issues, and it has served to highlight the socio-economic and environmental interconnections that need to be simultaneously addressed (and the multiple benefits that could be harnessed through REDD+). The FCPF has served to develop and strengthen MRV capacity (including remote sensing approaches) in partner countries and investigated sustainable ways to provide price incentives for forest carbon stock conservation and the sustainable management of forests in developing countries. Evidence from several participating countries such as Perú and Vietnam also highlight achievements on regulation and administrative aspects (including Strategic Environmental and Social Assessment, integrated land-use planning and zoning, improvement of forest tenure security, and enforcement of planning and environmental rules). There are remaining challenges, however, in pricing and carbon markets, including carbon ownership and benefit sharing. In light of the recent UNFCCC negotiation results and the latest UNEP 2013 Gap report, there is an urgent need to achieve considerable emission reductions by 2020 and beyond. REDD+ provides a critical opportunity for achieving required emission reductions with multiple co-benefits (not only limited to CC mitigation aspects, but also as a pathway to build CC resilience, strengthen local livelihoods, protect biodiversity, cultural heritages etc.). Consequently, the FCPF is at the core of international negotiations, and can serve as a pathway for concrete mitigation action *(mitigation effectiveness score 6, very strong)*. For more information see Annex 7.

***Concluding remarks**. The Swiss FSF portfolio was built strongly around projects already in the pipeline and existing interventions, with the aim of timely and effective implementation and potential up-scaling. In line with the ToR (see Annex 13[52]) an assessment of the effectiveness of the FSF portfolio was not part of this assignment. However, based on the types of interventions within the FSF portfolio, a strong emphasis on adaptation and global (multi-bi) initiatives, and CC mainstreaming efforts making use of the CEDRIG tool by SDC, we expect this portfolio generally to show strong CC effectiveness.*

[52] ToR, section 2.3: "*since the interventions financed under this bill have only started in 2011 or even in 2012, they have not yet produced results at outcome and impact level. An assessment on their effectiveness is therefore not possible yet".*

6. Conclusions

6.1 Swiss CC portfolio effectiveness – the big picture

The overall effectiveness rating is positive. Using a comprehensive assessment approach and multiple lines of evidence, we conclude that the big picture on CC effectiveness is positive. In particular, the 423 projects assessed here as a whole show moderate to strong overall effectiveness (making use of a seven-point scale from none to extremely strong to assess the CC effectiveness of the projects), with regards to CC mitigation, CC adaptation as well as strengthening the enabling frameworks for CC action in developing countries. This implies that public funds allocated to CC action in developing countries have in general been used in an effective manner, and have been producing results that support low-carbon and climate-resilient development in partner countries.

The overall effectiveness rating is improving. The assessment identifies a pattern of improving CC effectiveness over time when comparing the 2000-2006 with the 2007-2012 parts of the CC portfolio. Although exceptions were found among the 61 projects reviewed in depth, it is evident that this positive trend holds overall for both adaptation and mitigation. It is more marked for adaptation, however, presumably reflecting a steeper learning curve as adaptation has moved up the policy agenda with the acceptance of the inevitability and consequences of CC, and the trend is expected to continue within the Swiss Fast Start Financing portfolio (FSF 2010-2012) which strongly emphasises adaptation.

The FSF portfolio has potential for strong effectiveness. The Swiss FSF portfolio (CHF 140 million) was built strongly around projects already in the pipeline and existing interventions, with the aim of allowing timely and effective implementation and with potential for up-scaling. Based on the types of interventions within the FSF portfolio (and a comparison of the effectiveness of similar interventions in the total portfolio), a strong emphasis on adaptation and global (multi-bi) initiatives, and CC mainstreaming efforts making use of the Climate, Environment and Disaster Risk Reduction Integration Guidance (CEDRIG) tool by SDC, this portfolio is expected to show strong CC effectiveness (although explicit assessment of the CC effectiveness of FSF portfolio was not part of this assignment).

The CC relevance of project design and overall CC effectiveness are both improving. The in-depth review of 61 projects sought evidence for both CC effectiveness and CC design quality, and found a correlation between the extent to which CC was considered in project design and the later strength of projects' CC effectiveness. Comparing the 2000-2006 with the 2007-2012 parts of the portfolio, there is a clear increase over time in the extent to which CC was considered in project design. This trend is consistent with the hypothesis that greater attention to CC aspects has been required at SDC and SECO, as a result of increased priority being given to CC and the introduction of the OECD-DAC Rio Climate Markers over the same period.

6.2 CC results, strengths and weaknesses

Concrete CC results. Although quantitative data on mitigation and adaptation are scarce within the portfolio's documentation, among the 61 projects that were reviewed in depth a number of concrete results can be discerned. While such a small sample is hardly representative of the portfolio as a whole, these findings do shed important light on what could be documented if all 508 projects were subjected to the same level of investigation, and also what could be achieved with a more systematic emphasis on baselines and MRV in future. Among the 61 projects that were reviewed in depth, the following concrete results were found in various thematic sectors.

- **Mitigation through renewable energy (RE) and energy efficiency (EE) in the Balkans**, which by rehabilitating hydropower, improving energy efficiency and promoting renewables led to increased power reliability (thus avoiding GHG emissions from generators), reduced electricity imports (from countries that use fossil fuels to generate it), and reduced emissions from domestic thermal power plants.
- **Mitigation through cleaner production in Perú, South Africa and Vietnam**, which in Vietnam resulted in savings among partner companies of 7% in electricity, 7-20% in various kinds

of fossil fuel, 18% in water and 25% in chemicals, and in Perú and South Africa led to tens of thousands of tonnes per year in reduced GHG emissions by audited companies.

- **Mitigation and adaptation through ecosystem management**, which used multi-stakeholder forest management, REDD+, biotrade-based conservation and organic farming to generate mitigation gains (and, often, adaptation ones), for example in Vietnam by increasing the land area of FSC-certified forests by over 60% while also strengthening livelihoods, and in Mongolia by generating and distributing knowledge about how graziers can access financing to reward conservation of soil carbon and reversal of grassland degradation.
- **Adaptation through risk management**, which are providing real benefits to large numbers of people in places that include Tajikistan, Haiti, Mongolia and China through disaster risk reduction planning, early warning and insurance, including the exemplary development and hand-over of monitoring and early warning systems for glacier lake outburst floods that are a serious CC-related risk in some mountain areas.
- **Adaptation through knowledge management** and by mainstreaming CC into decision making, which through demonstration projects and knowledge sharing at community, local government and central government levels led to strengthened CC adaptive capacity and resilience (and replication and leverage effects) in many economic sectors in Perú, China and India.
- **Adaptation and mitigation through institutional contributions**, in which Swiss contributions to multilateral institutions show high overall effectiveness (both for mitigation and adaptation), including those to the Forest Carbon Partnership Facility, the Partnership for Market Readiness and the UNFCCC Adaptation Fund (in relation to which we note that strong Swiss support CC adaptation in developing countries is unusual among donors).
- **Adaptation and mitigation synergies**, which project designers sometimes explicitly sought, for example through community-based forest management in four of Nepal's poorest districts, thereby improving the extent, sustainability, livelihood utility and protective functions of forests, and in Mongolia and Bangladesh where a similar approach was applied to grasslands and agroforests respectively.

The themes of highly effective projects. Seeking to identify consistent strengths and weaknesses among the projects, we grouped the portfolio thematically according to their common approaches to achieve mitigation, adaptation, and/or enabling outcomes. Examples of such themes were RE, EE, cleaner production, ecosystem management, knowledge management, and risk management. Themes with particularly strong scores for CC effectiveness were found to include:

- **for mitigation,** projects that targeted the rehabilitation of hydropower systems, the promotion of diverse and locally-appropriate RE systems (small hydro, wind, biomass, etc.), the rehabilitation of power systems with direct EE benefits and enabling impacts for RE promotion, the strengthening of monitoring, reporting and verification (MRV) capacity and carbon market readiness, the use of knowledge sharing among cities and companies, the rehabilitation and re-deployment of used Swiss trams to other countries, the promotion of cleaner production (especially through a combined approach involving knowledge sharing, green credit facilities and risk management in collaboration with UNIDO and IFC), and the safe disposal of environmentally damaging wastes (ozone depleting substances and e-wastes);
- **for adaptation**, projects that targeted disaster risk reduction through protection against specific threats (including early-warning systems), disaster risk insurance at all levels from inter-governmental risk sharing to micro-insurance for small-scale farmers and microcredit borrowers, the strengthening of knowledge bases for adaptation planning and decision making, the establishment of networks to promote the flow of knowledge about potential adaptation solutions, the promotion of ecosystem-based approaches with local participation, water resources management, physical and institutional rehabilitation of water systems, and payment for ecosystem services; and
- **for both mitigation and adaptation**, projects that targeted the promotion of multi-stakeholder forest management, that enabled key REDD+ initiatives, that promoted desertification-resistant grassland management and livelihoods diversification, organic farming (including certification, links to Swiss markets, and trade financing during financial crises), CC-informed policy dialogue and policy development, knowledge sharing on local coping strategies, local empowerment, and comparative research, or that involved contributions to highly effective organisations, research, charitable, financial and UN institutions.

Reasons for high effectiveness. The reasons behind the strong effectiveness in parts of the portfolio are diverse but a number of common features were detected. First, where GHG emissions

were efficiently avoided or reduced through repair, re-use and recycling approaches. Second, where use was made of synergies among projects that addressed complementary parts of a complex set of issues (including cleaner production and economy-wide incentives). Third, where ecosystem services and natural resource management were addressed in concert with local participation, ownership and livelihood diversification. Fourth, where opportunities to participate in disaster-oriented insurance coverage were systematically broadened, especially where disaster risk and adaptation strategies were integrated and initiatives screened for climate vulnerabilities and proofed against them. Fifth, where core funding was provided for an institution known or reputed to have a substantial record of service delivery relevant to CC mitigation or adaptation, or both, and with global or regional reach and the capacity to distribute lessons learned widely.

Reasons for low effectiveness. A small minority of 41 projects were considered very ineffective, reasons for which include: poor awareness and communication of CC impacts, causing misunderstanding about the key drivers of desertification; a lack of attention to the social and institutional underpinnings of public and private services for the delivery of water and power; a lack of CC-related criteria for cultivar selection; inappropriate choice of biotrade targets; and a focus irrelevant to climate change.

6.3 Lessons learned

Swiss added value and opportunities for strengthening effectiveness. Project reviews, field missions and interviews consistently revealed a general appreciation of Swiss technical competence in their chosen fields of intervention and a satisfaction over the timeliness of aid delivery. The assessment notes a number of specific areas where Swiss CC expertise is particularly appreciated by developing country partners and where Swiss inputs could provide particular added value in meeting future CC challenges. Thus, Swiss technical expertise in areas such as renewable energy (in particular hydropower), disaster risk reduction through early warning and protection against specific threats, disaster risk insurance at all levels, and engaging business in CC and ecosystem management, all provide opportunities to develop and up-scale very strong CC effectiveness. With regard to thematic expertise, several interventions also revealed important opportunities to harness synergies between mitigation and adaptation more systematically. For example, Swiss-funded interventions in hydropower have the potential to combine mitigation with adaptation benefits through improved dam safety and management of water resources that responds to changes in CC risk profiles. Several interventions in the areas of ecosystem management and livelihood strengthening have the potential to achieve both mitigation and adaptation benefits more systematically, without administrative overload. The portfolio also contains a large volume of contributions to international organisations, including an increasing role for multibilateral interventions, and showing overall strong effectiveness, and these are particularly valued by the beneficiaries. Swiss strategic input and advice was highlighted by several international partners, with the UNFCCC Adaptation Fund being most prominently noted as an organisation that has benefitted from Swiss expertise and leadership through its board member input.

There is insufficient quantitative data to support reliable aggregations. Multiple lines of evidence were used to support the aggregate results statements above, but quantitative data on GHG emission reductions and adaptation benefits remain scarce overall. In the case of emissions, this is because few data were collected and baselines were seldom defined. In the case of adaptation, it is because no agreed standards for measurement yet exist. This conclusion is based on our in-depth reviews of 61 projects, which covered global and regional interventions as well as projects in Azerbaijan, Bangladesh, China, Ethiopia, Ghana, Haiti, India, Mozambique, Nicaragua, Niger, Tajikistan and Vietnam. It is further confirmed by findings from field missions to projects in Albania, Mongolia, Nepal, Perú, Serbia and South Africa, although here there were some early signs of improved CC-specific baseline formulation, indicators and monitoring procedures as well as the reporting of relevant results. However, in light of the general weakness in data availability, consolidated quantitative assessment of RE or EE achievements and emission mitigation results (in tonnes of CO_2e) is not currently possible at a portfolio level.

Opportunities were identified to improve coordination and CC mainstreaming. Combining the findings from this assessment with our knowledge of other donor agencies, we conclude that better coordination and CC mainstreaming within and between SDC and SECO can contribute to strengthened CC effectiveness, while also allowing for improved knowledge

management and synergy in the CC portfolio. This would also serve developing country partners in strengthening their MRV capacity, which is critical in accessing international climate finance and integrating CC into national and local development strategies and actions. Several developing country stakeholders indicated during the assessment their appreciation of Swiss efforts in this latter area, which will be of increasing importance as all countries (including developing countries) are expected to take on binding climate commitments at the 21st UNFCCC Conference of the Parties in December 2015.

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Annex 1: Answers to ToR questions

This Annex reproduces the questions contained in Sections 4.1 and 4.2 of the ToR (in Annex 13), along with answers formulated in light of the findings presented in this Technical Report.

General questions and answers

G.Q1: ***How have climate change (CC) relevant interventions achieved their CC relevant objectives and proven to be successful and effective in terms of CC mitigation and adaptation, including enabling framework*****?**

Answer. The assessment provides evidence of generally good CC effectiveness of the portfolio in the three main areas of CC mitigation and adaptation, and the enabling framework for both. The analysis also reveals a trend of improving overall effectiveness when comparing the pre-2007 and post-2007 portfolios (see Section 4.2, with the trend being significant for both mitigation and adaptation, measured by number of projects as well as budget share of the total portfolio). However, as pointed out in elsewhere (in particular Chapter 3 and Annexes 5-7), there are general data constraints related to CC-specific information, which in many cases hamper detailed MRV of CC-specific results. More detailed analysis also reveals differences in achieved results over project types and Result Chains, drawing attention to a number of factors that contribute to stronger effectiveness, and/or that can weaken it. For example, signs of strong CC effectiveness have been witnessed in the following circumstances: (a) when interventions have paid holistic attention to all key aspects of their socioeconomic and environmental circumstances and linkages; (b) when they exerted leverage effects by actively influencing the decisions and policies of governments and financing institutions; (c) when they efficiently avoided or reduced GHG emissions through repair, re-use, recycling or safe waste management; and/or (d) when they decisively harnessed multiple CC gains and co-benefits (be it for public and ecosystem health, mitigation and adaptation synergies). A more detailed account of reasons for higher/lower CC effectiveness is given in Chapter 6.

G.Q2: ***To what extent have CC relevant projects proven to be successful and effective in contributing to low carbon development in the partner countries*****?**

Answer. The Swiss-funded projects, notwithstanding the instrument and channel concerned, serve as one component among a wealth of interventions in the partner countries that contribute to low-carbon development. While some leading developing countries have outlined low-carbon strategies and a few have taken decisive steps to decarbonise their economies, the Swiss CC portfolio contributes to this process through several lines of action (with Result Chains 1-5 all serving in to this end and having mean mitigation scores of 4.9, 5.2, 5.4, 4.8, 4.8, i.e. corresponding to strong CC effectiveness: see RC-based answers below indicating the effectiveness within these particular Results Chains). It is, though, difficult to attribute to Swiss interventions broader policy development processes in its partner countries.

For example, while the intervention in Mongolia promoting access to carbon markets (see Annex 5, 7F-07809 Linking herders to carbon markets) has not been directly successful and has not led to any carbon credit revenues, the intervention has built important know-how about the carbon markets and preparedness for accessing climate finance more broadly – and is therefore likely to contribute to low carbon development in Mongolia in future. Likewise, the intervention in collaboration with DFID in China (see Annex 7, 7F-06983 Strengthening Climate Change Adaptation in China and Globally), while focussing on adaptation, has actually served to raise awareness of CC risks in China, and contributed to increased Chinese preparedness to consider mitigation measures nationally and within the UNFCCC context. This aspect also highlights the interlinkages between adaptation and mitigation, and the need to avoid strict categorisation of adaptation and mitigation, which is why many recent developing country strategies refer to low carbon (or green) climate-resilient development (as one package). In sum, while effectiveness and success at the national level in partner countries is impossible to assess within this evaluation, it can be concluded that the Swiss CC portfolio has contributed to low carbon development in many of its partner countries.

G.Q3: ***To what extent have CC relevant projects proven to be successful and effective in contributing to a climate resilient development in the partner countries*****?**

Answer. As noted above concerning the Swiss contribution to low carbon development, the Swiss funded interventions serve as one component among a wealth of interventions in the partner countries that contribute to climate resilient development. While a systematic process under the UNFCCC is supporting national adaptation strategy and implementation work in developing countries, the Swiss CC portfolio contributes to this process through several lines of action (with Result Chains 1, 6 and 7 serving this end and having mean adaptation scores of 4.9, 4.8 and 4.6, i.e. corresponding to strong CC adaptation effectiveness). Figures 6 and 7 in Chapter 4 highlight the change over time in CC adaptation effectiveness of the Swiss CC portfolio (before/after 2007).

As noted above, the intervention in China (7F-06983), for example, has been very strongly effective (score 6) in mainstreaming CC into national and regional planning and management, while also sharing regionally and globally the products and lessons learned. The Swiss contribution to the Adaptation Fund (7F-08274) is also considered as a highly effective pathway to promote resilience in developing countries broadly, and the Swiss contribution to the AF and its activities has been exceptionally well appreciated by its partners. While several other examples of national or regional adaption initiatives could be noted, it is important to highlight that many if not most of Swiss funded adaptation projects address – mostly with strong effectiveness - local level adaptation capacity, where the real benefits of resilience building will be tested. Also, many projects targeting poverty reduction (e.g. through improved food security or sustainable land and forest management) contribute significantly to strengthened climate resilience at the local level, even if CC was not considered in project planning. The challenge of monitoring and evaluating adaptation achievements, however, is even more acute than in the area of mitigation, as has been acknowledged in several Swiss-funded interventions (see Annex 7, e.g. 7F-04054 Programme on Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Areas in India).

G.Q4: ***What obstacles, difficulties and challenges have undermined the desired success and effectiveness of CC relevant interventions and which measures were undertaken to address them*****?**

Answer. Our analysis identifies a number of factors that contribute to higher effectiveness, and in many cases the lack of the same project attributes hampers that effectiveness (see Chapter 6). In some cases, the lack of effectiveness can be traced to special interests in partner countries (not differing from challenges typical in development cooperation) and in some cases to lower priority than expected or promised being given to CC action in partner countries. In general, poor climate screening and proofing (hereafter 'CC mainstreaming') of projects correlates with missing awareness and integration of CC in design, and a lack of CC-specific objectives, baselines and project indicators, which hamper achievement of CC-relevant results. Solid integration of CC aspects into design does not automatically guarantee strong CC effectiveness, but as also indicated by our analysis (see Chapter 4) more often than not it contributes to enhanced effectiveness. Despite the existence of an explicit CC mainstreaming tool (CEDRIG), systematic of CC mainstreaming is still lagging, and CEDRIG was rarely mentioned by SDC/SECO stakeholders and/or project partners during field missions. While this last point related to project design is a challenge that has been noted in Swiss ODA more generally (see OECD DAC peer review[53], which asserts that project documentation does not always clearly specify the outcomes and impacts intended), more systematic CC mainstreaming would improve the potential for strong CC effectiveness. In some cases, missing CC awareness among partners has hampered project success and CC effectiveness considerably (e.g. in Mongolia, where poor communication of CC issues led to using CC as a reason for inaction to address the real drivers of desertification). In another case, however, a complete lack of CC awareness by local partners did not hamper the successful implementation of energy-efficiency projects in Albania, as other co-benefits were strongly evident for project partners (see Annex 5, cases 7F-05405 Coping with Desertification Project in Mongolia; UZ-00745 Power Transmission and Distribution Rehabilitation Project in Albania, and UZ-00574.01.01 Drin River Cascade Rehabilitation Project in Albania). Further examples of obstacles and reasons for low CC effectiveness are provided in Chapter 6.

[53] OECD (2013). Review of the Development Co-Operation Policies and Programmes of Switzerland (DCD/DAC/AR(2013)2/19/PART1/FINAL), 4 December 2013. The peer review notes that "SECO's project documentation did not always clearly specify the outcomes and impacts intended".

Questions regarding 0.5% ODA Bill

FSF.Q 1: Which results have already been achieved through the Swiss contribution to the Fast Start Financing based on the funds committed in February 2011 by the Swiss Parliament (0.5% ODA Bill)?

Answer. The ToR (see Annex 13, section 2.3) state that "*since the interventions financed under this bill have only started in 2011 or even in 2012, they have not yet produced results at outcome and impact level. An assessment on their effectiveness is therefore not possible yet".* Our analysis of a portfolio of 67 FSF projects confirm that an effectiveness assessment is premature as part of this assignment (the majority of the Swiss-funded FSF interventions run beyond 2012, with only two of the 67 projects falling completely in the 2011/12 period. Of the 67 projects, 13 had less than 50% of their budget disbursed in 2010-12 Eleven projects have a start date before 2011 (Parliament's decision on FSF was in February 2011[54]) with one project dating back as far as 1996 (nine of the eleven projects have start dates prior to the Copenhagen Accord). However, based on a comparison of the FSF portfolio with interventions in the total Swiss CC portfolio covered by the assessment – in particular taking note of the FSF portfolio focus, project themes and intervention types, a continued emphasis on adaptation and an increasing role for global (multi-bi) initiatives, as well as CC mainstreaming efforts making use of the Climate, Environment and Disaster Risk Reduction Integration Guidance (CEDRIG) tool by SDC, this portfolio is expected to show strong CC effectiveness. The 61 in-depth project reviews (and case studies presented in Chapters 3 and 5), provide valuable preliminary information of the expected results and CC effectiveness of the FSF portfolio, but a more detailed analysis of this portfolio's effectiveness would be appropriate at a later date.

FSF.Q 2: To what extent were experiences and lessons learnt during the period 2000 – 2010 taken into account for the contributions within the Swiss Fast Start Financing?
Answer. The establishment of the FSF portfolio was launched by the UNFCCC negotiation process, and represents a rather special case in the CC work of donor countries. Given the need to place the funds quickly, the selection was mainly limited to initiatives already in the pipeline, including projects that had started previously. The selection process and priorities indicate that SDC and SECO relied on previous experiences, and preferred not to launch new projects specifically for the purposes of the FSF portfolio. No separate account of lessons learned from the past was explicitly given for the purposes of establishing the FSF portfolio. However, the selection criteria, while aiming to allocate additional funds in a timely and effective manner, did contain elements that could be considered as implicitly integrating lessons learned from the 2000-2010 period (such as building on existing institutional priorities, assuring complementarity with the existing portfolio, and strengthening existing competencies, see section 4.1.2)

Result Chain specific questions and answers

RC1 - Enabling Framework: CC sensitive strategies

RC1.Q1: To what extent have strategies, policies and financial investments of partner countries shifted towards low carbon and CC resilient development?

Answer. This assignment did not have the mandate or resources to review and analyse the strategies, policies and financial investments of developing partner countries. However, there are abundant signs that climate change has risen significantly among the policy priorities of many partner countries, particularly with a focus on national adaptation planning and the acceptance of adaptation themes within multilateral and bilateral ODA programming (increasingly with national counterpart investments alongside). This is because the effects of climate change are now widely seen as having the potential to undermine development gains achieved over decades, as well as offering new threats that are very diverse and often context specific (for example, it could be stated that SIDS, sub-Saharan LDCs, mountain countries such as Nepal, coastal countries such as Bangladesh and Vietnam, etc. are all equally vulnerable to climate change but often in quite different ways). Negotiators from almost all developing countries participate in UNFCCC meetings, with two major strategic objectives: to induce the joint mobilisation of the US$100 billion or so per year by 2020 as stated in the Copenhagen Accord to address their adaptation needs; and to encourage countries with an excessive historic or

[54] Bundesblatt 2011 2919.

current role in GHG emissions to accept the responsibility to agree rapid and meaningful reductions in those emissions while also supporting adaptation efforts and promoting low carbon and CC-resilient development. Some developing countries have more of a joint agenda, since they have become major GHG emitters as well as being vulnerable to the consequences of past emissions by others. Thus, for example, Indonesia contributes major emissions, mainly from the LULUCF sector (deforestation, peatland fires, plantation development, etc.), making it attractive to REDD+ investments which are strongly encouraged by national policy, yet is an archipelagic country where large population centres are exposed to sea level change, and has many farmers dependent on rainfed agriculture and vulnerable to changing rainfall patterns. Interestingly, Indonesia has a number of provinces (e.g. Aceh, three of the Kalimantans, Jambi and Papua), that have used their decentralised powers to prepare low-carbon development plans, and there are many stakeholders at all levels in the country who are determined to change the trajectory of Indonesian development in a lower-carbon and more sustainable direction.

RC1.Q2: ***To what extent have strategies, policies and financial investments of multilateral development banks shifted towards low carbon growth*****?**

Answer. The evidence from the World Bank Group clearly shows a great increase in low carbon and CC resilient development priorities and investments, and this is reinforced by recent policy statements (e.g. by World Bank President Jim Yong Kim in late 2013). The AsDB has also taken decisive steps towards mainstreaming CC into its processes and decision making, contributing increasingly to proactive CC screening and proofing of its interventions. Swiss contributions to relevant programmes and facilities have helped build knowledge and momentum in this direction, while also contributing to joint learning.

RC1.Q3: ***To what extent do developing countries have access to mitigation and adaptation funding*****?**

Answer. With regards to adaptation, international organisations such as Oxfam, UNDP and UNFCCC have estimated the global cost of CC adaptation at US$ 150-200 billion/year. Following the UNFCCC meetings in Copenhagen (2009) and Cancún (2010), it is accepted by most governments that the total cost of avoiding the worst effects of climate chaos will be at least US$ 100 billion/year for the foreseeable future. By early 2014, the UNFCCC Adaptation Fund had approved grant funding for close to US$ 200 million, allocated to 30 projects and programmes and to nine project formulation activities, in a total of 33 countries. So far nine National Implementing Entities (NIEs) have received funding. The fact that both LDCs and SIDS have completed the accreditation process, and one-third (five out of 15) of NIEs come from either LDCs or SIDS, is an indication that the Fund has been able to keep its focus on particularly vulnerable developing countries. The Adaptation Fund is just one example of the increasing availability of climate funding for developing countries. Challenges and bottlenecks in developing framework conditions remain, however, and hamper access to available adaptation funding, which in any case remains a fraction of estimated need.

Meanwhile, there was a total of US$ 3.2 billion/year in public global funding commitments for CC mitigation from 2008 onwards, managed through bilateral funds established by Japan, the UK, Norway, Spain, the EU, Germany and Australia, and multilateral funds established by the WBG and GEF[55]. However, decarbonising the world's economy at a sufficient rate to prevent runaway climate change is estimated to require low-carbon and carbon-negative investment at a scale of multiple trillions of dollars, a thousand times more than is currently available from public sources[56]. This investment deficit can only realistically be made up through private investment in carbon conservation, driven by a solid enabling framework.

[55] Caldecott, J.O. & McNally, R. (2008) Mid-Term Review of the Asean Centre for Biodiversity, Final Report (EU Delegation, Manila, November 2008); Caldecott, J.O. & Indrawan, M. (2010) Identification and Formulation of EC-Indonesia Climate Change Cooperation, Final Report (EU Delegation, Jakarta, November 2010).

[56] Fulton, M. & Capalino, R. (2014) Investing in the Clean Trillion: Closing the Clean Energy Investment Gap (Ceres, January 2014): http://www.ceres.org/resources/reports/investing-in-the-clean-trillion-closing-the-clean-energy-investment-gap/view (downloaded 21 Feb 2014); "In order to limit global warming to 2 degrees Celsius and avoid the worst effects of climate change, "...investments in low-carbon energy technologies will need to at least double, reaching $500 billion annually by 2020, and then double again to $1 trillion by 2030." (International Energy Agency - Energy Technology Perspectives 2012).

In conclusion, developing countries can be said to have increasing but still grossly insufficient access to mitigation and adaptation funding. Several Swiss-funded interventions covered in this assessment (e.g. related to the Adaptation Fund, FCPF, REDD+) are addressing this challenge.

RC1.Q4: ***To what extent have these fair and binding climate-sensitive political frameworks contributed to greenhouse gas (GHG) sensitive energy supply, transport and production and integration of adaptation into development and sectoral plans?***

Answer. In light of the latest scientific evidence (such as the latest UNEP emission gap report[57]) globally climate sensitive strategies and climate mitigation efforts remain clearly insufficient. While stepwise progress on mainstreaming adaptation in national and sectoral strategies and policies is taking place (with an increasing number of national adaptation plans being in place in developing countries), few of the adaptation plans are being systematically implemented. While it is not possible within this assignment to provide a global answer to this question, several of the Swiss funded interventions covered there are addressing this challenge, with the project reviews showing generally good effectiveness within these measures (see Figures A1.1and A1.1 below, indicating a strong focus on adaptation in CC the budget).

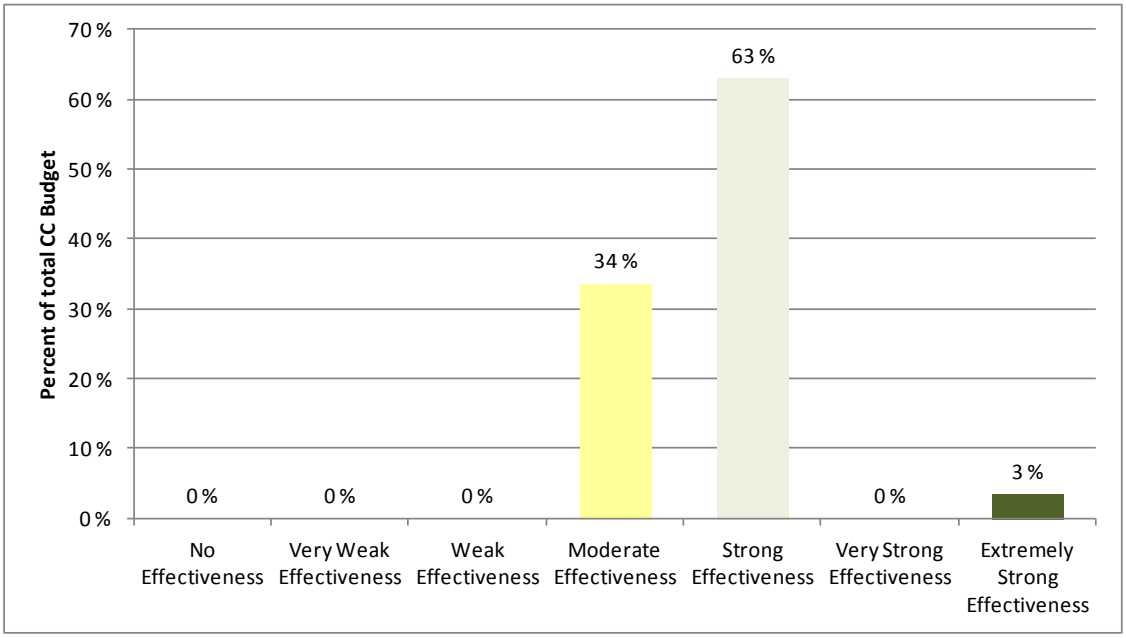


Figure A1.1 Effectiveness of all projects (n=7) reviewed under RC1 with mitigation effectiveness score distribution (within RC1 the CC mitigation budget is CHF 13,8 million)

[57] In particular, the 2013 report confirms and strengthens the conclusions of the three previous editions of the Emissions Gap Report that current pledges and commitments fall short of closing the emissions gap, implying that the world will have to rely on more difficult, costlier and riskier means after 2020 of keeping the global average temperature increase below 2° C. The gap report 2013 report points out that if the emissions gap is not closed, or significantly narrowed, by 2020, the door to many options limiting the temperature increase to 1.5° C at the end of this century will be closed

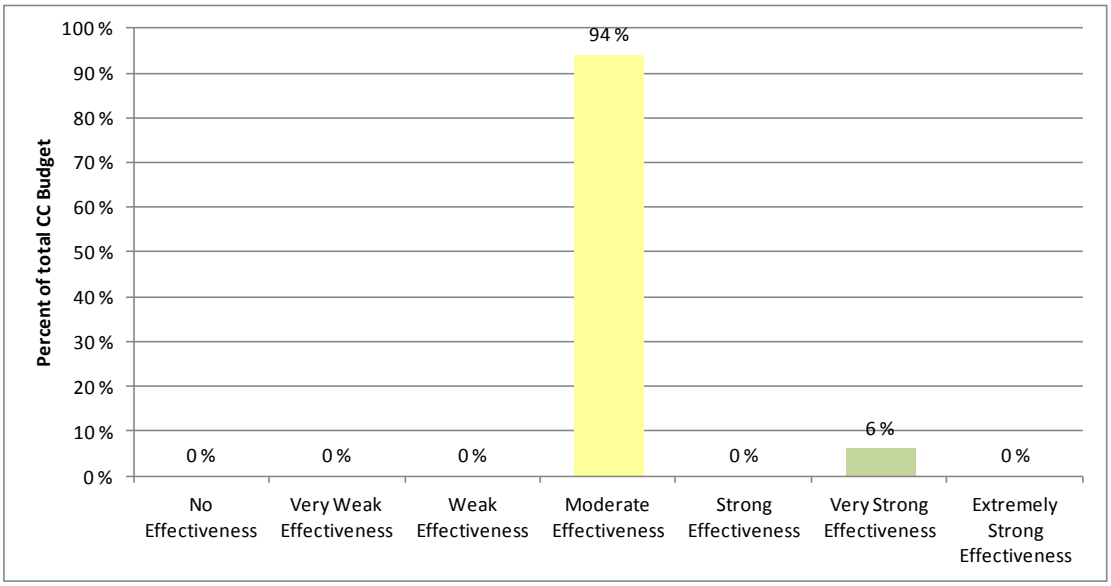


Figure A1.2 Effectiveness of all projects (n=7) reviewed under RC1 with adaptation effectiveness score distribution (within RC1 the CC adaptation budget is CHF 151 million).

RC2 - Enabling Framework: Emission Trading

RC2.Q1: ***To what extent have partner countries and cities successfully participated in market mechanisms on GHG emission trading and contributed to GHG emission mitigation*****?**

Answer. Access to carbon finance and participation in GHG emission trading requires important framework conditions to be in place to allow developing countries to benefit from it. Swiss-funded interventions have contributed to this readiness in several countries. When looking at the countries covered by field missions during this assignment, there is considerable diversity in the readiness and access gained to carbon finance. In early 2014, for example, Mongolia had 4 registered CDM projects, Albania and Serbia none, Perú 60, South Africa 54 and Vietnam 249.[58] In some countries, Switzerland has bilaterally supported efforts to improve preparedness and gain access to carbon finance (e.g. 7F-07809 Linking herders to carbon markets in Mongolia, see Annex 5) while in other countries it has worked through multilateral initiatives (such as the Partnership for Market Readiness (PMR, UR-00534.01.01, see Annex 7), with varying success.

Direct investments in CDM projects were not part of the assessed portfolio. The Swiss engagement in the World Bank's Carbon Finance Assist programme (under UR-009000090) has certainly contributed to a better understanding of market mechanisms, through trainings and development of online courses, as well as to the availability of financing of for emission- reduction projects in numerous developing countries. The facilitation of participation of these countries at Carbon Expo, the international trade fair for the carbon markets, will have provided participating countries with access to relevant buyers of project emission reductions, suggesting high levels of effectiveness of Swiss- funded interventions under this RC2 (see Figure A1.3). Some Swiss interventions included direct or indirect support for the development of CDM projects. They included Project 7F-07198 to establish vertical shaft brick kilns (VSBKs) as a programme of activities under the CDM in South Africa, and Project UR-00029 to establish a cleaner production center (CPC) in South Africa as facilitator of CDM projects (see Annex 5). While facilitating CDM projects was one of the targets of the CPC in South Africa, this strategy was not implemented, and no evidence for an increased number of CDM projects based on the intervention could be found. The CDM programme of activities registered for the VSBK did has not yet led to any registered emission reduction due to the collapse of prices in the CDM market.

[58] Source http://www.cdmpipeline.org/ (referred on 20.2.2014)

RC2.Q2: ***To what extent has participation in the Clean Development Mechanism, Joint Implementation and/or the New Market Mechanism (CDM/JI/NMM) contributed to reduced GHG emission*****?**

Answer. Access to CDM and JI has contributed to emission reductions in developing countries (see Answer 3, below) but due to the offsetting nature of the approach, the net-emission reduction at the global level is questionable, especially in a situation where the largest source of demand for those credits, i.e. the EU ETS, is oversupplied. A comparison of two Swiss partner countries also sheds some light on the major differences in geographical distribution in the allocation of the CDM projects – with Mongolia having 4 registered CDM projects while China has 3,737 of them[59], providing a strong indication of the differences in enabling environments as well as low-cost emission reduction potentials.

RC2.Q3: ***To what extent has participation in CDM/JI/NMM contributed to additional revenue and mobilised capital in partner countries*****?**

Answer. The CDM allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits, each equivalent to 1 tCO_2e, which can be traded and sold, and used by industrialised countries to meet part of their Kyoto emission reduction targets; as of 5 Feb 2014, UNFCCC (http://cdm.unfccc.int) had registered 7,427 CDM projects in at least 89 countries, and 1.428 billion CERs had been issued for project activities (with the expectation of issuing up to a further 6.2 billion by 2020). Under JI, countries with Kyoto commitments can use emission reduction units (ERUs) to meet part of their emission reduction targets; as of 31 Jan 2014, UNFCCC (http://ji.unfccc.int) reported that 841 million ERUs had been issued (58% of them hosted by Ukraine, 31% by Russia, and the rest by EU countries and New Zealand). The NMM is still being developed as a complement and successor to the CDM, with active discussion on methodologies and procedures being underway in early 2014. The CDM in particular has mobilised capital to developing countries, with wide participation, although according to WWF[60] the net effect on GHG emission reductions of all the Kyoto Protocol mechanisms was expected to be more than negated by increased emissions from deforestation in one Indonesian province (Riau) over the first Commitment Period. The emission trading approach clearly has potential, but cannot, on its own, resolve the mitigation challenge in the absence of a high and sustained price for conserved carbon and numerous other changes to policy, land use and low-carbon investment incentives. See also Section 3.3 on REDD+, forest plantations, grasslands and organic farming, and Section 3.7 on emission trading.

[59] Source http://www.cdmpipeline.org/ (referred on 20.2.2014)

[60] Deforestation, Forest Degradation, Biodiversity Loss and CO_2 Emissions in Riau, Sumatra, Indonesia (WWF Indonesia, 2008).

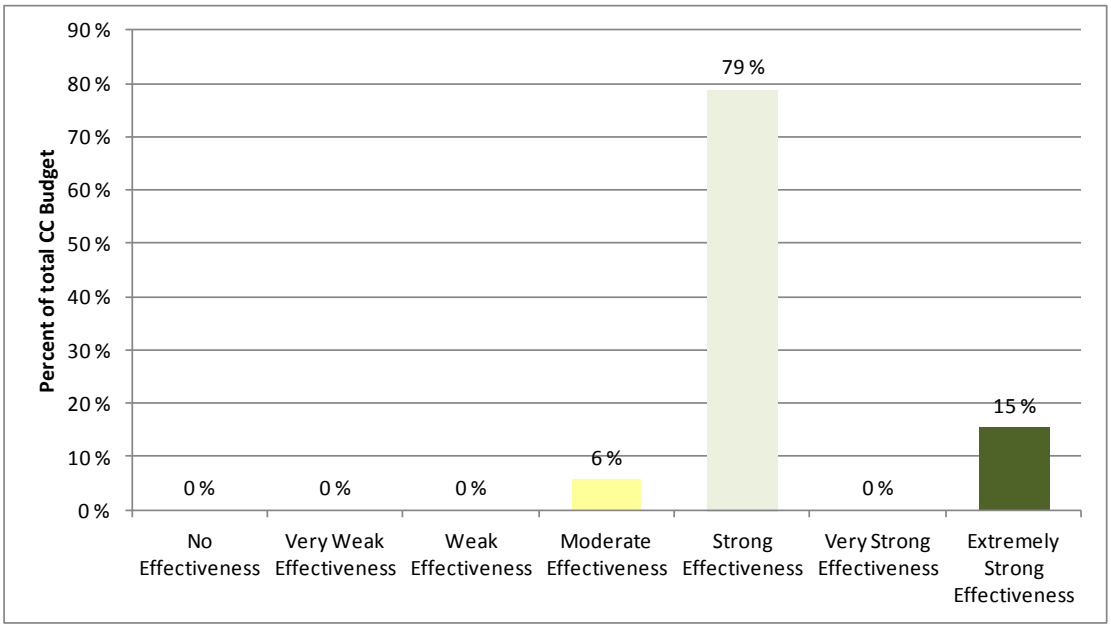


Figure A1.3 Effectiveness of all projects (n=6) reviewed under RC2 with mitigation effectiveness score distribution (within RC2 the CC mitigation budget is CHF 1,9 million)

RC3 – Mitigation: renewable energy (RE)

RC3.Q1: *To what extent has energy production been increasingly based on renewable/non-fossil sources in absolute terms and in relation to other (fossil/nuclear) energies*?

Answer. There has been massive growth in renewable energy generation worldwide in the past decade, driven by feed-in tariffs, government targets, subsidies and tax relief systems, and declining unit prices for photovoltaics and wind turbines driven by large-scale manufacture in China, Germany and elsewhere. At least 30 nations already have renewable energy contributing more than 20% of energy supply, and wind power is growing at the rate of 30% annually with a worldwide installed capacity of nearly 300,000 megawatts. With regards to Swiss partner countries no global answer to this question can be provided within the scope of this assignment. The Swiss funded projects in the RC3 have generally been strongly to very strongly effective and contributed positively to renewable energy production in its partner countries (see Figure A1.4 below).

RC3.Q2: To what extent did Swiss interventions enhance the access of partner countries to low carbon technologies for RE?

Answer. With regards to Swiss partner countries no global answer to this question can be provided within the scope of this assignment. The Swiss funded projects in RC3 have generally been highly effective and also enhanced access to low-carbon technologies in their partner countries, with some of the more detailed project reviews noting particularly successful technology transfer in hydropower and major potential in biomass-based energy production know-how and technology transfer. These are integral to the RE and EE focus in the current Swiss country strategy in Serbia/Albania (see Annex 5, e.g. UZ-00574.01.01 Drin River Cascade Rehabilitation Project in Albania; and UR-00516.01.01 Combined Heat and Power (CHP) Plant Fuelled by Biomass in Padinska Skela / Belgrade in Serbia).

RC3.Q3: What contributions did the interventions within the Swiss climate change portfolio generate in terms of the mitigation of GHG emissions?

Answer. As noted above, Swiss funded interventions in RC 3 have generally shown high CC mitigation effectiveness, with the assumption of contributing to GHG emission reductions in several partner countries. However, due to generally poor baseline information and limited quantitative information of achieved emission reductions, no clear quantitative figure can be given of the GHG emission reduction achievements of the overall Swiss funded CC portfolio. For a limited number of

projects reviewed in-depth, however, some quantitative data on GHG emissions reductions were reported (Annex 5).

RC3.Q4: ***To what extent have donor interventions improved the population's access to and use of RE and reduce the dependency on energy imports?***

Answer. While an answer to this question would require a review of all donor portfolios and an assessment of their impact relative to market forces, laws, carbon prices, etc., the considerable attention paid to RE within the Swiss portfolio, and the generally strong effectiveness of the projects concerned, suggest that Switzerland at least must be making a real difference in favour of RE to the energy mix in its target localities. The project specific reviews moreover provide indications of important contributions to improved access to energy overall, and in some cases also improved access in particular to low-carbon energy services. For example, several interventions reviewed in Albania helped to ensure access to electricity in the 1990s, and in particular helped to rehabilitate hydropower systems, which simultaneously contributed to economic recovery, stability, and rehabilitation of renewable energy - thereby avoiding reliance on imported nuclear and/or fossil fuel-based electricity (see Annex 5). In Serbia, several Swiss-funded interventions contributed likewise to the rehabilitation of the energy sector, improving access to electricity and reducing reliance on imports – but in this case also rehabilitating coal fired power plants (see Annex 5: UR-00269.01.01 SRB – Nikola Tesla Thermal Plant B (TENT B): modernisation of the monitoring and control system).

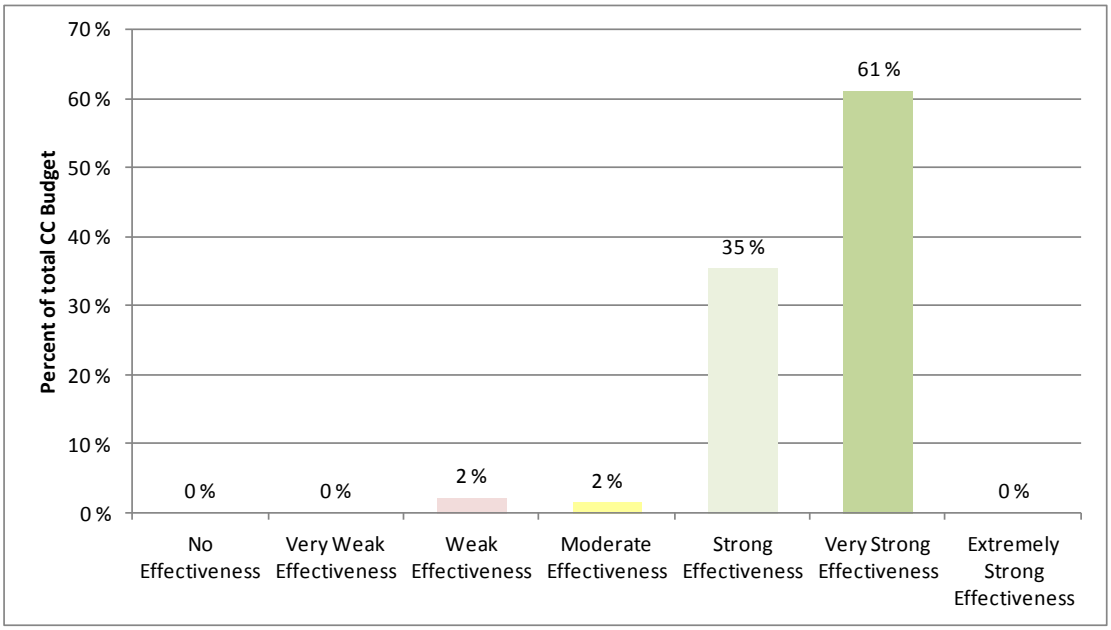


Figure A1.4 Effectiveness of all projects (n=34) reviewed under RC3 with mitigation effectiveness score distribution (within RC3 the CC mitigation budget is CHF 137 million).

RC4 - Mitigation: energy efficiency (EE)

RC4.Q1: ***To what extent have production processes and energy systems in partner countries become more efficient?***

Answer. Although quantitative evidence is sparse, there is strong and coherent targeting of Swiss EE interventions on war-damaged generation capacity, on creating systems for financial and managerial sustainability in power generation and distribution, on climate-friendly building materials and standards, and on leveraging system-wide behavioural and efficiency changes through knowledge sharing and fiscal incentives. Many of these interventions have strong effectiveness scores (see e.g. Annex 5 and examples of several Swiss funded projects in the Balkans with clear evidence of efficiency improvements in energy systems), suggesting that improvements in energy efficiency have been achieved at least in some partner countries. Swiss interventions have also helped partner countries to focus on industrial EE earlier than they would otherwise have done. This has been achieved through the collaborative establishment of Cleaner Production Centres in a number of countries and in particular through a contribution to the UNIDO project to support implementation of the ISO 50001 Standard for Energy Management System in South Africa (UR-00399). The projects have resulted in

energy audits and corresponding EE improvements in numerous cases, but more importantly they have created the necessary skill set and understanding at industry level. A less successful attempt at south-south technology transfer facilitated by Swiss funding has been the attempt to improve energy efficiency of brick production, through the introduction of VSBK technology in South Africa, Peru and other countries (see Annex 5).

RC4.Q2: ***To what extent have donor interventions improved the access of partner countries to low carbon technologies for energy efficiency (EE)*****?**

Answer. The transfer of low-carbon technology to (and among) developing countries is a substantial theme of the donor community as a whole, often being promoted through arrangements such as the UN's Partnership on Sustainable Low Carbon Transport, AsDB's Low-Carbon Technology Transfer Market Place, the UK's Climate and Development Knowledge Network and the US-India Partnership to Advance Clean Energy, among many others. The CDM has also contributed to the transfer of energy-efficiency technologies, even if renewable energy solutions and abatement of non-CO_2 greenhouse gases have dominated technology transfer through that mechanism. Within this assignment it was not possible to conduct a quantitative assessment of the collective volume and impact of EE technology transfers and accompanying public (and stimulated private) financial flows across ODA. We can conclude, however, that transfer of technology and know-how to and among partner countries is a major theme of the Swiss aid portfolio and has been widely appreciated by the partner countries concerned (see Annex 5 and findings from field mission countries and in particular section 3.1.2 on EE interventions).

RC4.Q3: ***To what extent have donor interventions supported the implementation and acceptance of EE Standards in infrastructure, production and goods are used*****?**

Answer. See the answers to RC4.Q1 and RC4.Q2 above.

RC4.Q4: ***What contributions did the interventions in the field of EE generate in terms of mitigating GHG emissions*****?**

Answer. As confirmed by overall moderate to strong mitigation effectiveness in RC 4 projects (see Figure 16 below), we conclude that the Swiss-funded interventions have contributed to GHG emission reductions in several partner countries. However, due to generally poor baseline information and limited quantitative information on achieved emission reductions, no hard figure can be given for the GHG emission reduction achievements of the Swiss funded CC portfolio in the area of EE (or renewable energy or emission trading). Some of the projects addressing EE are able to provide quantified data on emissions reductions. These include: (a) Industrial Energy Management Standard UNIDO in South Africa, resulting in an overall emission reduction of 225,000 tCO_2 to date; and (b) the Modernisation of the Monitoring and Control System at Nikola Tesla Thermal Power Plant B, in Serbia, which - according to preliminary estimates - contributed to annual CO_2 emission reductions in the range of 90,000 tCO_2 (see Annex 5). Most other projects with GHG mitigation objectives lack baseline information and systematic MRV systems to track GHG emission reductions.

RC4.Q5: ***To what extent did increased EE in production processes and energy systems contribute to the competitiveness of local economies*****?**

Answer. Improved competitiveness is inevitable where unreliable power systems are restored, unstable power delivery systems are stabilised, public transport systems are made more reliable, and construction standards are systematically raised, but quantification is not possible with available data. However, two trails of evidence are available to support the conclusion that the Swiss-funded interventions have contributed to improved competitiveness of partner country economies. First, systematic activities in the post-conflict Balkan region to rehabilitate the energy system, reduce losses and increase energy security have been crucial in the transition phase of Balkan countries. While the Swiss interventions have been part of a multitude of activities in the energy sector (with several donors collaborating) Swiss contributions have clearly served to improve the overall economic recovery and competitiveness in the Balkans (see Annex 5 with evidence from Albania and Serbia). Second, Swiss projects in the area of cleaner production (see Section 3.2) highlight cases of enhanced competitiveness on company and local level, resulting from EE interventions.

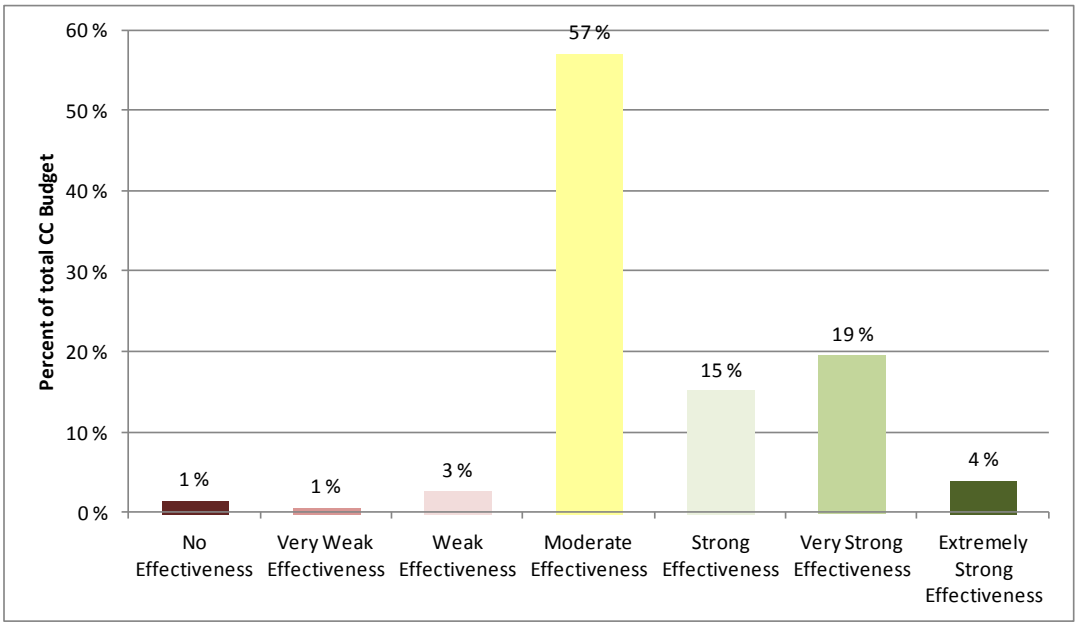


Figure A1.5 Effectiveness of all projects (n=102) reviewed under RC4 with mitigation effectiveness score distribution (the total RC4 CC mitigation budget is CHF 245 million).

RC5 - Mitigation: Sustainability Standards

RC5.Q1: ***To what extent were introduced Sustainability Standards for trade of commodities used by producers in partner countries?***

Answer. The biotrade-based conservation approach is known to be valid in principle, but from a small sample size among the Swiss portfolio seems to yield rather poor results in practice (i.e. uptake of sustainability standards was limited); it may well be that greater attention to specific design requirements in the local context would yield better results. The approach of working with forest stakeholders and institutions to achieve FSC certification is also known to be valid, in that it can generate price premiums and market access opportunities that would not otherwise be available, while also contributing to more durable and equitable management of forest plantations; rapid uptake of FSC standards was achieved in Vietnam and Lao PDR through the project reviewed, but the slow growth of tree crops means that mitigation benefits require long-term commitment and success. This is less of a problem in organic farming initiatives, although the accumulation of soil carbon does take a number of years, but meanwhile there are a range of early-onset benefits and uptake of standards appears to have been rapid.

RC5.Q2: ***To what extent is the access to markets for sustainably produced products ensured?***

Answer. The Swiss interventions on biotrade, forest certification and organic production all pay attention to linking producers both to credible certification systems and to appropriate markets internationally, both through direct links and through the participation of international institutions (i.e. UNCTAD, Triodos). While selected Swiss-funded projects have contributed to enhance market access, no comprehensive conclusion can be drawn based on data from the few case studies presented in Annexes 5-7.

RC5.Q3: ***To what extent did the use of sustainability standards for trade of commodities contribute to a sustained pool of natural resources?***

Answer. The biotrade, forest certification and organic production initiatives can all be expected to have significant influence in favour of maintaining the integrity of natural and plantation forest and farmland soil ecosystems and biodiversity, catchment functions and other contributors to sustainability of natural resources. While the projects reviewed provide a rather mixed picture of the CC effectiveness (e.g. the FCPF with very strong effectiveness, the biotrade projects with very weak

effectiveness), but with an overall moderate to strong effectiveness (see Figure A1.6), no conclusion on the contribution to overall sustainability of natural resources covered can be made at present.

RC5.Q4: ***To what extent did the use of sustainability standards support a sufficient income of producers?***

Answer. The biotrade, forest certification and organic production initiatives can all be expected (or are known) to be associated with price premiums and market access opportunities that are likely to enhance the income of producers. For example in Vietnam FSC (see project UR-00015.02.01, Commodities Cert Tropical Timber in Vietnam) certified *Acacia* wood has been purchased at a 43% price premium providing a significantly higher income for timber producers. However, the costly certification procedure reduces the overall benefits of timber certification, and in addition to the price premium, other incentives may also be needed to promote forest certification with maximum effect. While income-related impacts were not explicitly reviewed in the bio-trade project in Peru, the increased value in the production chain of native species, with good potential to raise demand in the international market, is expected to bring additional income to producers in the value chain. However, access to most developed-country markets remains a major barrier that is yet to be fully overcome (see Annex 5, project UR-00276).

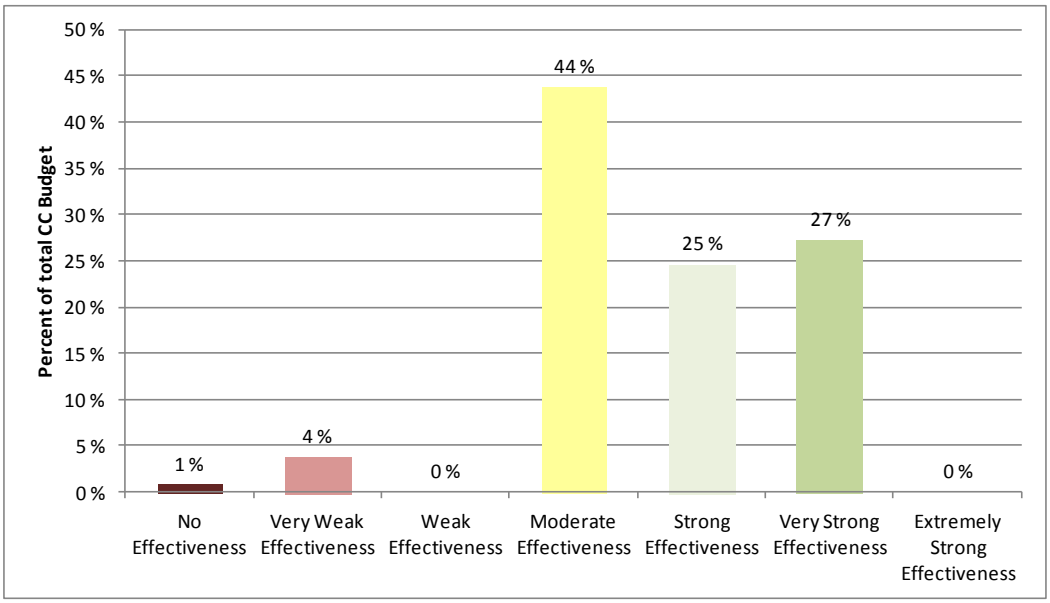


Figure A1.6 Effectiveness of all projects (n=32) reviewed under RC5 with mitigation effectiveness score distribution (the total RC5 CC mitigation budget is CHF 60 million).

RC 6 - Adaptation: Awareness Raising

RC6.Q1: ***How have the availability of and the accessibility to data on climate and weather observation, forecasting, modelling and alarming been increased?***

Answer. There has been massive global investment in the study of atmospheric and surface conditions (through the WMO/UNEP GEMS, EU GMES/Copernicus, WMO/NOAA GCOS, UNEP GEO and GEAS, Snow and Ice reports, etc.), and the frequent publication of findings, although the deep ocean (which comprises the bulk of the biosphere and is the prime recipient of heat from global warming) has been relatively neglected. For example the intervention 7F-00382 Observatoire du Sahara et du Sahel: Contribution au Programme Environnement (see Annex 7), is a regional initiative that is increasingly contributing also to CC monitoring and information sharing, in part thanks to Swiss influence (originally CC was not integral to the initiative). The real and more direct value added of the Swiss portfolio, however, comes from tactical engagement with vulnerable localities, and it contains numerous cases of the effective integration of knowledge gathering, analysis and dissemination at the local and regional level. For example, project 7F-07733 in Western China proceeded in an exemplary way from the compilation of a digital elevation model of the Kyagar Glacier Lake basin, to improved understanding of glacier dynamics, the evaluation of scenarios for glacier lake outburst floods (GLOFs), the development of an early warning system based on remote

sensing, flow and level gauges and web-cam monitoring, the definition of thresholds for triggering alarms, the automation of the alarm system, and the transfer of system ownership to local authorities.

RC6.Q2: ***How are different stakeholders informed about and involved in dialogue on CC induced vulnerabilities and risks?***

Answer. Although Swiss interventions typically rely on government leadership for the institutionalisation of early warning and response systems, many Swiss projects facilitate the flow of information from the community level and direct action to anticipate, prepare for and moderate risks at that level, and tend to be inclusive in involving knowledge holders (such as academics) in the resulting monitoring systems. With inclusion and transparency, interested activists (NGOs, journalists, local politicians, etc.) have the opportunity to participate, and they provide a crucial link to, and reinforcement for, ordinary people who are often aware of environmental change and induced vulnerabilities and risks but lack the resources to take action themselves. For example the intervention 7F-04054 Programme on Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Areas in India is actively engaging local stakeholders in dialogue around CC risks by applying a community-based adaptation approach. Another project (7F-07916, a contribution to the Haitian Catastrophe Micro Insurance Facility), developed though close stakeholder consultation, seems to provide, without explicitly referring to CC but rather to recent weather extremes, a solid process to strengthen the resilience of vulnerable populations.

RC6.Q3: ***How has climate change relevant information led to better climate sensitive (risk conscious) decision making at local, regional and national level?***

Answer. One view is that the main stimuli for change are: (a) that interested scientists create relevant knowledge and persuade donors to help them create more of it; (b) that societies experience environmental calamities and agitate for protection by their governments; and (c) that donors, armed with appropriate knowledge, offer support to governments, which are then persuaded to allow participation by local people, academics, NGOs, etc. in the development of risk conscious plans and preparatory actions. In addition to the cases presented above, several other projects within the Swiss CC portfolio provide evidence of CC data being produced effectively, and interpreted and tailored for use in decision making by local, national and regional stakeholders. A project in Mongolia (7F-06642 Index Based Livestock Insurance Project) is an example of an intervention that is actually screening the insurance scheme for forecasted CC impacts in order to adapt it to any possible changes in the CC risk landscape. In Perú, project 7F-06440 *Programme d'adaptation au changement climatique* has successfully supported the development of a diagnostic tool for assessing CC vulnerability in two focal regions and two prioritised water catchment areas in Cusco and Apurimac. This was done with the active participation of authorities and local population affected by CC impacts. Several other Swiss funded interventions within this RC show strong effectiveness in raising awareness and contributing the strengthened resilience in partner countries (see Figures A1.7 and A1.8).

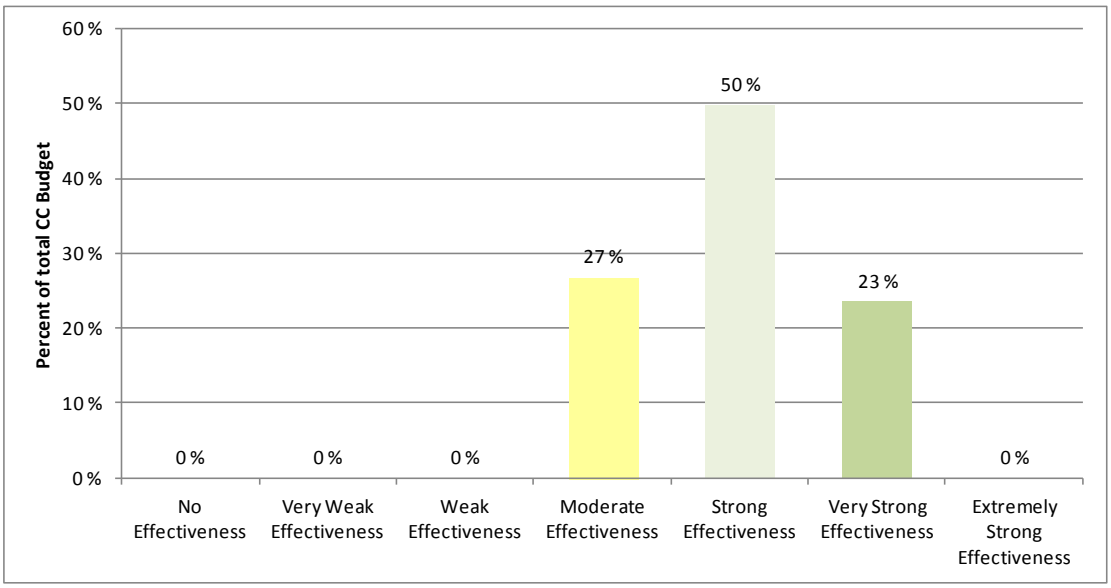


Figure A1.7 Effectiveness of all projects (n=21) reviewed under RC6 with adaptation effectiveness score distribution (within RC6 the CC adaptation budget is CHF 37 million).

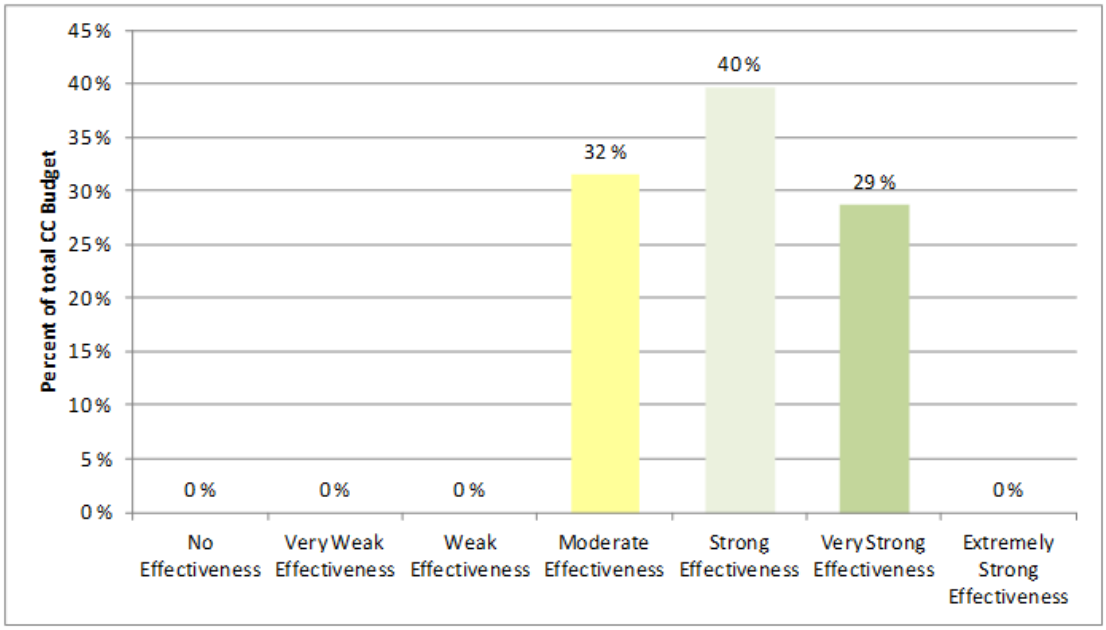


Figure A1.8 Effectiveness of all projects (n=5) reviewed under RC6 with mitigation effectiveness score distribution (within RC6 the CC mitigation budget is CHF 8,0 million).

RC7 - Adaptation: Capacity

RC7.Q1: ***How and to what extent are CC relevant aspects integrated into development plans of key sectors such as agriculture, forest, water, health, land use, and urban planning*****?**

Answer. Diverse entry points are used within the portfolio to integrate international knowledge on climate risks and adaptation and/or mitigation solutions into development planning, in order to encourage mainstreaming of adaptation measures into development decisions and to raise climate awareness among decision makers. Thus, some Swiss projects emphasise the adaptation issue of water resources management, some the adaptation and mitigation issue of forest ecosystem management, and some the strengthening of national or local government planning in relation to adaptation and/or mitigation. A project in Tajikistan (7F-02864, Integrated Natural Risk Management in Muminabad) has contributed to strengthened DRR capacity through introduction of integrated disaster risk management by increasing the coping capacity of local government, civil society organisations and the population at large. Interestingly, this project in its design did not address CC risks, but it is actually directly contributing to strengthened CC adaptive capacity in various ways, such as by reducing deforestation and soil erosion in a hilly area with elevations ranging between 700 and over 3,000 m above sea level. Showing how Result Chains sometimes inter-connect, a project in India (7F-04054 Programme on Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Areas in India, which was mentioned above in relation to RC 6) has contributed to strengthened adaptive capacity in several sectors, including energy, agriculture, water, land use and livestock in the target areas of Andhra Pradesh and Rajasthan (consolidated effectiveness scores for RC7 for both adaptation and mitigation are presented in Figures A1.9 and A1.10).

RC7.Q2: ***How and to what extent have (novel) appropriate coordination and planning mechanisms for CC adaptation and risk reduction across sectors been established*****?**

Answer. The Swiss approach is to promote the flow of knowledge about environmentally sustainable development, among countries, cities, rural areas and institutions, often featuring legislative collaboration and knowledge sharing on low-carbon development options between Switzerland and other countries, or between developing countries. Project 7F-06983 (Strengthening Climate Change Adaptation in China and Globally, noted above in relation to general questions) is an example of an

intervention that has contributed to broad-based, cross-sectoral mainstreaming of CC risk reduction into national and regional planning, but also with the explicit aim of sharing lessons learned internationally. In addition, through its contribution to the Adaptation Fund, and active role in the AF board, Switzerland is contributing in several countries to coordination and planning mechanisms for CC adaptation and risk reduction that cuts across sectors (see Annex 7).

RC7.Q3: ***How and to what extent has the CC adaptation and risk reduction/transfer capacity increased and contributed to improve the protection of people's livelihoods*****?**

Answer. While quantitative data are scarce, the inference from the attention given to developing a wide range of DRI products, aimed at all levels from small-scale farmers and micro-credit borrowers to inter-governmental risk sharing in relation to macro-scale events, and supported by Switzerland's traditional strengths in insurance and re-insurance, is that people's livelihoods are likely to be considerably more secure in places touched by the portfolio than they would otherwise have been, and this is reflected in relatively high effectiveness scores. For example the Haitian Catastrophe Micro Insurance Facility has helped thousands of people recover from disasters by providing both an emergency pay-out and the cancellation of their loans. This is a direct sign of the project's contribution to strengthened resilience in the face of CC (see Annex 7).[61] Project 7F-06642 Index Based Livestock Insurance Project in Mongolia is another example of a successful risk transfer initiative, that (still quite exceptionally within the Swiss CC portfolio) explicitly analysed forecasted CC impacts and screened and proofed the project to serve not only within the climate variability and extremes of today but also in coming years and decades (see Annex 5)

RC7.Q4: ***How and to what extent are preparedness mechanisms in place for an efficient and effective response in case of emergencies and extreme events*****?**

Answer. See answers to questions RC7.Q1-Q3 above. The Swiss CC portfolio is contributing through many interventions to improved preparedness for emergencies (both man-made and natural) and extreme events. In the case of climate, however, the focus has been mainly on extremes within current climate variability, with little attention to climate proofing investments in either infrastructure or in human and social capital.

RC7.Q5: ***How have emergency relief, rehabilitation, and reconstruction contributed to improve local CC adaptation (and avoiding mal-adaptation)*****?**

Answer. The emphasis within the Swiss CC portfolio here is on protection and early warning against specific threats, DRR mainstreaming and capacity building, and risk sharing and restoration financing through DRI. Emergency responses and post-disaster reconstruction are presumably covered under one or more separate humanitarian relief portfolios, since no single disaster can yet be attributed unambiguously to climate change and it would be inappropriate to attribute a CC budget to such relief work. As noted above, in only a few cases (the DRR and DRI portfolios notwithstanding) is attention being paid explicitly to the climate proofing of the interventions concerned. However, based on our review and analysis, by strengthening local livelihoods, resilience and preparedness through a number of pathways, the interventions generally contribute to increased capacity to cope with the advancing impacts of CC.

[61] It also highlights the interlinkages between RC6 and RC7, with SDC/SECO classifying the project initially into RC6, while our review team suggests classifying the project into RC7.

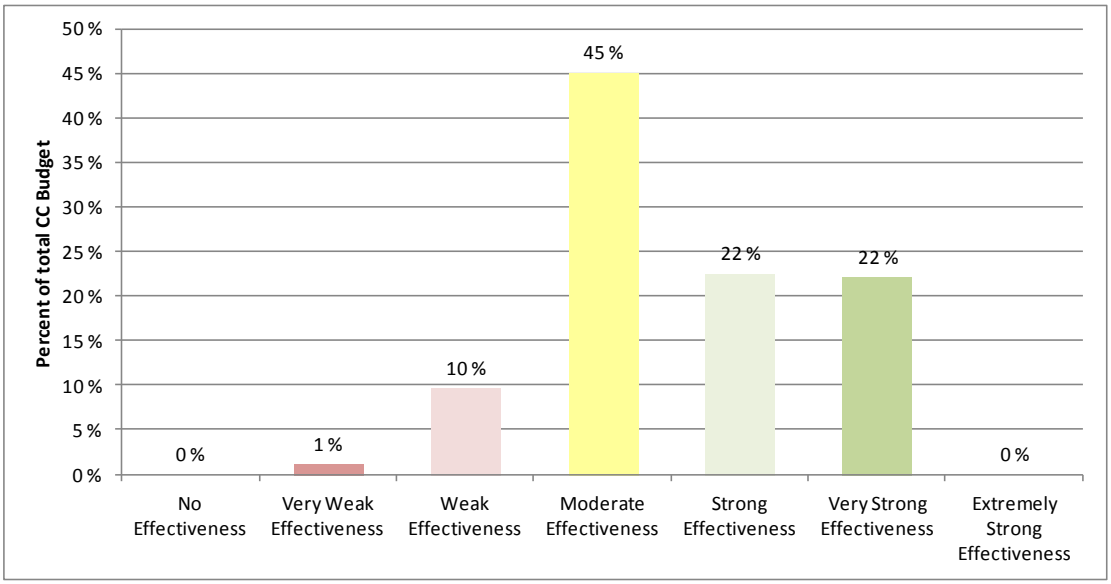


Figure A1.9 Effectiveness of all projects (n=209) reviewed under RC7 with adaptation effectiveness score distribution (within RC7 the CC adaptation budget is CHF 640 million).

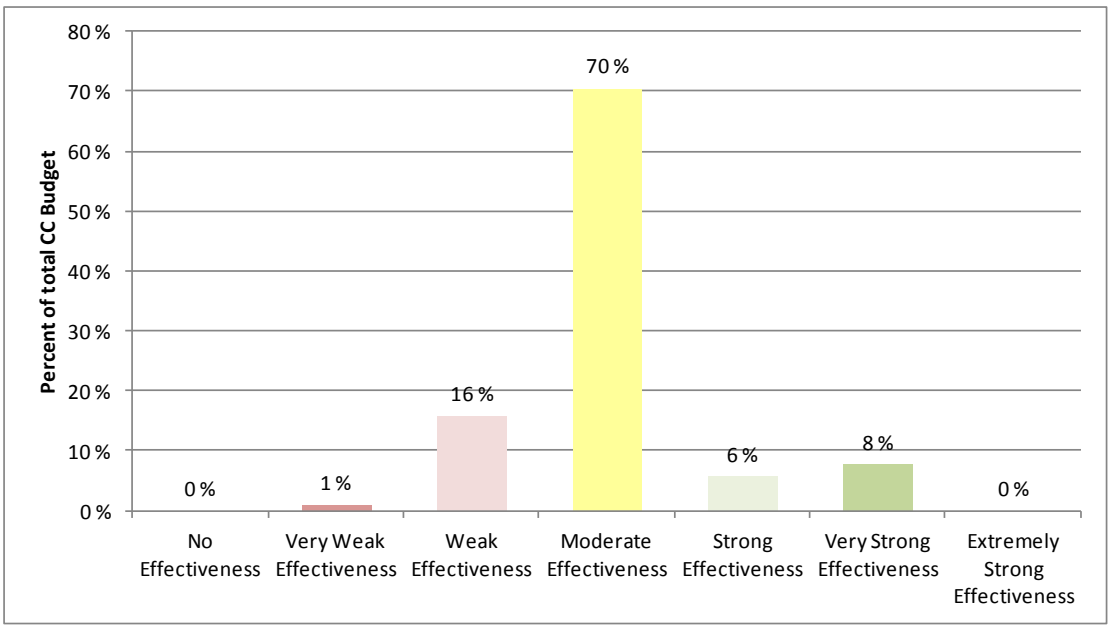


Figure A1.10 Effectiveness of all projects (n=51) reviewed under RC7 with mitigation effectiveness score distribution (within RC7 the CC mitigation budget is CHF 188 million).

Annex 2: Methodological guidance document for project oriented reviews

Evaluation template and guidance note for project reviews conducted by the assessment team

The aim of each project review is to form a defensible judgement on whether, and if possible the extent to which, a given project has been effective in mitigating climate change (CC) or promoting adaptation to CC influences and impacts (Table A.1.1). There are several conceptual sources to guide the formation of this judgement, including Sections 2.2.1 and 2.2.2 of the Inception Report (also annexed to this technical report), validation criteria based on Rio Marker guidelines (Table A1.2), Result Chains and their associated validation criteria, and questions for evaluating the effectiveness of climate change investments (Table A.1.3).

The evaluator will need to have all this material to hand and in mind when reviewing each project, but the key thing to remember is that the aim is to present, in a consistent structure across all projects, the evidence that a project has anything to do with climate change at all, and if so what. The starting point is phrased in this way to stress that we are engaged in an independent assessment of effectiveness, and must therefore to some extent set aside the assumptions and models that SDC/SECO have devised in advance. Our concern is with the detection and use of evidence to support judgements about relevant purpose and effectiveness against internationally-accepted criteria.

Table A.1.1. Project review template used in detailed desk and field studies

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review **EXPLANATORY NOTES FOR REVIEWERS**	
Identification	SDC 7F-00000 or SECO UR/UZ 00000, title of project.
Documents used	Credit proposal for the 'plausibility of project design' section. Final reports and external summative evaluations (if available) for the 'direct evidence of effectiveness' section. Any other documents that may have been used, for example in assembling indirect evidence for effectiveness.
People interviewed	Name and institutional position of each person interviewed (if any - if none, leave blank). Comments from interviewees should be integrated into the 'evidence' and/or 'overall effectiveness' sections. (for projects included in/analysed during field missions, kindly make reference to mission programme and people interviewed)
Basic data	Start/end date, budget/disbursements.
Location	Be as specific as possible, and include a brief description of the socioeconomic and ecological context.
Partners	Identify and briefly explain the roles of all institutions involved in the project.
Result Chain	Define the RC to which the project has been assigned by SDC/SECO, the nature of the pathway, the output(s) and outcome(s) involved, and the validation criteria that are expected to apply to it.
Purpose	A very concise yet comprehensive, accurate and defensible summary of what the project is or was for, based on the original credit proposal.
Pre-review estimates of CC relevance (Prima facie CC relevance)	Summarise how the project was assessed by SDC/SECO (percent relevant to adaptation/mitigation), and how it was initially classified by the review team, including the specification of any validation criteria that it was judged to meet and the basis for such a decision. This part should be

	filled in right after the 'purpose' to act as a transparent check on bias by the reviewer (who may be sceptical initially, but may later on be pleasantly surprised, either of which may affect scoring).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	This section is for summarising evidence of CC effectiveness from the project itself. Such evidence may be quantitative or qualitative, but should not be speculative. For mitigation effectiveness, direct evidence might include data on real GHG emission reductions (or proxies on energy efficiency), provided that some quantified baseline exists and some reasonable protocol to describe measured changes was applied. If no such data, baselines, protocols or measurements exist in the project documents, the reviewer should say so. For adaptation effectiveness direct evidence might include documentation and/or witness statements to the effect that environmental events and changes that are believed to be linked to climate change (e.g. droughts, fires, floods, sea-borne storms, dust-storms, cold snaps, heat-waves, or creeping salt-water intrusion) are being coped with (in any sense - including social, financial, environmental and political resilience, and early warning) better after the project than before. If no such documentation and witness statements exist in the project documents, the reviewer should say so.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	This section is for summarising other information that is relevant to forming a judgement on the likely indirect climate change (CC) effectiveness, of any CC relevant side effects, expected/unexpected consequences of the project under consideration.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Any potential further evidence based on similar kinds of projects in the same country or other parts of the world to build a case for or against likely effectiveness of this particular project. If not applicable, leave empty.
Overall conclusion on effectiveness based on the evidence (1+2+3)	With explicit reference to the evidence, whether direct (quantitative or qualitative) or indirect, and specifying what kind of effectiveness is involved, score the project as a whole as '7' (extremely strong), '6' (very strong), '5' (strong), '4' (moderate), '3' (weak), '2' (very weak) or '1' (none). The numbers can later be used, for example, to provide mean scores for projects in different regions or with different start dates. Note that the overall effectiveness score is a judgement based on the evidence about effectiveness, and must be defensible using that evidence or reasonable inferences from it. It has nothing to do with the 'plausibility of project design' scores, which address quite a different set of issues (below)
Project design aspects	
CC-relevance of project design (Evidence and reasoning, Integrity of the RC pathway)	This provides an opportunity to consider and critically evaluate the processes by which it was decided to invest Swiss public money in the project. If there is no evidence the reviewer should say so. If there is enough evidence to form a judgement on any aspect of the plausibility of project design, here a score of 7 is defined as 'excellent', 6 as 'very good', 5 as 'good', 4 as 'adequate', 3 as 'problematic', 2 as 'poor', and 1 as 'seriously deficient'. Evidence and reasoning. Describe and score the empirical evidence and reasoning upon which the logical pathway from CC challenge to response is based, as articulated in the credit proposal. Sound evidence and plausible reasoning based on it will be scored highly. Pathway integrity. Describe and score the closeness with which the steps of the logical pathway from CC challenge to response are followed in the credit proposal. Strong connections between steps will be scored highly.

General quality of project design (Clarity of explanation, Extent of participation)	Explanation clarity. Describe and score the clarity with which the logical pathway from CC challenge to response and the choices within it are explained in the credit proposal. Clarity will be scored highly. Participatory design. Describe and score the extent to which local research and consultation processes contributed to the design of the project. It is assumed that building on local knowledge and participation will yield a more reliably effective project than not doing so, but if there is any evidence to the contrary (e.g. that the project is so obviously 'no regrets' that little local input was needed), the reviewer should say so and not score this aspect. The issue will then need to be discussed in the report.

Table A.1.2 Rio Climate Marker based validation criteria used in the Portfolio Appraisal

Mitigation
Practical actions for mitigation
Applied ecology for mitigation (AEM). Protecting or enhancing GHG sinks and reservoirs through forest protection, avoided deforestation, sustainable forest management, reforestation, restoration of disturbed ecosystems (including soils through organic farming), rehabilitation of areas affected by drought and desertification, and sustainable management and conservation of oceans and other marine and coastal ecosystems, wetlands, wilderness areas and other ecosystems.
Applied technology for mitigation (ATM). Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management.
Capacity building for mitigation (CBM). Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.
Enabling frameworks for mitigation
Mainstreaming of mitigation (MOM). Integrating mitigation concerns and priorities within development processes, through preparation of national inventories of GHGs (emissions by sources and removals by sinks), mitigation - related policy and economic analysis and instruments, low-carbon development strategies and plans, mitigation- related legislation, mitigation technology needs surveys and assessments, and the building of mitigation-related institutional capacity.
Regulations & incentives for mitigation (RIM). Strengthening of regulatory frameworks related to mitigation, including those to discourage GHG emissions and to remove barriers to or encourage, through fiscal, economic, legal and other incentives, investment in reducing GHG emissions.
Education & training for mitigation (ETM). Promoting mitigation-related education, training and public awareness.
Research & monitoring for mitigation (RMM). Promoting research and monitoring efforts focused on mitigation and the understanding of oceanographic and atmospheric systems and processes.
Adaptation
Practical actions for adaptation
Resilience for adaptation (RFA). Making landscapes, farming systems, and communities more resilient to environmental change, including (as appropriate to changes anticipated in each location) through measures to safeguard or restore the ecological services of water catchments, floodplains, wetlands, mangroves, coral reefs, beach dunes and aquifer recharge areas, conserving water and introducing water-saving irrigation methods, introducing crops that are resistant to heat, drought, submergence and salinity, prophylaxis against vector -born and other diseases, amending fishery management practices in response to new ecological conditions and changing fish populations, promoting diverse forest management practices and species, developing emergency prevention and disaster preparedness measures (including insurance and engineering works to relieve known threats, e.g. from glacial lake outburst floods and sea-borne storms).
Knowledge for adaptation (KFA). Promoting stakeholder environmental monitoring and networking to enhance sharing of knowledge on environmental change, threats, solutions and adaptation best practices (as appropriate to changes anticipated in each location), including the building of social capital, cooperation and adaptation/disaster preparedness, and the production and dissemination of public information materials on the principles and practices of adaptation.
Enabling frameworks for adaptation
Mainstreaming of adaptation (MOA). Supporting the integration of adaptation into national and international policy, plans and programmes, including through the development of

adaptation-specific policies, programmes and plans, strengthening the capacity of national institutions (including finance and planning ministries) that are responsible for coordinating and planning adaptation activities and the integration of adaptation into planning and budgeting processes.
Adaptation against disasters (AAD). Building capacity for disaster risk reduction, preparation and management at local, national and regional level, by making disaster-relevant information and tools more accessible for adaptation negotiators and managers, by promoting disaster consciousness in adaptation policies, strategies and programmes, and encouraging systematic dialogue, information exchange and joint working between climate change and disaster reduction bodies, focal points and experts, in collaboration with policy makers and development practitioners.
Education & training for adaptation (ETA). Promoting adaptation-related education, training and public awareness-raising.
Research & monitoring for adaptation (RMA). Promoting research focused on environmental change, and weather, climate and water monitoring and information systems, including observation and forecasting, impact and vulnerability assessments and early warning systems, and how to make landscapes, farming systems, and communities more resilient to detected or anticipated changes.

Table A.1.3 Result Chains and pathway integrity within projects

Result Chain (RC)	Key logic & links (lightly edited for clarity)	Notes & validation criteria
RC1 - Enabling Framework: CC sensitive strategies	**Output:** (a) positive influence on CC discussions, etc. **Outcome 1**: (a) shifting of MDG actions towards low-carbon and CC-resilient development; (b) elaborated national/regional CC AdMit strategies; (c) increased multilateral funding for AdMit in developing countries. **Outcome 2:** (a) GHG-sensitive energy supply, transport and production; (b) CC is integrated into development and sectorial plans; (c) developing country access to funds for AdMit actions.	A pathway to the reform of ODA through multi-national dialogue, leading to enabling frameworks for mitigation and adaptation. Validation criteria: Mainstreaming of mitigation (MOM); Mainstreaming of adaptation (MOA).
RC2 - Enabling Framework: Emission Trading	**Output**: Partner countries receive CD on CDM, JI & NMM. Outcome 1: (a) Partner countries register and implement programmes under CDM, JI & NMM. **Outcome 2**: (a) mitigated GHG Emissions; (b) revenue through trading of emission certificates.	A pathway to promote more universal participation in carbon financing mechanisms, which can be measured in terms of tonnes of carbon dioxide equivalent (tCO2e) not emitted and finance mobilised. Validation criteria: Regulations & incentives for mitigation (RIM).
RC3 - Mitigation: Renewable Energy	**Output:** (a) remove regulatory obstacles to RE and create incentives for RE; (b) facilitate access to finance & technology for investments in RE. **Outcome 1**: (a) increased production of RE; (b) increased access to RE in rural areas. **Outcome 2**: (a) increased use of RE reduces GHG emissions; (b) people have better access to affordable energy; (c) reduced dependence on energy imports.	A pathway to promote renewable energy through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of power substituted (MWh) and tCO2e conserved. Validation criteria: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
RC4 - Mitigation: Energy Efficiency	**Output:** (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. Outcome 1: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE.	A pathway to promote energy efficiency through reform of policies and incentives, and access to low- carbon technologies, and can be measured in terms of percent of efficiency increase, tCO2e conserved, and economic competitiveness. Validation criteria: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
RC5 -	**Output**: (a) establish access to	A pathway to reduce GHG

Mitigation: Sustainable Standards	markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification. **Outcome 1**: (a) greater use of sustainability certification standards in the commodities trade. **Outcome 2**: (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets.	emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. Validation criteria: Regulations & incentives for mitigation (RIM).
RC6 - Adaptation: Awareness Raising	**Output:** (a) generate, collect and analyse CC-related data; (b) involve multiple stakeholders in multi-level dialogue on CC. **Outcome 1**: (a) increase in knowledge and awareness on CC (trends and variability) and related vulnerabilities. **Outcome 2**: (a) decision making is based on improved climate risk information.	A pathway to informed dialogue and decision making through the accretion and management of CC-related knowledge. Validation criteria: Education & training for mitigation (ETM); Research & monitoring for mitigation (RMM); Education & training for adaptation (ETA); Research & monitoring for adaptation (RMA); Knowledge for adaptation (KFA).
RC7: Adaptation Capacity	**Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). Outcome 2: (a) increased community resilience to the consequences of climate change.	A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectorial and cross-sectorial adaptation planning and to deliver resources to support local adaptation efforts. Validation criteria: Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).

Annex 3: Consolidated results from project oriented reviews

This annex presents the scores from 61 project oriented reviews with confirmed scores, including 30 projects covered during field missions (Table A3.1), including 6 projects covered by the in-depth Vietnam desk study (Table A3.2), and 25 projects covered b y complementary desk-review (Table A3.3)[62].

Table A.3.1 Results obtained from field visits

Institution	Project no.	Geograpihcal Focus	Evidence for Reasoning	Pathway Integrity	Explanation Clarity	Participatory Design	Overall Conclusion on Effectiveness
SECO	UZ-00574.01.01	Albania	3	2	6	NA	4
SECO	UZ-00574.02.01	Albania	2	1	5	NA	2
SECO	UZ-00745.01.01	Albania	2	2	6	NA	3
SDC	7F-02164	Andean Region	2	2	6	6	4 (M) 4 (A)
SDC	7F-03461	Mongolia	6	5	6	7	6
SDC	7F-05405	Mongolia	3	5	3	5	3
SDC	7F-06465	Mongolia	6	4	5	6	5
SDC	7F-06642	Mongolia	5	5	5	4	5
SDC	7F-07572	Mongolia	3	4	7	7	3
SDC	7F-07809	Mongolia	6	5	5	4	5
SDC	7F-01898	Nepal	6	6	5	1	4
SDC	7F-03093	Nepal	1	5	6	7	4
SDC	7F-03128	Nepal	3	2	6	6	4 (M) 5 (A)
SDC	7F-03149	Nepal	3	2	7	6	4 (M) 5 (A)

[62] Five of the projects were given forecasted scores: 7F-07309, 7F-08073, UR-00516.01.01, UR-00593.01.03 and 7F-07807. For a more detailed analysis of these five and all other 56 projects with confirmed scores see annexes 5-7.

SDC	7F-07309	Nepal	6	5	7	4	4 (M) 6 (A)
SDC	7F-08073	Nepal	6	5	7	6	5
SDC	7F-02172	Peru	4	4	4	4	4
SDC	7F-05409	Peru	5	6	6	6	6
SECO	UR-00050.02.01	Peru	3	4	4	5	5
SECO	UR-00276.01.01	Peru	1	5	5	5	2
SECO	UZ-00988.01.01	Peru	4	4	5	4	4
SECO	UR-00005.01.01	Serbia	3	3	5	4	4
SECO	UR-00269.01.01	Serbia	6	5	6	5	5
SECO	UR-00516.01.01	Serbia	7	6	6	5	6
SDC	7F-07198	South Africa	7	3	7	3	4
SDC	7F-07512	South Africa	6	4	7	3	3
SDC	7F-07681	South Africa	7	6	7	5	5
SECO	UR-00029.02.01	South Africa	6	3	4	1	5
SECO	UR-00399.01.01	South Africa	7	6	7	4	4
SECO	UR-00568.01.01	South Africa	1	1	1	1	1

Table A.3.2 Results obtained from in-depth desk study analysis of Vietnam projects[63]

Institution	Project no.	Geographical Focus	Evidence for Reasoning	Pathway Integrity	Explanation Clarity	Participatory Design	Overall Conclusion on Effectiveness
SDC	7F-03833	Vietnam	5	2	2	2	4

[63] Among the Vietnam projects reviewed one project (UR-00593.01.03, IFC: E&S Risk Management, VN, USD) was provided a forecasted score.

SDC	7F-05697	Vietnam	2	1	1	NA	2
SECO	UR-00015.01.01	Vietnam	5	3	3	3	4
SECO	UR-00050.03.01	Vietnam	5	7	7	6	4
SECO	UR-00593.01.03	Vietnam	7	7	5	5	4
SECO	UZ-00987.03.01	Vietnam	5	5	5	5	4

Table A.3.3 Results obtained from complementary desk study analysis of additional 25 projects

Institution	Project no.	Geographical Focus	Evidence for Reasoning	Pathway Integrity	Explanation Clarity	Participatory Design	Overall Conclusion on Effectiveness
SDC	7F-00382	Regional	3	3	5	4	5
SDC	7F-02242	Azerbaijan	4	4	5	5	5
SDC	7F-02864	Tajikistan	4	4	7	5	6
SDC	7F-03804	Bangladesh	4	4	7	6	3 (M) 6 (A)
SDC	7F-04054	India	6	5	6	7	5
SDC	7F-05733	Niger	4	3	3	6	5
SDC	7F-06401	Regional	3	2	6	5	4
SDC	7F-06841	Regional	6	6	6	5	4
SDC	7F-06983	China	7	7	7	6	6
SDC	7F-07733	China	7	7	7	4	6
SDC	7F-07789	India	6	6	5	4	5 (M) 4 (A)
SDC	7F-07807	SADC	6	5	3	3	5
SDC	7F-07916	Haiti	6	6	5	5	5
SDC	7F-07923	Mozambique	7	5	6	5	4

SDC	7F-08104	Nicaragua	6	7	6	5	5
SDC	7F-08274	Global	7	6	6	6	6
SECO	UR-00366.04.01	Ghana	1	4	3	NA	4
SECO	UR-00152.01.01	Ethiopia	NA	NA	NA	NA	5
SECO	UR-00171.04.01	Ghana	3	4	4	4	2
SECO	UR-00174.03.01	Tajikistan	2	3	6	7	1 (M) 3 (A)
SECO	UR-00263.13.01	South Africa	5	4	4	NA	4
SECO	UR-00289.02.01	Global	5	5	6	5	5
SECO	UR-00372.01.01	Global	7	7	5	6	6
SECO	UR-00397.02.02	Global	6	6	6	4	6
SECO	UR-00534.01.01	Global	7	6	6	5	5

Annex 4: Consolidated effectiveness results per thematic section (sections 3.1-3.8)

This annex serves two purposes. Firstly, it lists all the projects that have been analysed in-depth during the assignment (i.e. the projects also presented in Annex 3) but here grouped in line with the thematic sections 3.1-3.8. This serves the effectiveness analysis of the portfolio through a number of themes, which have close interlinkages and in many cases provide opportunities for synergies (Tables A4_3.1 to A4_3.8). Second, it thereafter summarizes the CC effectiveness scores from sections 3.1 to 3.8 (Figures A4_3.1.1 to A4_3.8.2)

After the lists of confirmed scores for each section, the CC effectiveness results are presented i) for the projects that have been covered by in-depth reviews (in total 61 within this assignment), i.e. with confirmed effectiveness scores, and ii) for all projects covered within each section, i.e. with all confirmed and/or tentative scores. The confirmed scores are presented in categories 1-7, whereas the scores for all projects covered (through tentative and confirmed scores) in the respective section are presented in three overarching categories, indicating low, medium and high CC effectiveness.

The effectiveness scores are presented according to the allocated budget share in the respective effectiveness categories (in case any major difference in scores exist, i.e. if presented by number of projects in each effectiveness category instead of budget in each effectiveness category, this will be noted separately). The total CC budgets covered by each presentation are indicated separately with each figure.

Table A.4_3.1 List of projects with confirmed scores in the Mitigation through renewable energy and energy efficiency section (section 3.1).

Inst.	Project no.	Result Chain	Project title	Geographic focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SECO	UZ-00574.01.01	4	Drin River Cascade Project/AL	Albanien	4	
SECO	UZ-00745.01.01	4	PTDP - PMU-Beratung Colenco	Albanien	3	
SECO	UZ-00574.02.01	4	Power Loss Reduction Project/AL I + II	Europe & CIS	2	
SDC	7F-01898	4	Vertical Shaft Brick Kiln Project / Clean Building Technologies for Nepal	Nepal	4	
SDC	7F-02172	4	Regional Clean Air Programme	Peru	4	
SECO	UR-00005.01.01	4	Ex-Yu: Nat Control Cent.-Supl. EMS/SCADA	Serbia	4	

SDC	7F-03833	4	Swiss-Vietnamese Clean Air Program	Vietnam	4	
SECO	UR-00269.01.01	4	Serbia & Montenegro, Electricity- TENT B	Serbia	5	
SECO	UR-00399.01.01	4	UNIDO Industrial EMS, South Africa, EUR	South Africa	4	
SDC	7F-07198	4	Energy Efficiency Building Programme in South Africa	South Africa	4	
SDC	7F-07512	4	Energy Efficiency Monitoring and Implementation Project in South Africa	South Africa	3	
SDC	7F-07681	4	Energy Efficiency Skills Development Project in South Africa	South Africa	5	
SECO	UR-00516.01.01	3	Serbia: CHP Biomass Padinska Skela, EUR	Serbia	6	
SDC	7F-07789	3	Project on Biomass in India	India	5	4
SDC	7F-08073	3	Power Plant Extension in Nepal	Nepal	5	

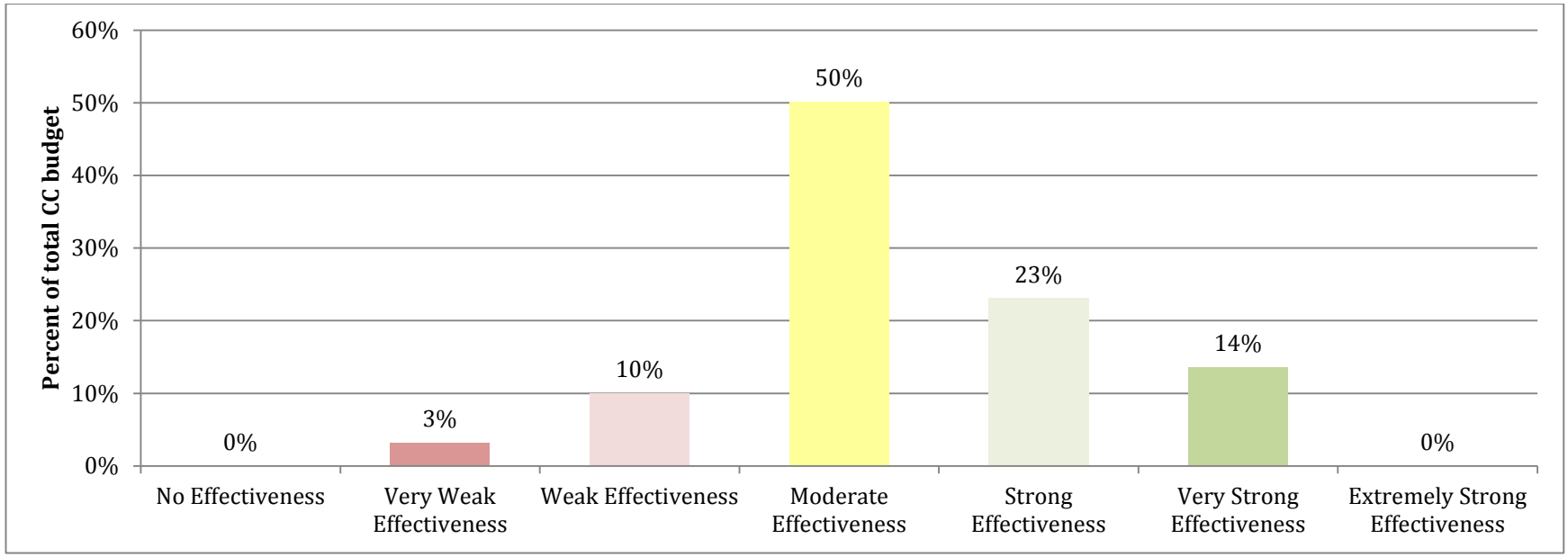


Figure A.4_3.1.1 Mitigation thorough renewable energy and energy efficiency (confirmed scores for section 3.1). Mitigation score distribution for Renewable Energy and Energy Efficiency for projects with confirmed scores (n=15), by percent of total cc budget. The total budget for the projects with confirmed scores is CHF 63 million.

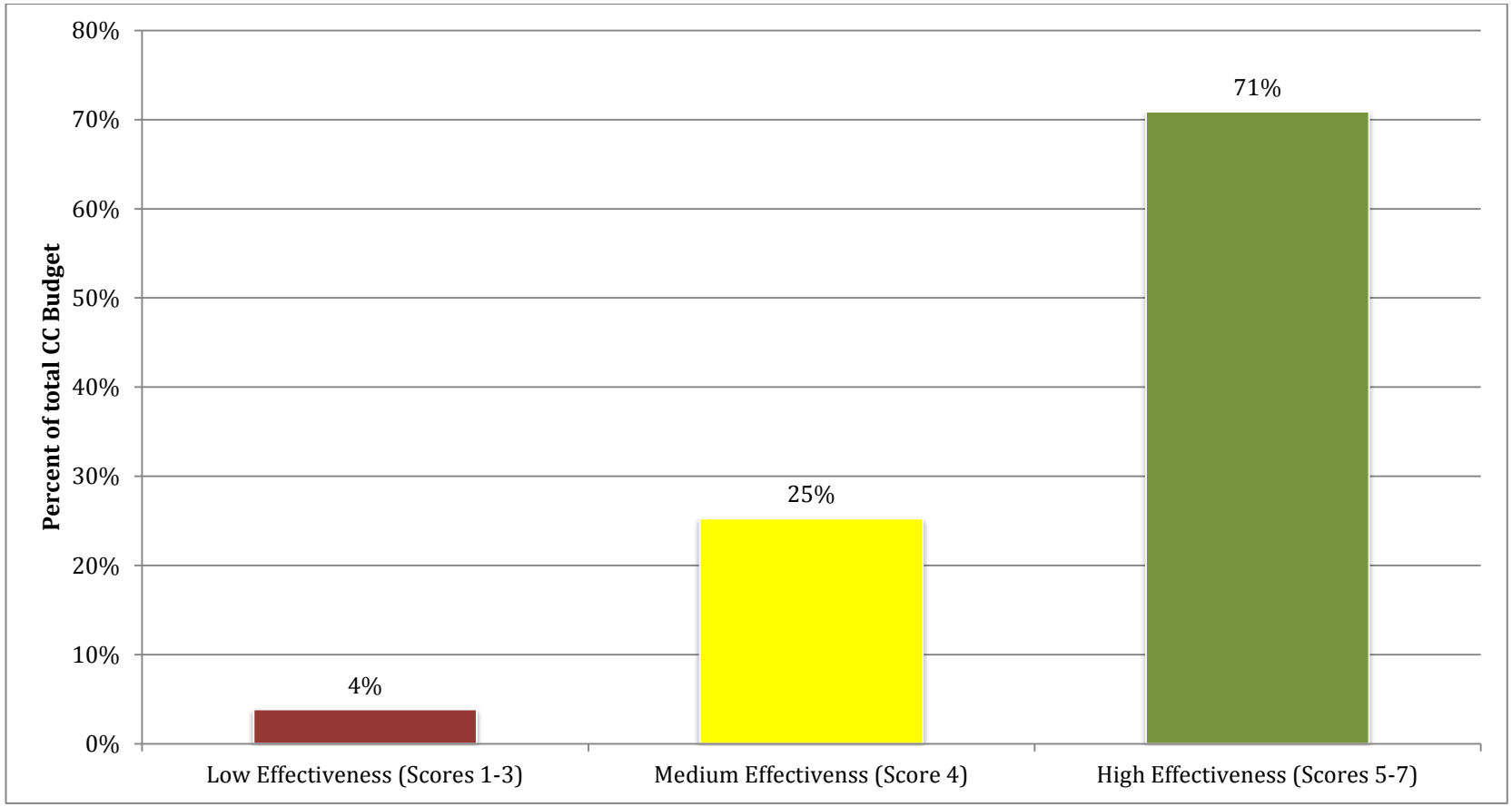


Figure A.4_3.1.2 Mitigation thorough renewable energy and energy efficiency (confirmed and tentative scores for section 3.1). Mitigation score distribution for Renewable Energy and Energy Efficiency theme for all projects covered in section 3.1 with confirmed and/or tentative scores (n=85), by percent of total CC budget grouped into three scoring groups. The total budget for all projects covered in 3.1 is CHF 291 million.

Table A.4_3.2 List of projects with confirmed scores in the Mitigation through cleaner production section (section 3.2).

Institution	Project no.	Result Chain	Project title	Geographical focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SECO	UZ-00987.03.01	4	CPC VN II, USD	Vietnam	4	
SECO	UZ-00988.01.01	4	CPC: Peru Phase I (EMPA)	Peru	4	
SECO	UR-00029.02.01	4	CPC ZA	South Africa	5	
SECO	UR-00050.02.01	4	Green Credit TF Peru USD(UZ-01116.01.02)	Peru	5	
SECO	UR-00050.03.01	4	Green Credit Trust Fund VN, USD	Vietnam	4	
SECO	UR-00263.13.01	4	IFC: PEP Africa CIPA ZA, USD	South Africa	4	
SECO	UR-00593.01.03	4	IFC: E&S Risk Management, VN, USD	Vietnam	4	

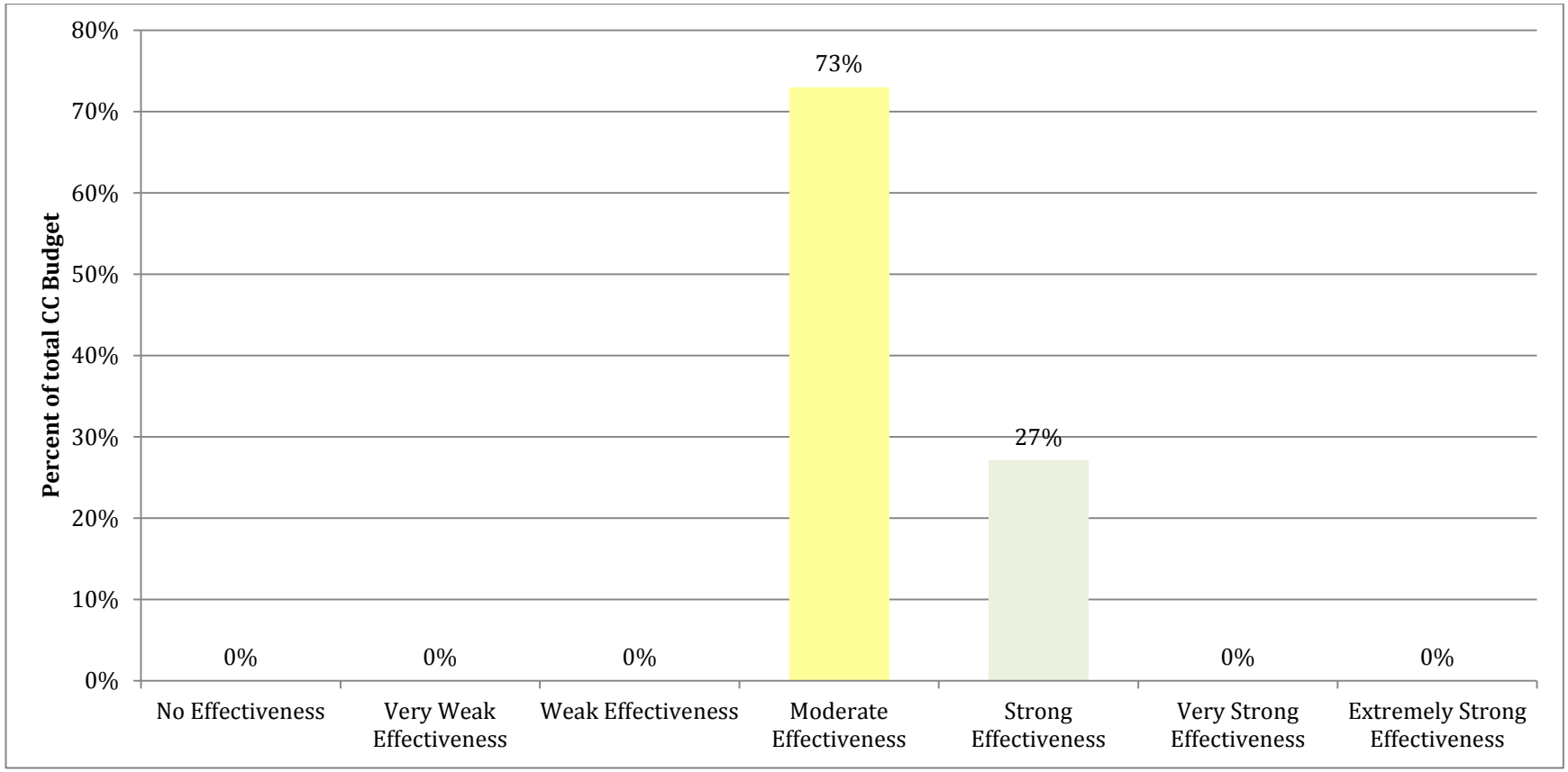


Figure A.4_3.2.1 Mitigation thorough cleaner production (confirmed scores for section 3.2). Mitigation score distribution for projects with confirmed scores (n=7), by percent of total CC budget. The total budget for projects with confirmed scores is CHF 16,0 million.

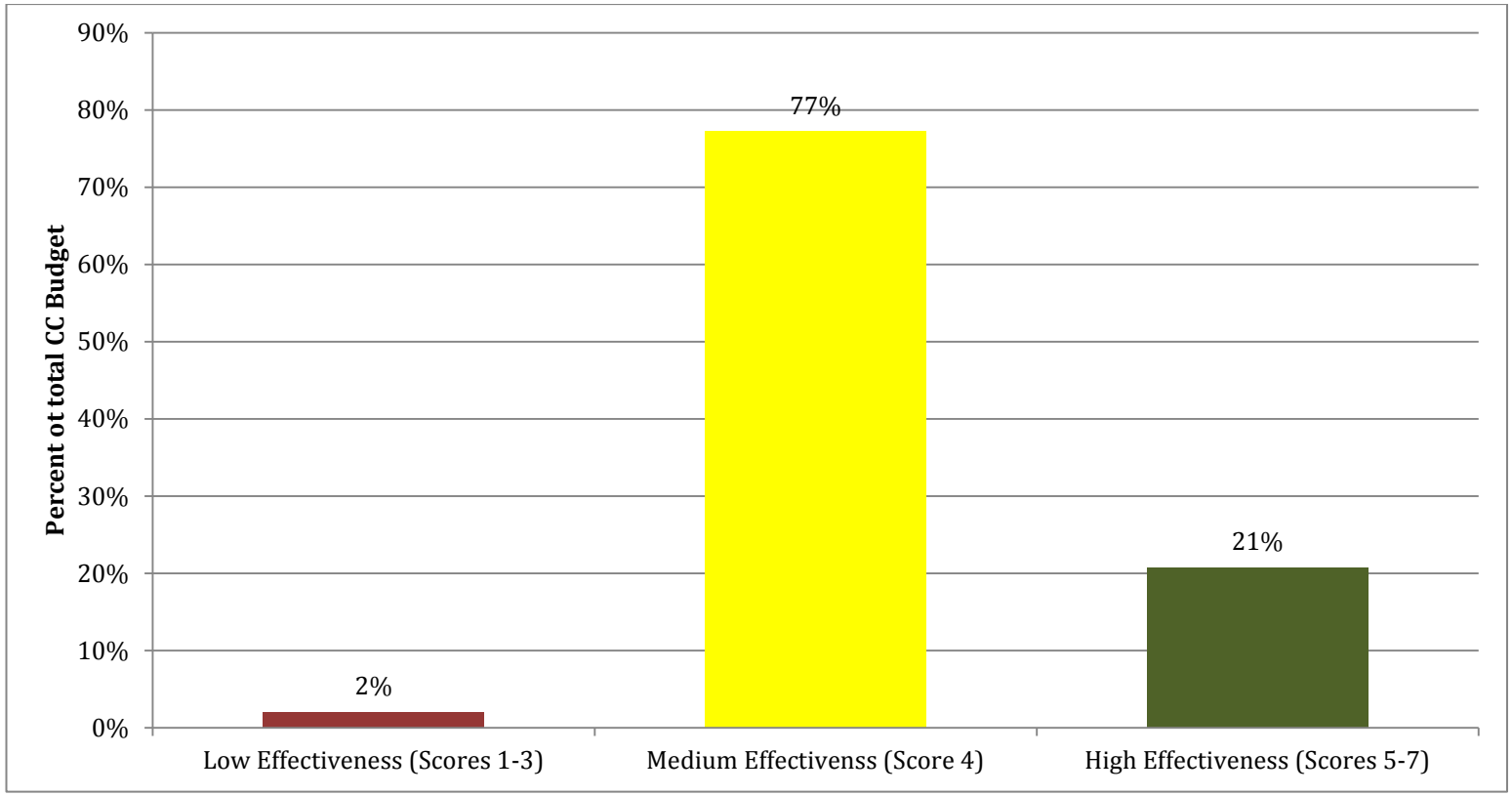


Figure A.4_3.2.2 Mitigation score distribution for all projects covered in section 3.2 with confirmed and/or tentative scores (n=41), by percent of total CC budget grouped into three scoring groups. The total budget for all projects covered in section 3.2 is CHF 73,9 million.

Table A.4_3.3 List of projects with confirmed scores in the Mitigation through ecosystem management section (section 3.3).

Institution	Project no.	Result Chain	Project title	Geographical focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SDC	7F-07309	7	Nepal National Forestry Programme	Nepal	4	6
SDC	7F-02164	7	Program for Social Forestry in the Andean Region	Andean Region	4	4
SDC	7F-03461	7	Pastoral Ecosystem Management Mongolia	Mongolia		6
SDC	7F-03128	7	Nepal Swiss Community Forestry Project	Nepal	4	5
SDC	7F-05405	7	Coping with Desertification in Mongolia	Mongolia		3
SDC	7F-06465	7	Sustainable Land Management for Combating Desertification	Mongolia		5
SDC	7F-05697	7	Mekong Market-Development Portfolio Project	Mekong	2	2
SECO	UR-00276.01.01	5	Biotrade PE, Phase I, USD	Peru	2	
SECO	UR-00171.04.01	5	Allanblackia, Ghana Phase II	Ghana	2	
SECO	UR-00015.01.01	5	Commodities Cert Tropical Timber VN	Vietnam	4	
SDC	7F-07809	2	Linking herders to carbon markets in Mongolia	Mongolia	5	
SECO	UR-00152.01.01	5	ITC-Organic Coffee Ethiopia - Clearance	Ethiopia	5	
SECO	UR-00568.01.01	5	Biotrade South Africa (RKVII)	South Africa	1	
SECO	UR-00366.04.01	5	Pakka: Organic FT, Cocoa in Ghana	Ghana	4	

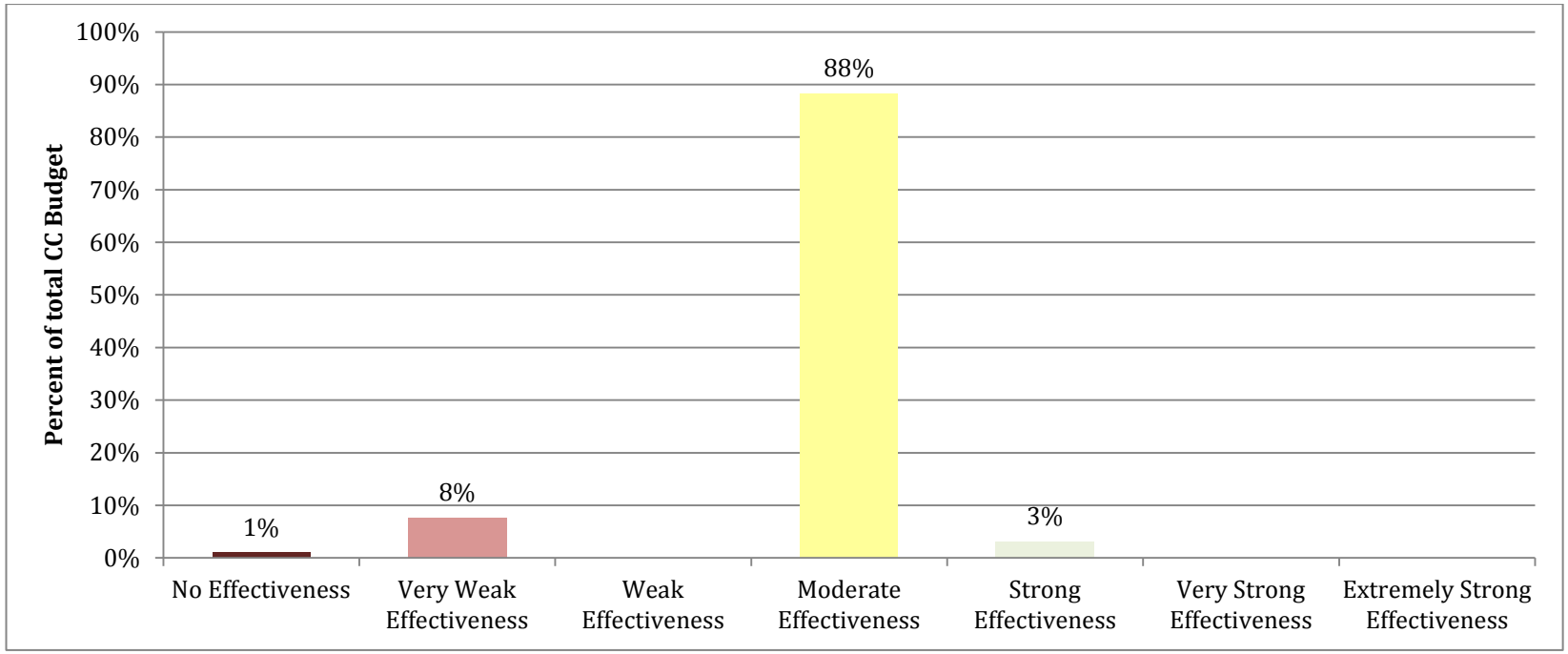


Figure A.4_3.3.1 Mitigation score distribution in Mitigation through ecosystem management section for projects with confirmed scores (n=11), by percent of total CC budget. The total budget for projects with confirmed mitigation scores is CHF 46, 4 million.

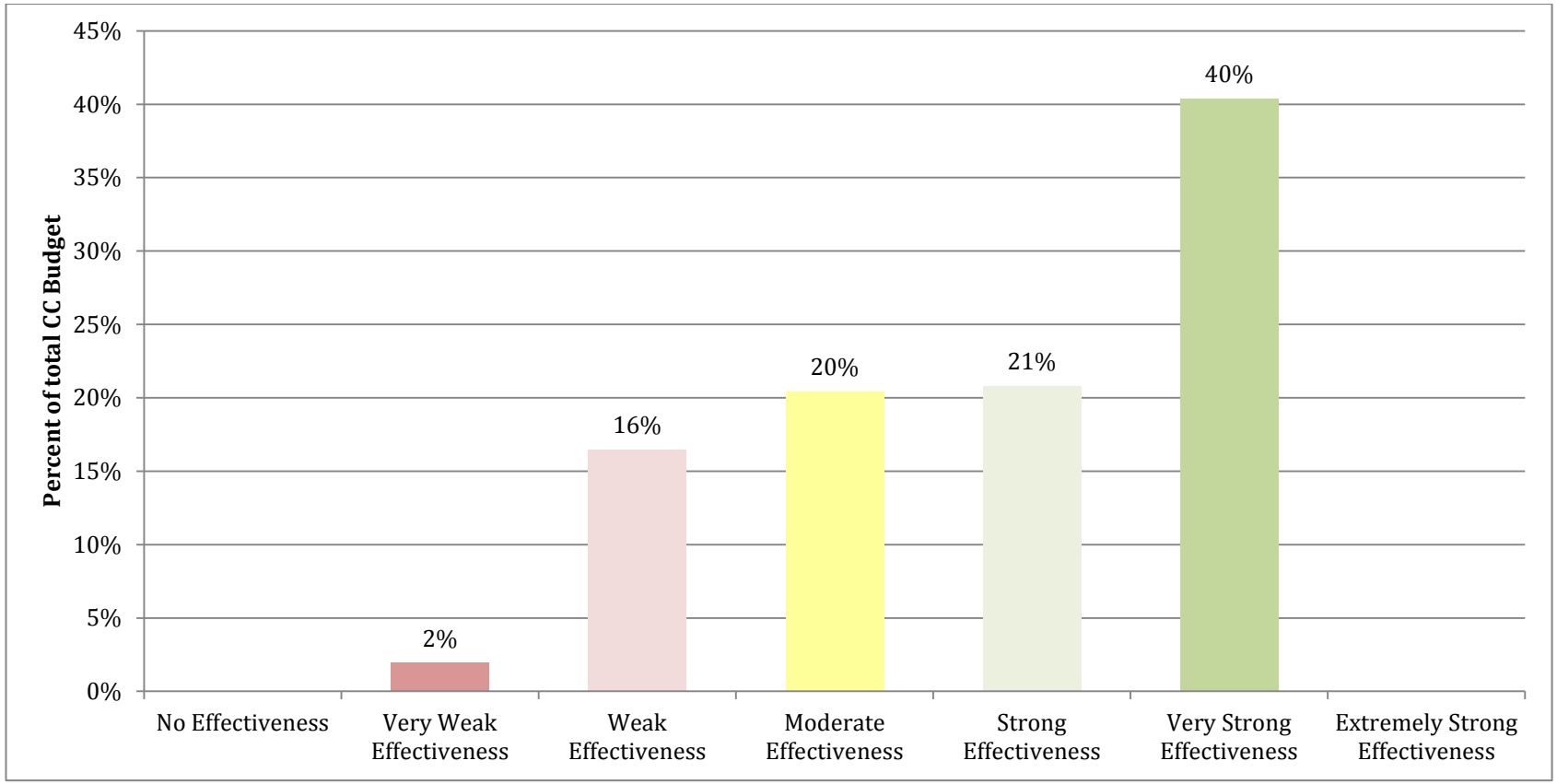


Figure A.4_3.3.2 Adaptation score distribution in Mitigation through ecosystem management section for projects with confirmed scores for adaptation (n=7) effectiveness (note that some project have confirmed scores for both adaptation and mitigation) by percent of total CC budget. The total budget for projects with confirmed adaptation scores is CHF 67,2 million.

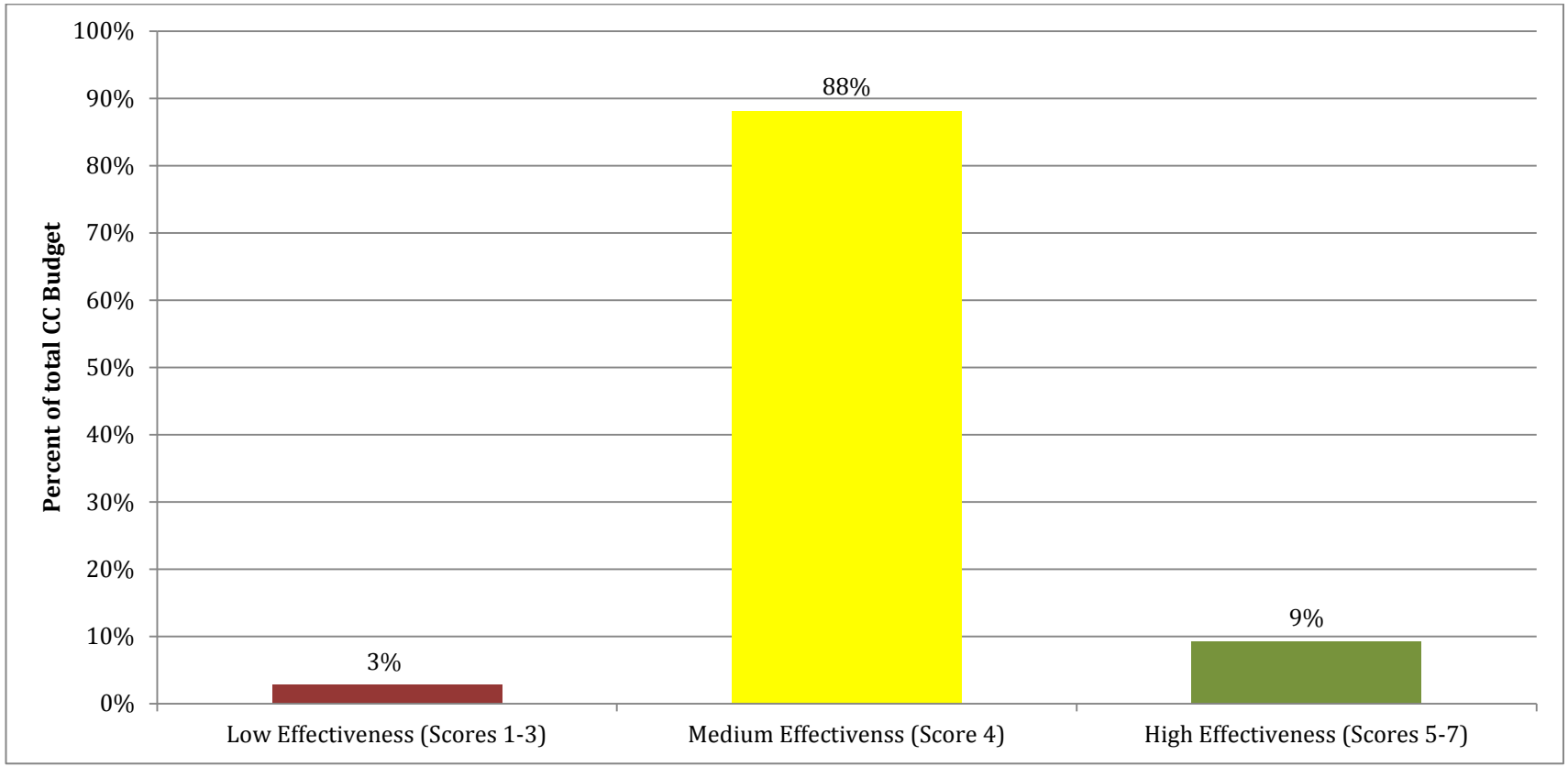


Figure A.4_3.3.3 Mitigation score distribution in Mitigation through ecosystem management section for all projects with confirmed and/or tentative scores (n=49), by percent of total CC budget grouped into three scoring groups. The total budget for projects with mitigation scores is CHF 145 million.

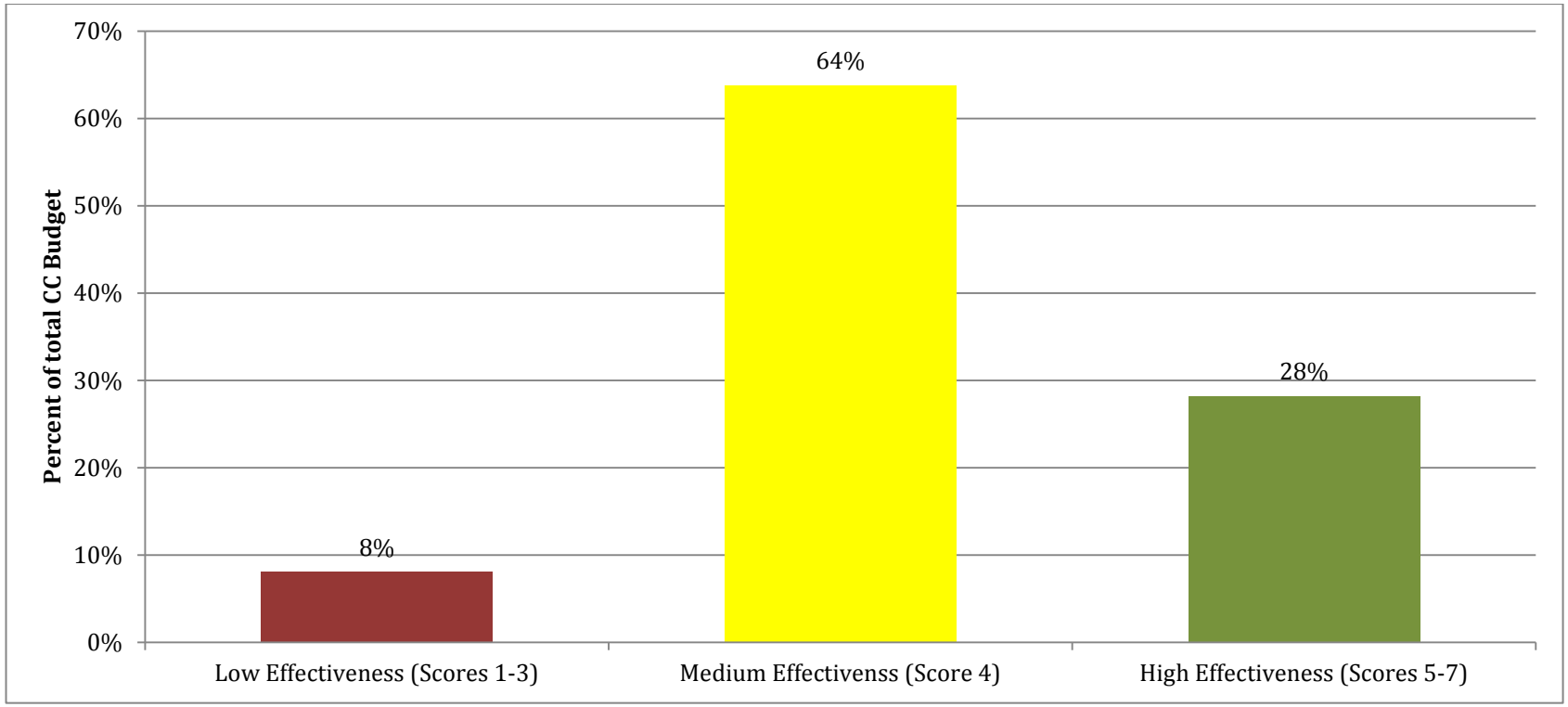


Figure A.4_3.3.4 Adaptation score distribution in Mitigation through ecosystem management section for all projects with confirmed and/or tentative scores (n=34), by percent of total CC budget grouped into three scoring groups. The total budget for projects with scores is CHF 154 million.[64]

[64] Due to major overlaps in the projects cointributing to both mitigation and adaptation, the total budget figure for both mitigation and adaptation (figures A.3_3.3.3 and A3_3.3.4in this section should be taken only as indicative figures.

Table A.4_3.4 List of projects with confirmed scores in the Adaptation through risk management section (section 3.4).

Institution	Project no.	Result Chain	Project title	Geographical focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SDC	7F-07923	7	Coastal Protection of the City of Beira	Mozambique		4
SDC	7F-06642	6	Index Based Livestock Insurance Project	Mongolia		5
SDC	7F-07916	6	Contribution to Haitian Catastrophe Micro Insurance Facility – Reducing Disaster Risks by providing catastrophe insurance	Haiti		5
SDC	7F-02864	7	Integrated Natural Risk Management in Muminabad	Tajikistan		6
SDC	7F-06841	6	Disaster Risk Education in Public Schools (Jordania/Lebanon)	Regional		4
SDC	7F-07572	7	Dzud Disaster-Prevention and Relief Program	Mongolia		3
SDC	7F-07807	6	Weather-index based Crop Insurance in Zimbabwe, Swaziland, Zambia, Malawi	SADC		5

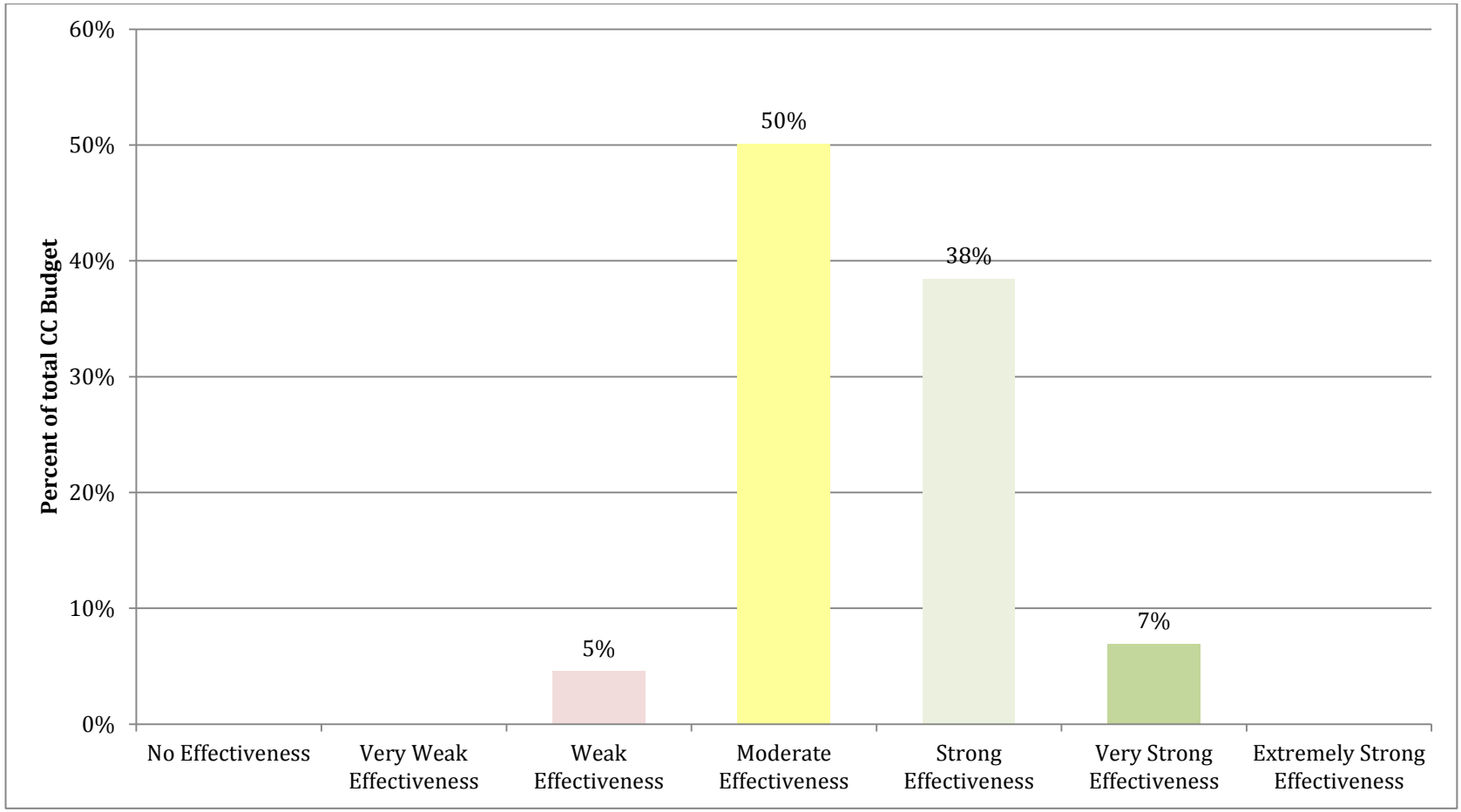


Figure A.4_3.4.1 Adaptation score distribution in Adaptation through risk management section for projects with confirmed scores for adaptation (n=7) effectiveness by percent of total CC budget. The total budget for projects with confirmed adaptation scores is CHF 8,2 million.

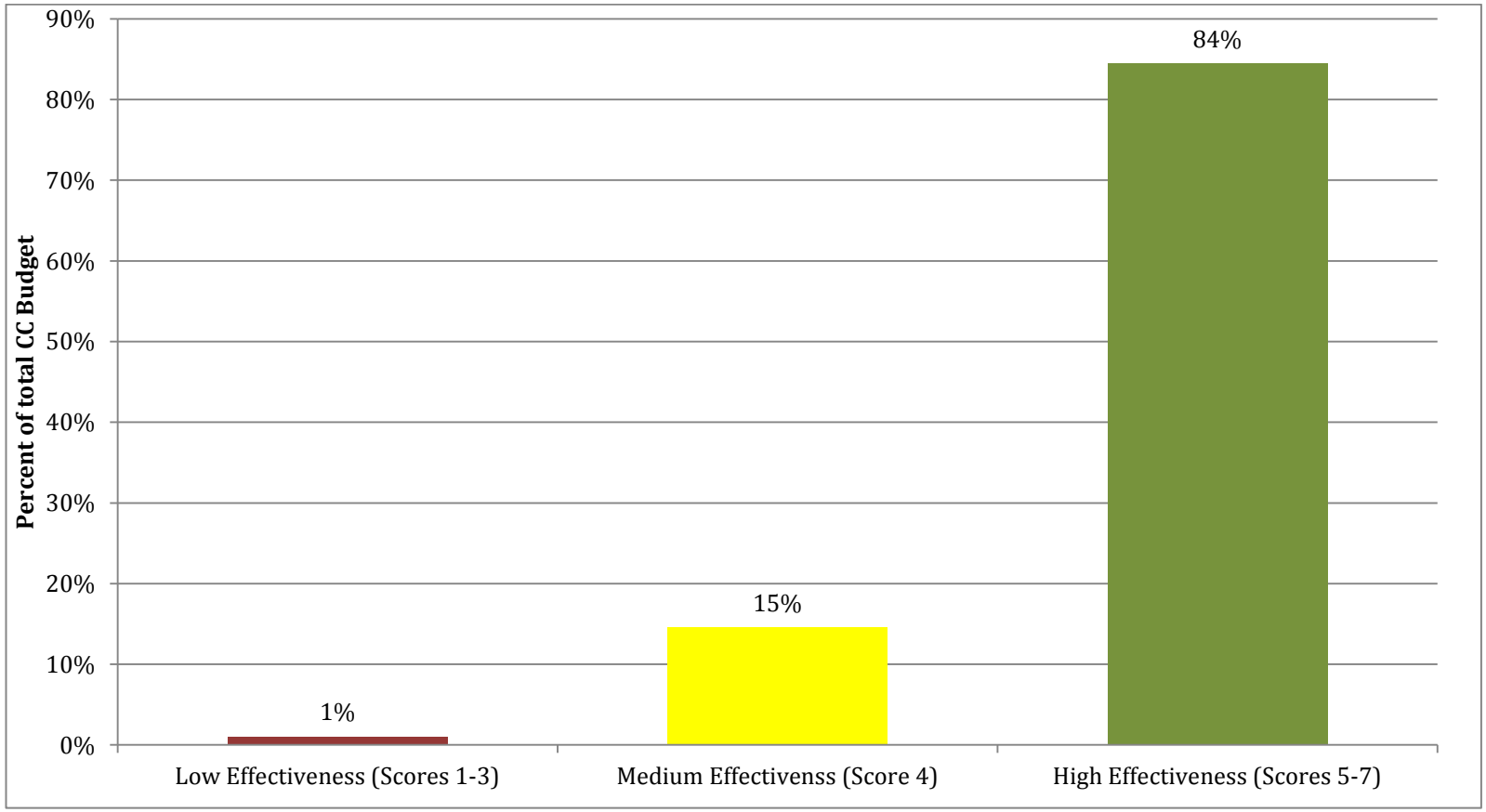


Figure A.4_3.4.2 Adaptation score distribution in Adaptation through risk management section for projects with confirmed and/or tentative scores for adaptation (n=31) effectiveness by percent of total CC budget grouped into three scoring categories. The total budget for projects with adaptation scores is CHF 37,3 million.

Table A.4_3.5 List of projects with confirmed scores in the Adaptation through stronger ecosystems and societies section (section 3.5).

Institution	Project no.	Result Chain	Project title	Geographical focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SDC	7F-03149	7	Sustainable Soil Management Program	Nepal	4	5
SDC	7F-03804	7	AFIP-HELVETAS-Intercooperation	Bangladesh	3	6
SECO	UR-00174.03.01	4	TJ: Khujand Water Supply Project II, EUR	Tajikistan	1	3
SDC	7F-05733	7	Support for farmerorganisations to improve food security in Niger	Niger		5
SDC	7F-06401	7	Up-scaling of Integrated Water Resources in Central Asia Management	Regional		4
SDC	7F-02242	7	Economic Development and Income Generation in Nakhchivan Rural Communities through Kahriz Rehabilitation, Azerbaijan	Azerbaijan		5
SDC	7F-03093	7	Hill Maize Research Project in Nepal	Nepal		4

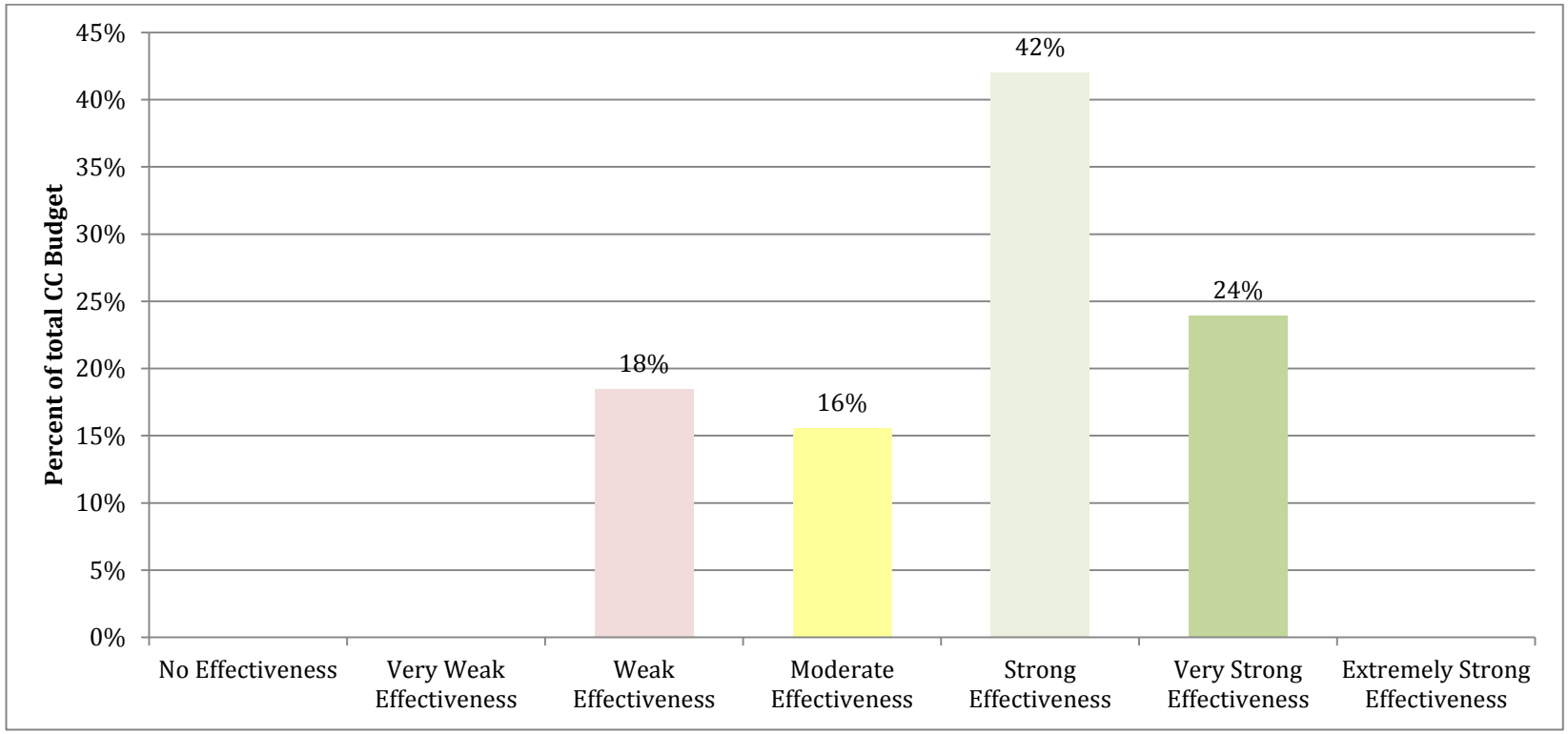


Figure A.4_3.5.1 Adaptation score distribution in Adaptation through stronger ecosystems and societies section for projects with confirmed scores for adaptation (n=7) effectiveness by percent of total CC budget. The total budget for projects with confirmed adaptation scores is CHF 19,2 million.

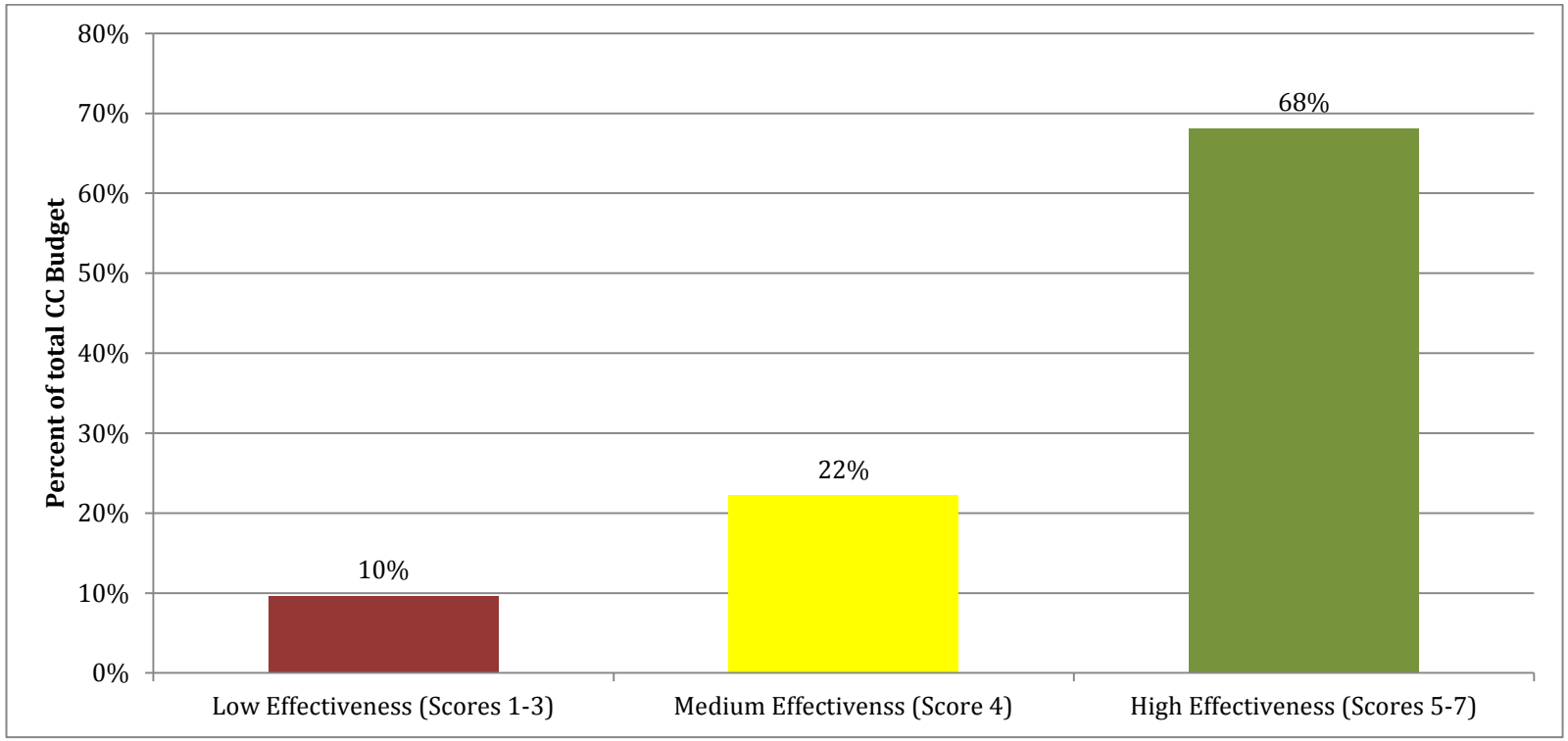


Figure A.4_3.5.2 Adaptation score distribution in Adaptation through stronger ecosystems and societies section for projects with confirmed and/or tentative scores for adaptation (n=48) effectiveness by percent of total CC budget grouped into three scoring categories. The total budget for projects with adaptation scores is CHF 110 million.[65]

In total 5 projects (3 with confirmed scores) in this section also have mitigation scores, showing generally weak to moderate mitigation effectiveness

[65] Also corresponding to total CC budget in this section, i.e. all projects are labeled as adaptation with 5 having both adaptation and mitigation objectives.

Table A.4_3.6 List of projects with confirmed scores in the Adaptation through knowledge management section (section 3.6)

Institution	Project no.	Result Chain	Project title	Geographical focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SDC	7F-05409	7	Adaptation Program in Peru (PACC)	Peru		6
SDC	7F-06983	7	Strengthening Climate Change Adaptation in China and Globally	China		6
SDC	7F-08104	7	Reducing vulnerability and adaptation to climate change in Nicaragua	Nicaragua		5
SDC	7F-07733	7	Climate Change Adaptation in China: Monitoring and Early Warning of Glacier Lake Outburst Floods in the area the Yarkant River	China		6
SDC	7F-00382	7	Observatoire du Sahara et du Sahel: Contribution au Programme Environnement	Regional		5

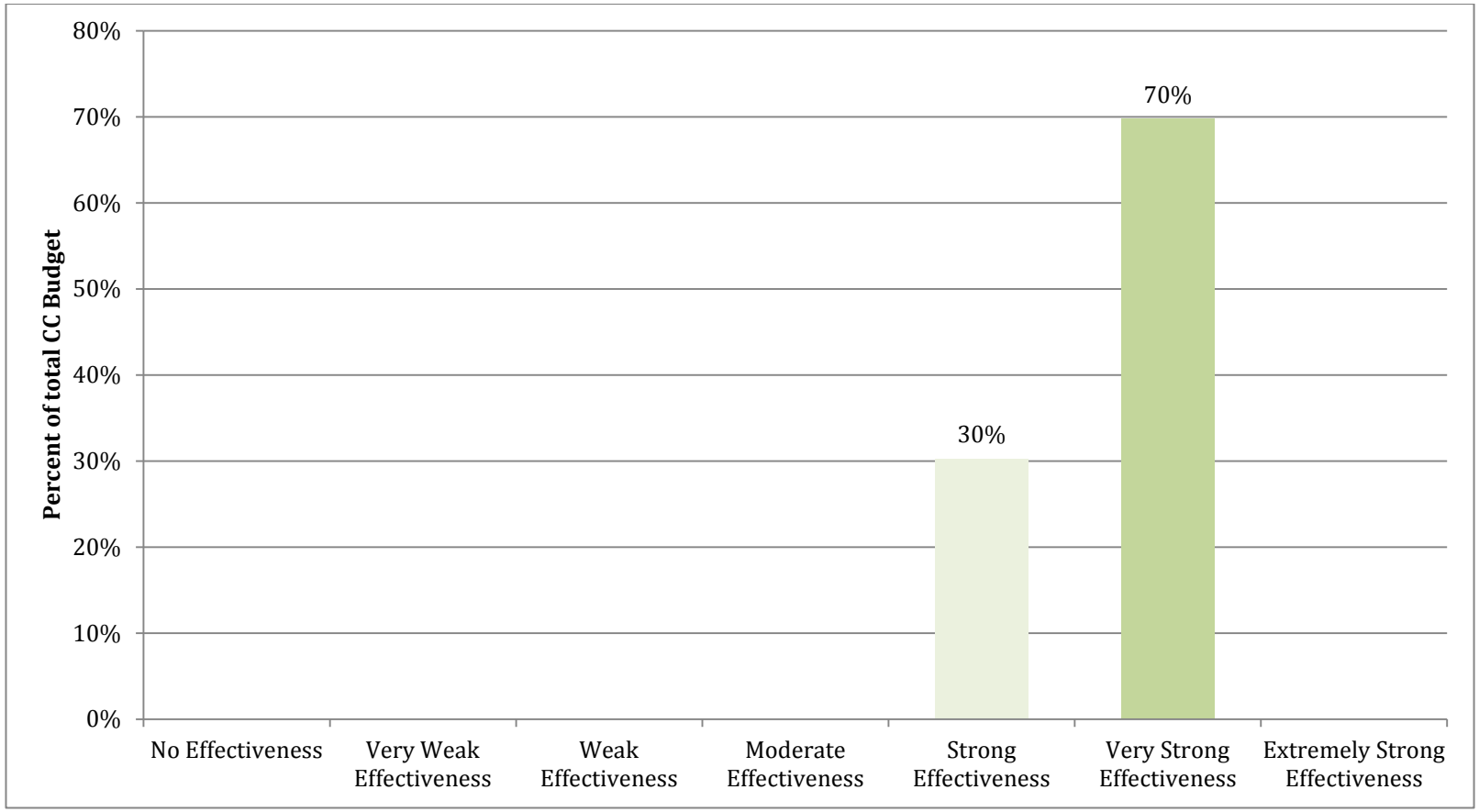


Figure A.4_3.6.1 Adaptation score distribution in Adaptation through knowledge management section for projects with confirmed scores for adaptation (n=5) effectiveness by percent of total CC budget. The total budget for projects with confirmed adaptation scores is CHF 20,1 million.

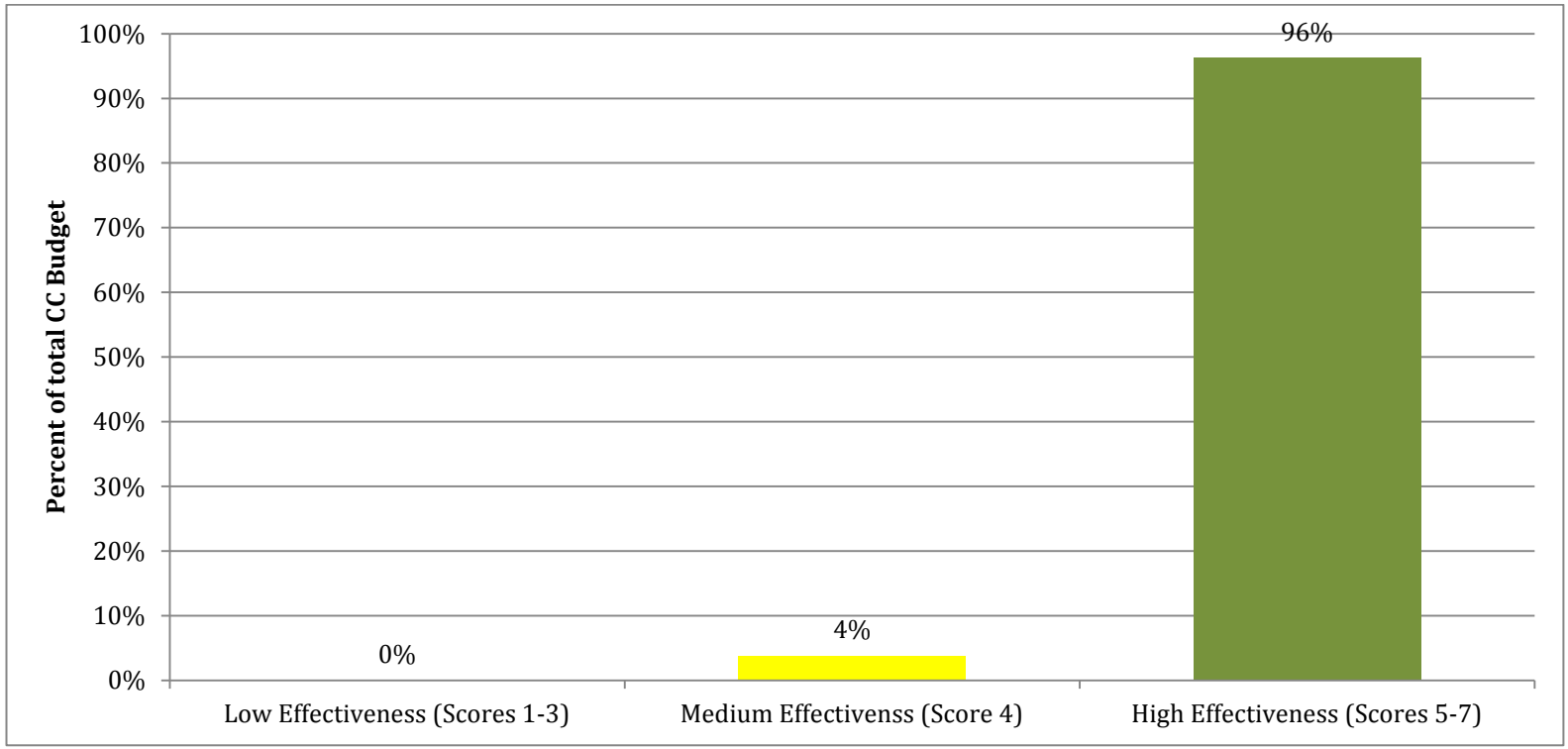


Figure A.4_3.6.2 Adaptation score distribution in Adaptation through knowledge management section for projects with confirmed and/or tentative scores for adaptation (n=25) effectiveness by percent of total CC budget grouped into three scoring categories. The total budget for projects with adaptation scores is CHF 80,2 million.

Table A.4_3.7 List of projects with confirmed scores in the Unclassified projects section (section 3.7).

Institution	Project no.	Result Chain	Project title	Geographical focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SDC	7F-04054	7	Programme on Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Areas in India	India		5

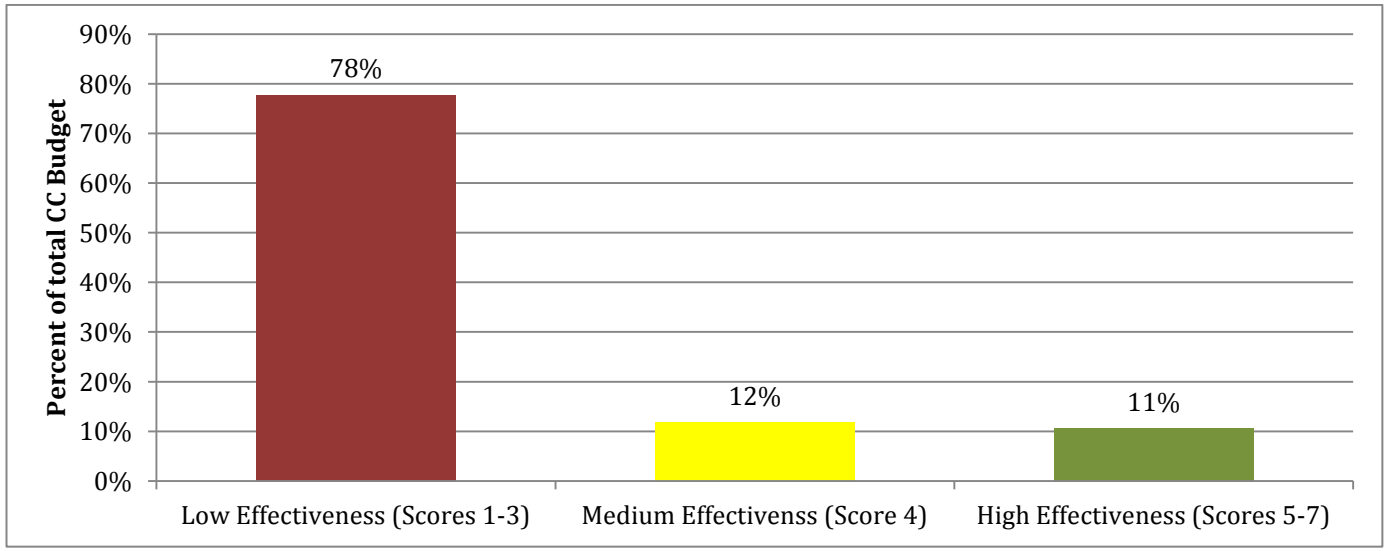


Figure A.4_3.7.1 Mitigation score distribution in the "unclassified projects" section for projects with tentative scores for mitigation (n=8) effectiveness by percent of total CC budget grouped into three scoring categories. The total budget for projects with adaptation scores is CHF 21,1 million.

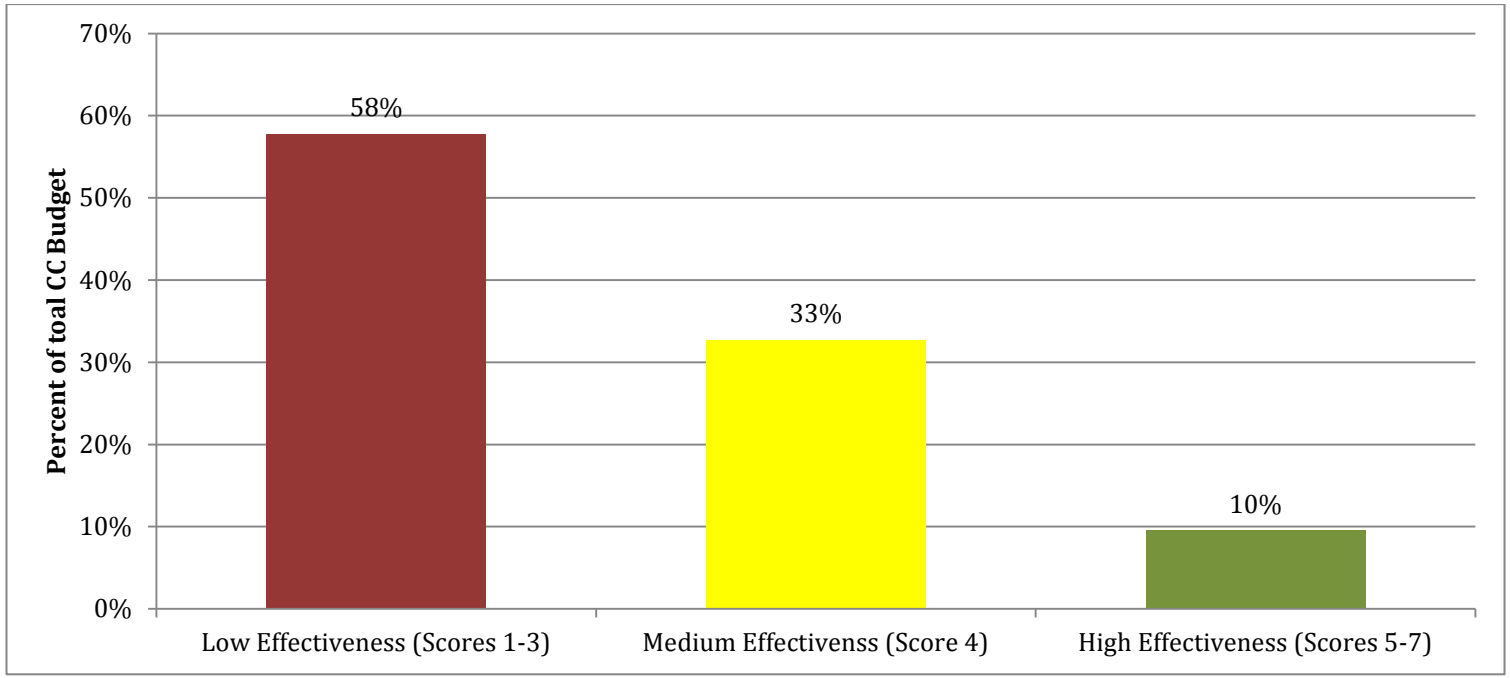


Figure A.4_3.7.2 Adaptation score distribution in the "unclassified projects" section for projects with tentative scores for adaptation (n=38, with only one confirmed score noted in table above) effectiveness by percent of total CC budget grouped into three scoring categories. The total budget for projects with adaptation scores is CHF 56, 6 million.

Table A.4_3.8 List of projects with confirmed scores in the Contributions to organisations section (section 3.8).

Institution	Project no.	Result Chain	Project title	Geographical focus	Confirmed Score (Mitigation)	Confirmed Score (Adaptation)
SECO	UR-00372.01.01	5	FCPF WB Forest Carbon Partners. Fac.	Global	6	
SECO	UR-00534.01.01	2	Partnership for Market Readiness		5	
SECO	UR-00289.02.01	7	Commodity Risk Management (Aufst.),USD	Global		5
SDC	7F-08274	7	Multilateral Contribution to the Adaptation Fund	Global		6
SECO	UR-00397.02.02	7	WB: SEEC CRIF (increase 2010), USD			6

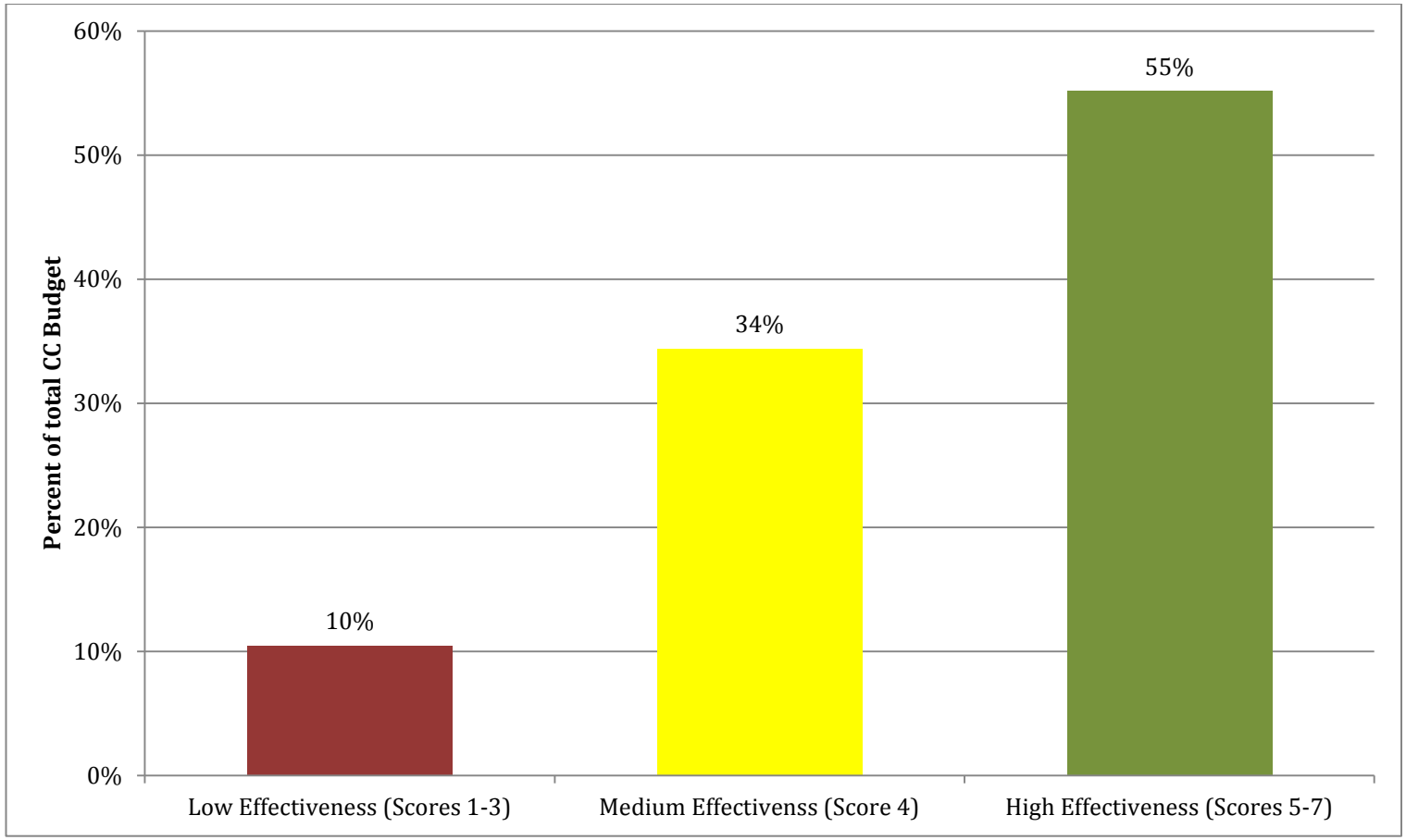


Figure A.4_3.8.1 Mitigation score distribution in the Contributions to organisations section for projects with confirmed and/or tentative scores for mitigation (n=32, with 2 confirmed scores) effectiveness by percent of total CC budget grouped into three scoring categories. The total budget for projects with adaptation scores is CHF 82,5 million.

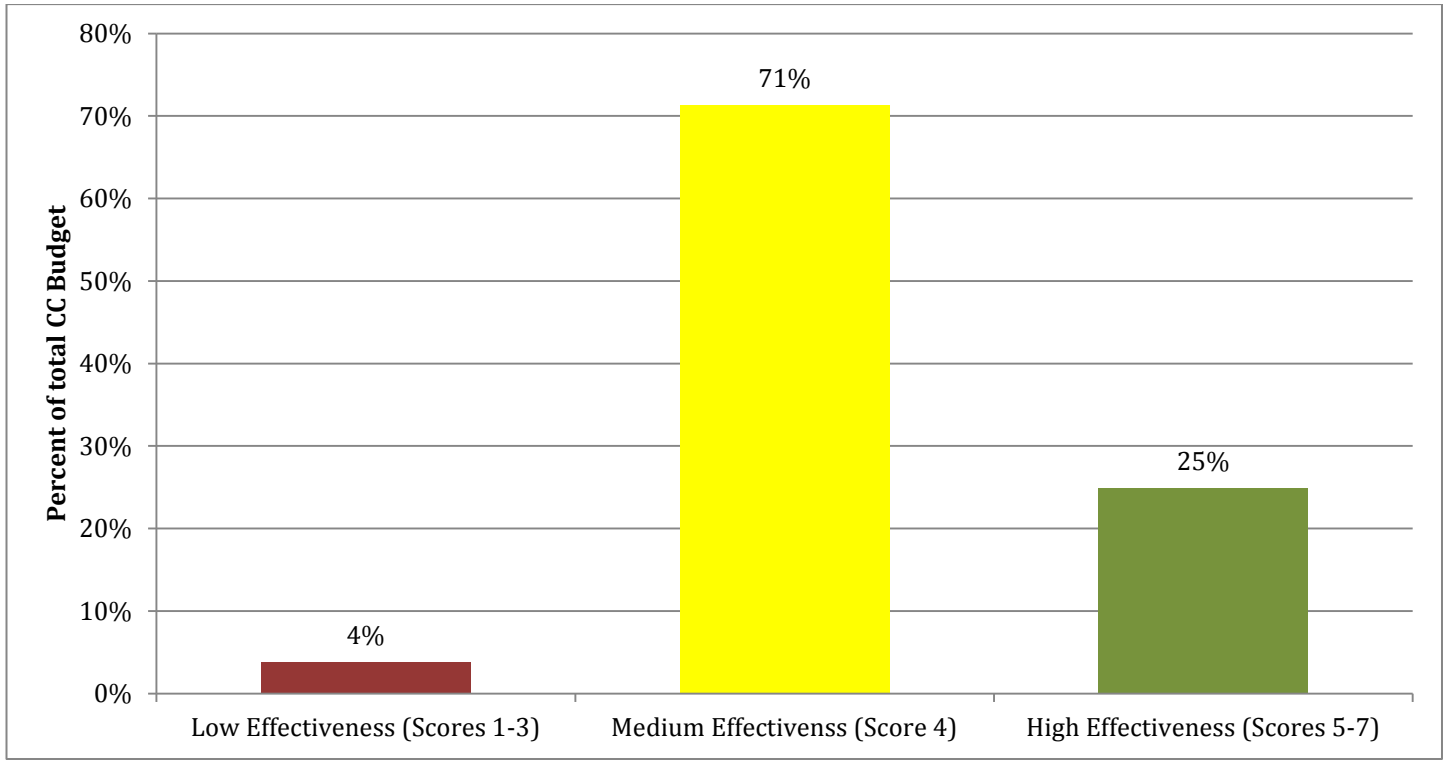


Figure A.4_3.8.2 Adaptation score distribution in the Contributions to organisations section for projects with confirmed and/or tentative scores for adaptation (n=65, with 3 confirmed scores) effectiveness by percent of total CC budget grouped into three scoring categories. The total budget for projects with adaptation scores is CHF 407 million.

For both mitigation and adaptation, the projects covered by in-depth reviews in this section indicate strong to very strong effectiveness (see table A3_3.8)

Annex 5: Project oriented reviews – in-depth review and field mission analysis of 30 projects

List of projects reviewed in detail and covered by field missions.

Institution	Project no.	Result Chain	Project title	Geographical focus
SECO	UZ-00574.01.01	4	Drin River Cascade Project/AL	Albania
SECO	UZ-00574.02.01	4	Power Loss Reduction Project/AL I + II	Albania
SECO	UZ-00745.01.01	4	PTDP - PMU-Beratung Colenco	Albania
SDC	7F-02164	7	Program for Social Forestry in the Andean Region	Andean Region
SDC	7F-03461	7	Pastoral Ecosystem Management Mongolia	Mongolia
SDC	7F-05405	7	Coping with Desertification in Mongolia	Mongolia
SDC	7F-06465	7	Sustainable Land Management for Combating Desertification	Mongolia
SDC	7F-06642	6	Index Based Livestock Insurance Project	Mongolia
SDC	7F-07572	7	Dzud Disaster-Prevention and Relief Program	Mongolia
SDC	7F-07809	2	Linking herders to carbon markets in Mongolia	Mongolia
SDC	7F-01898	4	Vertical Shaft Brick Kiln Project / Clean Building Technologies for Nepal	Nepal
SDC	7F-03093	7	Hill Maize Research Project in Nepal	Nepal
SDC	7F-03128	7	Nepal Swiss Community Forestry Project	Nepal
SDC	7F-03149	7	Sustainable Soil Management Program	Nepal
SDC	7F-07309	7	Nepal National Forestry Programme	Nepal
SDC	7F-08073	3	Power Plant Extension in Nepal	Nepal
SDC	7F-02172	4	Regional Clean Air Programme	Peru

SDC	7F-05409	7	Adaptation Program in Peru (PACC)	Peru
SECO	UR-00050.02.01	4	Green Credit TF Peru USD(UZ-01116.01.02)	Peru
SECO	UR-00276.01.01	5	Biotrade PE, Phase I, USD	Peru
SECO	UZ-00988.01.01	4	CPC: Peru Phase I (EMPA)	Peru
SECO	UR-00005.01.01	4	Ex-Yu: Nat Control Cent.-Supl. EMS/SCADA	Serbia
SECO	UR-00269.01.01	4	Serbia & Montenegro, Electricity- TENT B	Serbia
SECO	UR-00516.01.01	3	Serbien: CHP Biomass Padinska Skela,EUR	Serbia
SDC	7F-07198	4	Energy Efficiency Building Programme in South Africa	South Africa
SDC	7F-07512	4	Energy Efficiency Monitoring and Implementation Project in South Africa	South Africa
SDC	7F-07681	4	Energy Efficiency Skills Development Project in South Africa	South Africa
SECO	UR-00029.02.01	4	CPC ZA	South Africa
SECO	UR-00399.01.01	4	UNIDO Industrial EMS, South Africa, EUR	South Africa
SECO	UR-00568.01.01	5	Biotrade South Africa (RKVII)	South Africa

A. In- depth review of selected projects in South Africa

A.1 Projects reviewed

Within the effectiveness assessment six projects were chosen to more detailed review, in line with criteria presented in the final Inception Report (dated 20.9.2013). These SDC and SECO projects are as follows:

SDC

- Vertical Shaft Brick Kiln (VSBK)
- Energy Efficiency Monitoring and Implementation (EE MIP)
- Energy Efficiency Skills Development

SECO

- Establishment of a National Cleaner Production Center (NCPC)
- Industrial Energy Management System (UNIDO)
- Biotrade South Africa

A priori, all projects were classified by SDC/SECO as relevant for climate change (CC) mitigation with a 100% relevance for all but the Biotrade and NCPC project that were rated as 50% relevant. Similarly all but the Biotrade and NCPC projects have been termed *principal* in their climate orientation as elucidated in the Handbook on the OECD-DAC Climate Markers, with the latter two being termed as *significant*.

The review results are presented in the assessment templates below (section A2). The field mission team and people consulted during the field mission are presented in section A.3.

A.2 Review results

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC (7F-07198.01), Energy Efficient Building Programme, Vertical Shaft Brick Kiln (VSBK) Project, South Africa
Documents used	(a) Credit Proposal (SDC, 2009) (b) End of Phase Report (SDC, 06/2013), (c) Project Evaluation Report (Project Consult 12/2012), (d) Half Yearly Report (VSBK, H1 2013)
People interviewed	John Volsteedt, VSBK Project Manager (11:00-12:00, 4. Nov 2013, Pretoria) Peter du Toit, Managing Member, and Dries van Vuuren, Cermalab CC Materials Testing Laboratory, VSBK service provider (11:00-12:00, 5 Nov 2013, Pretoria) Juancho Hagnauer, Project Director VSBK, Regional Director Southern Africa, swisscontact, VSBK Partner Organisation (13:00-14:00, 5. Nov 2013, Pretoria) At Coetzee, Executive Director, Clay Brick Association, Strategic Project Partner (15:30-16:30, 5. Nov 2013, Midrand) Kevin Fruin, VSBK project initiator, external consultant Phase 1 (16:00-17:00, 6. Nov 2013, Johannesburg) Niko Blake, Managing Director, Langkloofbricks, (15:00-16:00, 18.Nov 2013, via phone)
Basic data	Start date: Nov 2009 End date: Oct 2013 Budget: CHF 2,9 million Disbursements: CHF 2,6 million (up to end 2012) Fund utilization: CHF 2,2 million (6/2013 according to Half Yearly Report) In kind contributions, commitment from private service providers.
Location	The Republic of South Africa (RSA) has the largest economy in Africa. RSA is the 14th largest emitter of GHG emissions (2010 data) on country level and 42nd on per capita level (2008 data) world wide. The construction sector contributes 23% to the countries GHG emissions. This figure includes the production of bricks.
Partners	**Consortium** of SKAT (Swiss Resource Centre and Consultancies for Development) and Swisscontact. SKAT provided access to VSBK experts in India and Nepal through its longstanding partnerships and Swisscontact provided the local presence in RSA. Swisscontact hosted the project manager and provided strategic advice on the business level and on social aspects, SKAT was responsible for the technical dimension of the project, ensuring quality and supporting the involved stakeholders on strategic and technical level. The Clay Brick Association was a **strategic partner** as representative of the majority of brick manufacturers in South Africa.
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b)

	increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: (a) **Applied technology for mitigation** ("Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management"); and (b) **Capacity building for mitigation (CBM)**. ("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors."
Purpose	To reduce CO2 emissions in the production of clay bricks, while improving working conditions and informing policy of the sector, by anchoring the VSBK technology in the existing brick sector infrastructure. Project focuses on knowledge and capacity building as well as technology transfer through facilitation of South-South cooperation with VSBK experience in Asia.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to mitigation, and initially classified by the review team as meeting validation criteria **Applied technology for mitigation** and **Capacity building for mitigation**. As CO2 reductions are stated as the main goal of the project and the development of a project baseline and monitoring of project emissions should be straightforward (proven as CDM project in India), the review team expects that emission reductions achieved by the project can (and will) be measured. As the project reduces fuel costs, improves output levels and enhances working conditions, a good take up of the technology through the activities of the project on the backdrop of increasing coal costs and new environmental regulation in RSA is expected.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The project facilitated the construction of one pilot facility in Langkloof with six shafts. The plant in Langkloof started construction for an additional 18 shafts in May 2013, and these should be operational by March 2014. The initial 6 shaft pilot plant will then be shut down and upgraded depending on demand. This resulted in a total emission reduction of about 3'200 t CO2 up to Nov 2013. With the other shafts in Langkloof being implement this will result in a total reduction of about 42'000 t CO2 until 2023 (The End of Phase Report incorrectly quotes 42.000t until June 2013).
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The demonstration plant resulted in an improvement of VSBK technology to a highly efficient and semi automated solution. A reduction in firing energy and resulting CO2 emissions of up to 60% compared to clamp kilns was proven. The project managed to reach out to over 90% of all clamp kiln operators in South Africa and to positively change the perception towards VSBK technology of some of them. The environmental authorisation at Langkloof allows for operation of 36 shafts on the Langkloof site, but the expansion of the another 12 VSBK shafts is market demand dependant and is envisaged for 2017/18 at the earliest.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Two more brick makers have started Environmental Impact Assessments with financial support from SDC. Service providers that help with technical analysis, design and financial modelling are trained to provide their services at a fee to interested entrepreneurs.

	The project will be followed up with a second phase which has a target of 240 shafts. If that target is met, it has a potential to reduce 96'000t CO_2 per annum (assuming 400t per shaft per year on average, Langkloof's reductions per shaft per year are around 230 t).
Overall conclusion on effectiveness based on the evidence (1+2+3)	With only six shafts at one pilot site implemented the project is seriously behind expectations of 18-20 VSBK sites with 180-200 shafts. This target was much too ambitious and additionally hampered by the fact that VSBK had a bad reputation in RSA previous to the project. The majority of clamp kiln owners were sceptical that the promised technical economic improvements (less energy, less breakage, higher quality) could be achieved by VSBK. The design of VSBKs and general processes of brick making in India that were intended to be a positive example were regarded as inferior by RSA brick makers. The design of the VSBK had to be improved in many ways from the versions currently in use in India and Nepal and installed in a Pilot plant to demonstrate a real improvement over proven clamp kiln processes in RSA. The managing director of Langkloof Bricks summarizes his experience as "The funding received from the Swiss through the cooperation with SDC and Swiss Contact created an enabling environment which allowed us to identify support companies and structures to further advance the development of VSBK for the Clay Brick industry in South Africa and beyond Langkloof Bricks". By working with the Clay Brick Association as strategic partner the project managed to inform over 90% of clay brick operators about the real benefits of VSBK technology and generate a more positive attitude towards the technology resulting in two more companies already committed to start a VSBK development in phase 2 of the project. The pilot plant in Langkloof will extend the number of shaft to 18 in total during phase 2 and one of those shafts will be made available to the project for testing purposes. This is essential to remove further concern of brick makers about the ability of the technology to work with various clay types, especially those that require a higher firing temperature than the one achieved in Langkloof. One test shaft for all of Africa will however not be sufficient, as green (unburned) bricks cannot be transported for long distances (over 60km) without the risk of breakage. Calculating a per ton cost of the emission reductions achieved by the 18 shafts implemented as tangible result of the first phase results in about CHF 69/t CO_2 reduced. This is certainly more than abatement costs in the EU ETS or in the CDM, but less than the cost of abatement in Switzerland which can be estimated at above CHF 100/t. The project is therefore rated as 4.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit note identifies the construction sector was identified as major contributor (23%) to the country's GHG emissions. The project's aim was to increase the efficiency of clay brick production by 50% in RSA using VSBK as a proven technology and reducing 0.9-1.1m tons CO_2 emissions over a ten year period. The focus was on technology transfer and capacity building to anchor VSBK technology within the building sector's existing supply structure. The adaptation and further development of VSBK technology was supposed to be developed as open source to facilitate a broad role out across Southern Africa. (**Score**: 7) **Pathway integrity**. In hindsight the target performance of installation of 180-200 shafts in three years was too ambitious. According to the credit note the project intended to build on extensive

	knowledge gathered with the VSBK technology in Asia. The aim was to facilitate a South-South technology transfer. The implementing agencies SKAT and Swisscontact were chosen as partners with existing network and experience in Asia and South Africa respectively. During the project design phase more attention could have been paid to experience gathered from other VSBK projects implemented by both SDC and SKAT from which the difficulties of introducing the required technology shift should have been known. The evaluation report rates this target as "incomprehensible, as in most of the Asian projects the dissemination of the VSBK technology, which is from a purely technical and economic perspective very convincing and viable, has been hampered by similar barriers" This refers to inter alia socio economic barriers, resulting in a resistance to change in the clay brick sector. The challenges of introducing a major technology shift were underestimated and the well-meant technology transfer from India/Nepal to South Africa was not always perceived positively. South African clay brick manufacturers were already more advanced than their Indian counterparts in many aspects of brick making (e.g. clay composition design and testing, industrial brick forming processes, etc.) and did not see value in copying a technology from less developed countries. The influence of the project on an enabling policy framework could have been more effective. The credit note does also not mention the bad reputation VSBK technology had in South Africa previous to the project's implementation. This was based on bad construction of VSBK at two sites (about 40-50 shafts in total). One of the projects was operating at efficiencies far lower than what was claimed to be achievable by the project, the other one tried to develop a steel version VSBK that was portrayed by its developer as superior to the standard brick kiln model, but in fact was not able to prove this superiority. South African Entrepreneurs were described in the credit note as actively looking for a cleaner brick firing technology. However a shrinking building sector (partially due to global economic slowdown) and resulting oversupply seriously hampered the take up of VSBK technology as new investments were avoided. In addition the entrepreneurs were not regarded as credit worthy enough by financing institutions. As project financing was identified as a major issue and the CDM was seen as welcome a mechanisms to improve technology take up. The grant was amended by CHF 0,56 million to facilitate a CDM Program development. This initiative, while successful on paper, led to no new investment due to the collapse of the CDM carbon price to insignificant levels. This is unfortunate as the pilot plant could establish the ecological and economic benefits of operating a VSBK with investment payback periods between 24 and 48 months. The project mangers reacted with the development of finance application templates, which apparently is picked up well, but did to date not result in additional take up of the technology. The project was extended by 10 months to Oct 2013. (**Score**: 3)
General quality of project design	**Explanation clarity**. Technological, economical and ecological advantages of the VSBK technology, based on experience in Asia, were explained clearly. The technology transfer/adaptation and capacity building needs were identified and well described. (**Score:** 7) **Participatory design**. In preparation of the credit note study tours of SA brick entrepreneurs were conducted to India and Nepal. The credit note describes these visits as generating a positive response to the VSBK technology and a commitment of the visiting entrepreneurs to invest. The evaluation report however states that SA brick makers would have rather liked to see Vietnamese VSBK sites as these seemed

	more advance with regards to loading technology and exhaust systems. A South African engineering company later developed a highly improved SA VSBK version, which is now broadly regarded as state of the art. However, this resulted in an on-going copyright dispute and is hindering the open source approach that was supposed to facilitate easy technology dissemination. It also seems that the bad reputation VSBK technology had in RSA prior to the project was not taken into account accordingly. Another target to ensure the sustainability of the project was the development of a network of Support Service Providers. Due to the fact that only one instead of five pilot sites were developed this network is a lot smaller than intended, with one each for financial advice, technical testing and VSBK design. However, capacity seems to be sufficient to accommodate the needs of the planned 10 more companies (200-240 shafts) in phase 2 of the project. The project was instrumental in achieving a more positive view of VSBK technology reaching out to over 90% of all clamp kiln operators in RSA. (**Score**: 3)

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC (7F-07512.01), Energy Efficiency Monitoring and Implementation Project (EEMI), South Africa
Documents used	(a) Credit Note (SDC 03/2010) (b) Inception Reports (DEM, 04/2012) (c) Mid Term Review Report (Sustainable Energy Africa/COWI 12/2012) (d) Combined Project Progress Report (DoE and SALGA 03/2013) (e) National Energy Efficiency Strategy (Department of Minerals and Energy (now DoE), First Review Oct 2008)
People interviewed	*Xolile Mabusela,* DirectorEnergy Efficiency and Environment, Department of Energy (DoE), Pretoria (15:00-17:00, 4 Nov. 2013) *Dr Ulrich Averesch, Head of Energy Efficiency, GIZ*, Pretoria (9:00-10:00, 5 Nov 2013) *Mfundo Xulu, Director of Facilities Management, Department of Public Works*, Pretoria (10:0-11:00, 6 Nov 2013) *Barry Bredenkamp, Senior Manager: Energy Efficiency, South African National Energy Development Institute (SANEDI),* Sandton, (13:00-14:00, 7 Nov 2013) *Anise Sacranie, Consultant, Danish Management A/S (DEM)*, Pretoria (8:00-9:00, 8 Nov 2013) *Linda Manyuchi, Technical Specialist: Energy Efficiency, (Chief Special Advisor in the project), SALGA*, Pretoria (11:30-12:30, 8 Nov. 2013)
Basic data	Start date: April 2010 End date: Dec 2013, for SALGA ; Dec 2015 for DoE (in line with contract with Danish Management) Budget: CHF 3,8 million Disbursements: CHF 1,5 million (2010-2012)
Location	The Republic of South Africa (RSA) has the largest economy in Africa. RSA is the 14th largest emitter of GHG emissions (2010 data) on country level and 42nd on per capita level (2008 data) world wide. Five regional centre municipalities will work as pilot sites as part of the Project implementation. The target pilot municipalities are Sol Plaatjie Municipality (Kimberly, Northern Cape), Rustenburg (North West), Polokwane (Limpopo), Mbombela (Nelspruit, Mpumalanga) and King Sabatha Dalindyebo (Umtata, Eastern Cape). South Africa is one of the highest emitter of greenhouse gas (GHG) per capita worldwide. To address this in the context of climate change and energy issues, South Africa launched its National Energy Efficiency Strategy in 2005 with an ambitious objective of 12% reduction in final energy demand by 2015. The 283 Municipalities of South Africa are at the forefront of energy consumption as they are responsible for distribution of electricity to buildings and households.
Partners	**Main Partners:** **Department of Energy (DoE)** In the implementation of the project, DoE works with the stakeholders relevant for implementation and monitoring of energy efficiency. In establishing the Energy Efficiency Target Monitoring System (EETMS,) the DoE has appointed a consortium led by the *Danish Energy Management (DEM)* for a period of three years, starting from January 2012 to December 2014. The DEM Consortium will establish the Energy Efficiency Target Monitoring System (EETMS), and institutionalise it with the *DoE, Municipalities* and *South African Energy Development Institute (SANEDI)* as well as build capacity to the data suppliers on the

	procedures and processes to collect and supply data to the system. **South African Local Government Association (SALGA)** is a voluntary association and represents the majority of Municipalities in the country. SALGA is recognised as the employer body of local government and serves as the representative voice of Municipalities. In the context of building capacity at municipal level to be able to manage Energy Efficiency, SALGA represents the official and recognised forum. **Pilot Municipalities:** The five pilot Municipalities distribute a majority of the electricity to the households and office building and have capacity to enforce compliance to the National Building Regulations and manage and report on Energy Efficiency. **Support Partners:** **National Energy Regulator of South Africa (NERSA)** holds the mandate to approve tariffs and oversee generation, transmission and distribution of electricity in line with the agreed regime for service, quality and price. It is also mandated to address capacity constraints should a municipality not be able to report on or deliver electricity services as stipulated in the licence agreement. **Eskom** is South Africa's largest producer of electricity generating about 95% of energy for the country that has an electrification rate of around 85% of households. There are many smaller municipalities that do not have the capacity to manage the distribution to households and Eskom distributes directly to those households. Therefore Eskom is an important stakeholder and partner in terms of monitoring and management of building energy and energy efficiency. **Statistics South Africa (STATSSA)** is an essential partner for collecting and analysing data. **Department of Human Settlement (DoHS)** is an important partner to motivate that all housing developments comply with building code in line with their sustainable policy. **Project Management:** The project was intended to be implemented through input from a Chief Technical Adviser (CTA) based at the DoE as well as a Chief Special Adviser (CSA) based at SALGA with substantial technical advisory functions towards the municipal level. The development of the monitoring system involved recruitment of a team of international and local consultants with hand-on experience in monitoring of national energy efficiency targets. Other short term advisers and consultants were recruited for the capacity development, knowledge sharing, formulation of legal advice, regulations, advice on financial incentive structures and communication. SALGA only hired local consultants for these tasks. The DoE engaged Danish Management S/A for the EE Target Monitoring System. The Project Steering Committee (PSC) comprised of SDC, DoE, SALGA, eventually the pilot 5 municipalities, the CTA and the CSA. Other specialised stakeholder representatives were intended to be included in advisory capacities based on decisions by the PSC (statistics, research centres etc.).
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG

	emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: **Capacity building for mitigation (CBM)**. *("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")*
Purpose	To develop and support introduction of a monitoring tool for the national Energy Efficiency Strategy and to pilot the use of monitoring targets and implementation of energy-saving initiatives in five municipalities with a focus on the building sector. To ensure that South African building sector energy consumption can be measured through the production of regular and quality data from municipalities in order to inform central government on energy consumption progress.
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SDC as 100% relevant to mitigation, and initially classified by the review team as meeting validation criteria **(a) Capacity building for mitigation, (b) Mainstreaming of mitigation (MOM)**, **(c) Regulations & incentives for mitigation (RIM).** A functioning monitoring system is the pre-requisite of the implementation of any successful energy efficiency strategy following the management adage "You can't manage what you don't measure". However, establishing a functioning monitoring system from scratch in a three year time frame across several municipalities in a country that starts from a very low basis of data availability is challenging.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	No evidence of achieved energy efficiency improvements was found in the documentation. According to Xolile Mabusela, Director at DoE "The project itself never projected any CO2 savings, but created an enabling environment."
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The Project has the overall objective to help achieve the targets listed in the *National Energy Strategy* to improve energy efficiency and reduce energy consumption by 2015 as follows: • Commercial and Public buildings 20% • Residential sector 10% • Industrial and Mining sectors 15%. According to the *mid term evaluation report*, the success of the project up to end of 2012 seems to be limited to the establishment of a platform for communication and cooperation between involved partner institutions and the identification of key pieces of work that need to be completed. According to the interviews conducted with the DoE and SALGA the goal of the project were adjusted several times. This resulted in an inclusion of additional sectors (incl. Industry) for the EE TMS. The revised project plan was however not yet approved by the PSC. Energy Efficiency Tax Incentive Regulation was finalized by DoE to be promulgated 01/2013. DoE has also promulgated Mandatory Provisions for Energy Data with effect from March 2012. The influence of this project on these regulations is unclear According to the *Mid Term Review*. At the time of the interviews, the project seemed to be back on track. According to Barry Bredenkamp at SANEDI, "The new energy strategy is still sitting with cabinet, the actual target that we have to deliver against as well as the baseline are still unclear". The TMS, once established, will inform the baseline against which energy efficiency measures should be established and against which CO2 savings could

	be calculated. The project will ultimately contribute to the success of meeting those targets, but it seems impossible to attribute a percentage at this stage. According to Anise Sacrabie of DEM the data collected to date suggests an energy efficiency improvement in industry that participated in the pilot phase of the project of 26% in the period 2005-2008 compared to 2000. Only if information like this is available government will be in a position to design an energy strategy with ambitious but achievable targets.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	It is hard to assess the effectiveness at the current stage of the project. Capacity building projects of this kind lay the ground work for long term improvements. Given the number of problems at different levels of the project and the limited tangible outcome to date the project is scored low. The following statements by interview partners will support the overall usefulness of the project and the commitment of the different parties to succeed in the long term. Xolile Mabusele, DoE: "The project will allow the DoE to develop a new baseline and to conduct benchmarking analysis." Anise Sacranie, DEM: "Without the Swiss money the DOE Energy Efficiency Programme would not be where it is today. They managed to hire more staff and get more attention. It triggered the Energy Management Plan initiative and contributed to a harmonization between departments." Linda Manyuchi, SALGA: "Swiss funds were also used to understand and map future development needs. We can use this work to identify where support is needed and approach other donors for that support. The DoE now also started to fund municipalities for EE capacity development" Barry Bredenkamp, SANEDI: "A proper evaluation of the project's mitigation effectiveness can only be done in three years if you want tangible results."
Overall conclusion on effectiveness based on the evidence (1+2+3)	**Overall (mitigation) effectiveness score**: 3 with an outlook of 4 if DEM manages to complete their work.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The building sector is a large contributor to CO2 emissions and therefore the natural target of energy efficiency improvements. Establishing a monitoring system and improving coordination and cooperation between different levels of governments is an essential element of this strategy. With an understanding of the South African Situation the approach to involve municipalities is regarded as very ambitious in the *Mid Term Review*, as municipalities generate revenue from electricity sales and cooperation between different levels of government has proven to be difficult. **Score**: 6. **Pathway integrity**. According to Anise Sacranie of DEM, consultant to the DoE for the Energy Efficiency Target Monitoring System (EE TMS), "the TMS was designed on paper in 2005 by COWI consultants to match the National Energy Strategy first published in 2005. When the DoE was separated out of the Department of Minerals and Energy it decided to start the implementation of this TMS. Management at the DoE at the time however lacked a clear understanding of what a TMS actually entails." According to Ms. Sacranie, this lack of understanding contributed to the number of misunderstandings in the project design. "It would have been more efficient to train DoE staff on what a TMS is first, before you sit down with them to discuss its implementation. This could have been achieved by sending them to Canada or New

	Zealand and see a performing system in action." The *credit note* identified the right risks to the project, although in hindsight the probability of individual risk materialising might have been assessed as too low. The project started with a substantial delay of seven months for the DoE and nine months for the SALGA part. At the time of the *Mid-Term Review* in Dec 2012, 13 out of the 21 foreseen activities had either not started, delayed or classified as impossible to assess. Several deficiencies in project management, including at the Project Steering Committee level are identified in the report. In addition, since the project started there have been changes to the project scope, which resulted in some activities being sacrificed in order to allow others to overrun their budget. The scope of the target monitoring system was extended to include other sectors such as industry. The *mid-term review* made a number of recommendations most of which seem to be followed at the time of the review (new project plan and a joint project manager are still lacking). The report also makes the point that given the very difficult situation at the outset the project has contributed to a better understanding between parties. There seem to be major misunderstandings on the deliverables between SDC and SALGA, with SDC reading the Logframe as requesting the actual implementation of measures and SALGA reading it as the delivery of an implementation plan being sufficient. SALGA delivered State of Energy Reports (According to SDC some already available in draft before the project) and intends to complete the development of Local Strategy Papers for all municipalities by end of 2013. The late delivery of SALGA and different understandings on the scope of work resulted in the non-extension of the agreement with SALGA past the original project end date. Until end of 2013 only about 80% of the funds allocated to SALGA where spent, with (according to SALGA) 80% of the agreed outcomes delivered as well. The work at the DoE also started late but with the help of DEM seems to be on track; an EE TMS was tested in the buildings and industry sector and the consultants are confident to be able to deliver the full system at the intended end of the project in 2014. Finally, it is important to note that the approach of data collection does not include third party verification. Neither at industry nor at municipalities level. GIZ, who are working on a similar project with municipalities have the data third party verified. Experience from the European Emissions Trading Scheme shows that monitoring energy (and emissions) data is not a simple task and third party verification is essential to achieve reliable results. **Score**: up to mid term (1) with recommendations of mid term review implemented (4).
General quality of project design	**Explanation clarity**. Due to a history of low energy prices in South Africa energy efficiency was not a high priority. As a response the government formulated different energy efficiency targets including energy efficiency in private and public buildings. The ability of the RSA government to monitor the implementation of the strategy and the actual achievements in energy efficiency at municipality level is essential in addressing this challenge successfully. The project targets to support the translation of the national Energy Strategy into actionable strategy implementation plans at local government level. Successful implementation will lead to energy efficiency improvements and with that a reduction in GHG emissions. This is all explained well in the *credit note*. **Score**: 7. **Participatory design**. The DOE has the mandate to promote energy efficiency and energy planning in South Africa. It is also responsible

	for the monitoring of the energy efficiency target. The *credit note* expected that SALGA will be able to provide energy efficiency best practice information towards the building sector to all municipalities. The Project intended to build capacity at SALGA and 5 pilot municipalities to manage EE implementation and monitoring. The municipalities were expected to benefit from capacity building to oversee, approve, manage, supervise and take the initiative to ensure that houses and buildings comply with best practice EE standards and guidelines. It is also the Municipalities that have the direct responsibility to inspect buildings and houses. Finally it is the Municipalities that have the option to influence the citizens through promotion and awareness campaigns. SDC had the best intentions to bring together a number of partners and stakeholders that were not cooperating in the past. All stakeholders interviewed pointed to the problems arising from this goal. Xolile Mabusela of the DoE stated "The conceptualization of the project process was confusing; the separation into parallel movements at the DoE and SALGA was an error". According to Barry Brendekamp at SANEDI, their role in the project is limited to procurement: "The reason for the inclusion of SANEDI in the project was that the DoE was simply not ready to sign a contract in time." He also observed that "the DoE and SALGA had a strong willingness to integrate in the beginning, now I see a gap widening". SANEDI is not funded by the project for its role as procurement agent and according to the DoE (and other interview partners) timely procurement of services for the DoE's part of the project was difficult throughout, with procurement for some tasks only completed in the third quarter of 2013. The Department of Environment was not included in the project, which is unfortunate as it is today an important holder of energy and emissions information due to the fact that it is administering the national GHG inventory and the Monitoring, Reporting and Verification (MRV) in accordance with international obligations. According to Dr Averesch at GIZ "Energy Efficiency work in South Africa is challenged by a very weak data structure and a lack of cooperation between knowledge holders. Different and overlapping data sets seem to be available at Statistics South Africa (STATSSA), DoE and DEA. DEM seems to have looked for data for some time and then did their own survey only to find out later that the DEA already had it". Anise Saranie, DEM states one goal of the project is to get rid of redundancies and that the project will help to "establish the DoE as a central source of energy data that others can draw on". The development of the data collection approach involved pilots with test groups at industry and municipality level to find the best and most feasible way to collect data. According to the interviews with the Mfundo Xulu at Department of Public Works and Anise Saranie at DEM these pilots were conducted successfully for industry and government (for government buildings only). Success especially in the case of government buildings does not mean complete data, but to understand the challenges and gaps. According to the *credit note* the project proposal was a result of an extensive dialogue with the policy partners DoE and SALGA. Anise Sacranie of DEM provided a different view "It seems like the donors hired a consultant to develop a plan and then planted it in a department. It was not really an inclusive process". Linda Manyuchi, Chief Special Advisor for the project at SALGA adds that "the selection of municipalities for this project focussed on the fast growing category B municipalities. The assumption was that these have the best opportunity to influence Energy Efficiency. The selection process should have been more inclusive and should have selected municipalities that are supportive of the project goals. We are now

	stuck with one or two that don't really want to engage. Their limited availability for meetings caused a delay of the whole project." The *mid term report* also states that the collaboration between the main partners DoE and SALGA lacked clear project management responsibilities and no single project manager was accountable to the steering committee. **Score**: 3

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC (7F-07681.01), Energy Efficiency Skills Development ,South Africa
Documents used	(a) Credit Proposal (SDC 2010) (b) Mid Term Review (SDC 2012) (c) PIRB completion note (PIRB 2013) (d) Progress Report 4 (SAIAT, Jan 2013)
People interviewed	Mr Xolile Mabusela, Director, DoE (15:00-17:00, 4 Nov 2013, Pretoria) Mr Frans Dekker, President Finance & Administration CPD, SAIAT, (8:30-9:30, 6 Nov 2013, Johannesburg) Mr Lea Smith, President, PIRB (9:00-10:00, 7 Nov 2013, Centurion) Mr Victor Smith, Training Manager, Master Builders Association, (Telephonic communications)
Basic data	Start date: 01.08.2010 / End date: 31.12.2013 Budget: CHF 1,1 million / Disbursements: CHF 0, 74 million (until end 2012)
Location	The Republic of South Africa (RSA) has the largest economy in Africa. RSA is the 14th largest emitter of GHG emissions (2010 data) on country level and 42nd on per capita level (2008 data) world wide. The building sector accounts for 23% of total GHG emissions in South Africa. The Government has a target to build 300.000 houses a year, mostly in the low cost sector and to roll out 1million solar water heaters in the period 2009-2014. Electric water heaters account for a third to half of a households energy use.
Partners	National Regulator for Compulsory Specification (NRCS) and South African Institute for Architectural Technologists (SAIAT) project leader for the development of educational unit standard and training material for the design and approval of building plans. The Master Builders Association (MBA) project lead for skills development trainings in energy efficiency techniques and practices for construction workers. Plumbing Industry Registration Board (PIRB) project lead for standardized learning (incl. e-learning) material for the plumbing sector (solar water heater installation and maintenance). Project Steering Committee includes key partners and SDC.
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: **Capacity building for mitigation (CBM)**. ("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")
Purpose	To support the establishment of sustainable skills development and capacity building systems for fostering energy efficiency measures in the building sector. Overall project goal is that South African houses

	and buildings are built in compliance with best practice and approved national standards for energy efficiency and use of solar water heaters. The project was later extended to include training material for installations of heat exchanger for water heating.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to mitigation, and initially classified by the review team as meeting validation criteria **Capacity building for mitigation**. The project was planned well with involvement of key stakeholders and careful selection of project partners. Energy Efficiency in the buildings sector is one of the key areas to achieve long lasting emission reductions. The development of a well trained and certified workforce to implement regulated energy savings is essential and the project fills a clear gap in the South African system. It is not expected to find any direct evidence on emission reductions achieved by the project.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Deriving credible, additional emission reduction figures in tons of GHG from a project that improves capacity to comply with regulatory requirements is not possible.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Compliance with energy efficient regulation and standards can not be achieved without the necessary skills of relevant people in the building sector. The projects overall objective was to contribute to the governments goal that the building stock in South Africa reduces its CO2 emission with 10% in the residential buildings and 20% in the public and commercial buildings by 2015 and that 1 million solar water heaters are installed in buildings by 2014. A monitoring system to verify this achievement is not yet in place. Its development is part of another project sponsored by SDC. The interviews revealed that the pre-project situation in South Africa was that neither architects, nor building inspectors, nor craftsmen were trained on the existing regulation with regards energy efficiency in buildings or the correct implementation of relevant measures. There was also a clear lack of knowledge for the correct installation of solar water heater systems as the picture suggests. The project addresses these shortfalls and partnered with the right institutions. The SA government's program to install 1 million solar water heaters by 2014 will clearly benefit from the fact that more trained plumbers are available and equipment installed correctly will be able operate at higher efficiencies. Having trained architects, craftsmen and building inspectors will also contribute to general building activity by the private and public sector compliant with existing energy efficiency regulations. An indirect measure of achieving emission reductions as a result of the project is therefore the availability of accredited training material, trainers and ultimately number of people trained. We confirmed the following numbers: Trained building inspectors: 853 Building Control Officers trained (target 150 Municipal councillors and 60 municipal inspectors). Training numbers from PIRB: 26 training centres accredited to offer SWH and/or heat pump training (target was 12) 56 trainers (target 15) 71 individual plumbers (target 100) 24 assessors (target 10)

3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	MBA: both the qualifications and learning material are adopted as the new standards and trade testing is formally developed on it. Compulsory trade testing of these qualifications is set to come into effect in 2015 under the legislated entity. PIRB: An on-going concern is that the demand for high pressure solar water heaters and especially heat pumps is still relatively low. As on the job experience is required to complete the training and for on-going skills development this is challenging the sustainable success of the project. SAIAT: Enforcement of existing regulations in the building sector remain an issue. The development of courses and training have helped to improve the situation, but there is still a lot of room for improvement. The fact that the developed training will count towards the credit score of a university degree in architecture will contribute to its long term success.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project has to be seen as three separate initiatives that delivered individually very good results. Accredited training courses were developed and the training numbers required per budget were largely met and in some cases exceeded. It is likely that the trained trainers will continue with courses and these will be taken up. However, concrete steps to monitor these numbers are neither planned nor implemented. **Overall (mitigation) effectiveness score**: 5
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The construction sector was identified as major contributor (23%) to the countries GHG emissions. The project addresses a crucial element in the implementation of South Africa's energy efficiency strategy. In particular the installation of solar water heaters and heat exchangers will contribute to a tangible reduction in energy use in the residential sector. The improvement of compliance with energy efficiency regulation will reduce the energy demand for heating and cooling. While no direct benefits are expected to be measurable, indirect benefits are clearly there. **Score:** 7 **Pathway integrity**. The credit note states that the target group for the skills development are (i) building inspectors who render the inspection services to municipalities and (ii) Semi-skilled workers (plumbers, installers). It was intended to address the training needs of this workforce of about 10'000 people via a standardized training course and a train-the-trainers approach supported by e-learning modules. It should have been questioned whether e-learning modules are the right media to address a semiskilled workforce. The e-learning approach was adapted during the project and is now only a supporting measure for interested parties. The mid-term review reported that each institution only started a subset of the planned activities. Training modules have been completed. e.g. training for verification of building compliance (SAIAT) and is considered as an undergraduate University course (Architectural Technologists), and a guide for "energy efficiency building" (MBA) and solar water heater installation and maintenance training (also as e-learning). Learning material for six master builder qualifications, as developed by the Master Builders Association, will be published as a book by end 2014. Interviews during the field mission confirmed that this project has delivered the intended development of accredited courses. The project goals with regards to number of people trained is achieved and in some cases overachieved. **Score:** 6

General quality of project design	**Explanation clarity**. The credit note explains very clearly the role of each key partner as well as the intended outcomes and outputs. **Score:** 7 **Participatory design**. According to the credit note, the project was planned over a ten month period with direct involvement of the key partners. Additional relevant stakeholder groups were consulted during project planning and involved in the implementation. The project also included a set up where financing for training would be available after the end of the project. This was to be achieved through the registration of standards with the South African Qualification Authority. This would allow interested training institutions to access funding from Sector Education and Training Authorities that is financed through a 1% levy on all workplace salaries. The collaboration of project partners in the project execution was less successful. According to the mid term evaluation and confirmed by interviews during the field mission, there was little collaboration and interest in each others activities and project plans of individual partners where changed several times. We do not think that the lack of collaboration affected the project negatively. All three institutions reached the desired targets. The approach with different partners however has to be evaluated separately. MBA: The six qualifications developed by the Master Builder Association were adopted by the Quality Council for Trade and Occupations and the learning material to be published in book form by Build Aid. The legislated body to set standards for trade tests, the National Artisan Moderation Body, has adopted the material for the trade test. PIRB: A deviation from the e-learning approach was agreed during the project. Mr Lea Smith of the PIRB stated "I would not go for an e-learning approach again. It can be used for course preparation, by those that have access to the internet. This is not the case for most in the semi skilled workforce. E-learning does not replace face to face teaching." SDC funding was used to support the on-going development by of training material for solar water heaters and as per Mr Lea Smith "SDC funded the complete introduction of heat pumps to the market as the full set of required accreditation and training documents was funded by the project". Mr Xolile Mabusela of the DoE confirmed that they will rely on the people trained as result of this project in their role out of further solar water heaters and will make certification under the developed courses a requirement for companies to participate in relevant programs. SAIAT: Frans Dekker, President Finance & Administration CPD of SAIAT stated that despite the good planning there was a misunderstanding of what the project can achieve and to a degree on how Swiss funding would be used. SDC made a very welcome contribution to a much bigger program already running and the funds clearly made a difference towards its success. Mr Dekker stated: "If it wasn't for the Swiss Program, the state of the building industry regarding compliance with EE regulation would be a lot worse than it is today." According to Mr Dekker, the cooperation with NRCS had started well, but developed badly. SAIAT feels that there is a lack of commitment by NRCS to the project and to really change regulation with regards to requirements on education and enforceability. **Score:** 5

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UR-00029.01.01), Programme for the Establishment of a National Cleaner Production Centre (NCPC) in South Africa.
Documents used	(a) Credit Note: Aufbau eines C leaner Production Centers in Südafrika (SECO Sept 2002), (b) Completion Note: NCPC South Africa, Phase I & II (SECO, Dec 2008) (c) Independent Evaluation of the UNIDO-UNEP Cleaner Production Programme (Eco-Innovation & BECO Institute for Sustainable Business, Apr 2008) (d) NCPC-SA Impact Review (Oct 2002) (e) RECP Proven Benefits & savings for enhanced competitiveness (Presentation by NCPC, 2013)
People interviewed	Gerswynn McKuur, National Program Manager, and Kevin Colliers, Technical Manager, SA NCPC (13:00-14:00, 4 Nov 2013, Pretoria) Zakhele Mdlalose, Director: Environment and Energy Efficiency, Industrial Development Division, and Gerard Fourie, Chief Director: Green Industries, the dti (14:00-15:00, 6 Nov. 2013, Pretoria) Claudia Giacovelli, Project Consultant, UNIDO (12:00-13:00, 8 Nov 2013) Frank van Zanten Solleveld, special projects director, Cobra Water Tech, Krugersdorp (Phone and email, Jan 2014) Esbe van Zyl, Junior Industrial Engineer, Wispeco Aluminum, Alberton (Phone and email, Jan 2014)
Basic data	Start date: 4 Sep 2002. End date: 12 Dec 2008. Total budget US$1.700 million (US$0.950 million contributed by SECO), co-financed by Austria, with annual financial support of ca ZAR 1.2 million (ca US$145,000 in Sep 2008) from the South Africa government (the dti) for national staff and operating costs.
Location	South Africa (SA) has the largest economy in Africa, with prominent mining, farming and manufacturing themes, and joined the BRICS grouping of major emerging national economies (which also includes Brazil, Russia, India and China) in 2010. The NCPC was established at the offices of CSIR (Council for Scientific and Industrial Research) in Pretoria (the executive capital), with nodes in KwaZulu-Natal (later closed), Eastern Cape and Western Cape provinces.
Partners	Host institution: CSIR (Department for Trade and Industry, DTI). Executing agency: UNIDO (United Nations Industrial Development Organisation). Implementing consultant: FHNW (Fachhochschule Nordwest-schweiz). NCPC South Africa (SANCPC) is part of a global network of 47 NCPCs established by UNIDO and UNEP (see http://www.unido.org/ncpc.html).
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: (a) **Applied technology for mitigation** ("Reducing or stabilising GHG emissions in the waste and

	sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management"); and (b) **Regulations & incentives for mitigation** ("Strengthening of regulatory frameworks related to mitigation, including those to discourage GHG emissions and to remove barriers to or encourage, through fiscal, economic, legal and other incentives, investment in reducing GHG emissions").
Purpose	To support the establishment of sustainable skills development and capacity building systems for fostering energy efficiency measures in the building sector. Overall project goal is that South African houses and buildings are built in compliance with best practice and approved national standards for energy efficiency and use of solar water heaters. The project was later extended to include training material for installations of heat exchanger for water heating.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 50% relevant to mitigation, and initially classified by the review team as meeting validation criterion **Capacity building for mitigation** ("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors"). The basis for this was the assumption that the concept of 'cleaner production' (CP) must include an aspiration to reduce emissions of one or more GHGs, and that efforts to promote and disseminate CP skills, technologies and regulations are likely in principle to result in reduced GHG emissions whether directly or indirectly. The review team expressed reservations over the ability to evaluate these projects; however, on the grounds that effects of the project were likely to be diffuse and indirect, so attributing specific improvements to the project would be hard.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The interview with NCPC confirmed that energy efficiency audits only started in 2008. The six audits resulted in electricity savings of 24.1m kWh/a, at an electricity grid emission factor of 0.994 kg CO2/kWh (Eskom, 2012) this translates into 24'943 tCO2 annual savings. In addition the audits identified savings from fuel sources of 24.2m kWh/a. As the fuel source is not documented this can not be translated in actual CO2 values. It is also not documented how many of the recommended actions were implemented and no savings after 2008 were monitored. In addition 35 Integrated performance assessments were undertaken in the 2003-2008 period, which identified cumulated projected annual savings potential of 138m kWh/a. The fuel source is however not identified, which means that a CO2 number cannot be calculated. It is also not documented what percentage of identified savings was actually implemented. While the credit note describe the development of CDM Project baselines and the bringing together of programs to reduce significant amount of greenhouse gases with mechanisms under international conventions such as the CDM, non of this was realized or at least documented as realized by the project. The project completion note and evaluation report make no mention of subjects related to climate change mitigation, and they describe the project mainly in terms of its very good relevance to government environmental and industrial priorities (which include minimising the impact of business on the environment to protect the health of workers and community and the ecological integrity of the natural environment) and its good effectiveness from the point of view of delivering CP services through its network of affiliated

	professionals and through information and awareness creation, in-plant demonstrations and training activities, particularly in the textile, agro-processing (including food) and chemical sectors. The NCPC Presentation on Resource Efficient and Cleaner Production(RECP) Proven Benefits & savings for enhanced competitiveness documents the total number of energy audits undertaken in the 2003 to 2012 period and provides examples of energy savings achieved, but there is no consolidated numbers for all the audits, and most importantly, no monitored results over a longer time frame. Single year savings results that are reported are in the range of 3 to 150 tCO2/a per company totalling 540 t CO2/a for the sample of companies. The Independent Evaluation confirms that "There are good examples that CP is beneficial to South African businesses, but more needs to be done to document successes to enable evidence-based promotion of CP." In other words, no culture of gathering evidence on the effects of CP had been established by 2008. The two beneficiaries interviewed claim the following emission reductions as result of the CPC intervention (Cleaner Production Assessment): Cobra Watertech "Cobra's Carbon Footprint in 2010 was 23671 t CO2, the NCPC spurred us on many projects and initiatives that resulted in an annual reduction of 10%" Wispeco Aluminum: "The NCPC completed six RECP (Resource Efficient and Cleaner Production) projects at three of our facilities in Johannesburg and Cape Town. Lots of energy saving measures were identified, some bigger than others. Of these, 28 opportunities were implemented at all three facilities and many of these were monitored. The results of this monitoring identified the following reduction and or savings were achieved: - achieved reduction of electrical energy consumption 790,000 kWh/yr - achieved reduction of peak power demand 271 kVA - achieved water reduction 5,580 kL/yr - achieved heavy fuel oil (HFO) reduction 11,700 L/yr - GHG reduction achieved 894 t CO2e/yr"
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Early work of the SA NCPC focussed on awareness raising and advocacy for the need of energy savings. Kevin Cilliers of the NCPC stated "Before the blackouts in 2008 it was not possible to motivate change in companies. Electricity was available in abundance at a price of 0.1 ZAR/kWh. Today it is 0.7 ZAR/kWh and supply is limited." While no consolidated results in terms of CO2 reductions are available for the 2002-2008 period, the early creation of the NCPC was very important. Gerard Fourie, Director at the dti states that "SECO laid the foundation of cleaner production in South Africa. We are very grateful to them the NCPC is now really making a contribution. Energy Efficiency Expert is becoming a career in South Africa." At the moment however, only 8.7% of companies with Energy Efficiency Experts attribute this to the NCPC (see NCPC-SA Impact review).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Since end of 2009 NCPC acts as implementing partner at the level of interaction with industry in the implementation of UNIDO's IEE Project "Industrial Energy Management Standard" that is also co-funded by SECO and was evaluated at part of this field mission.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Based on evidence, we conclude that the SA NCPC probably had some effect on reducing GHG emissions (as well as no doubt numerous collateral environmental and other benefits). However, follow up on the implementation of identified savings potential as well as monitoring of CO2 savings seems to not have been a priority of the project. It is

	therefore difficult to assess the projects effectiveness in terms of tons of CO2 reduced. If an implementation level of 50% is assumed and if the identified annual savings are extrapolated over 10 years the project might have resulted in 930m kWh of energy savings most likely from CO2 emitting sources. **Overall (mitigation) effectiveness score**: 5.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal does not mention particular climate change mitigation targets of the project but talks of a general requirement to facilitate sustainable development and eco-efficiency of companies. One of seven potential consulting opportunities of the CPC is identified as linking programs with international financing mechanisms such as the CDM to achieve significant GHG reductions. Overall, the project can be seen as a standard replica of the UNIDO-UNEP CPC model, the evidence for the need and effectiveness of which is abundant and compelling. In a large emerging market economy with a significant industrial sector and an imperfect history of clean production and pollution control, the reasoning in favour of establishing an NCPC is straightforward. A potential service offering that relates to Climate Change is the intention to develop/make data available for baselines of Clean Development Mechanism projects. **Score**: 6. **Pathway integrity**. In terms of the Result Chain definition, because the SA-NCPC is precluded from undertaking policy advice and technology transfer, links between outputs (i.e. removing regulatory obstacles, creating incentives, and facilitating access to finance and technology for investments in energy efficiency) and expected outcomes are rather tenuous. The approach taken via the establishment of audit standards, accreditation requirements for auditors, training of auditors, training of trainers, and training of industry energy experts is a functioning approach. **Score**: 3.
General quality of project design	**Explanation clarity**. The project goals for the first three years of the project as stated in the credit note were to (i) facilitate national and international trainings and "on-the-job" education to increase capabilities for sustainable development, (ii) the implementation of cleaner production/technologies in existing companies with a target to reduce specific environmental impacts by 30%, (iii) to advise companies on social accountability and eco efficient behaviour. In total 60 audits should have been conducted resulting in a minimum of 15 Investment-projects. The completion note states that "This was expected to contribute to facilitating the market access of the national economy and strengthening the economy in a way compatible with environmental protection and social development, the two other dimensions of sustainable development." The development objective of the project is further stated to be "to enhance the competitiveness and productive capacity of the national industry, primarily SMEs, through the increased application of cleaner production techniques and the transfer of environmentally sound technologies." Thus the formulators of the project were chiefly concerned with contributing to the industrial competitiveness and productivity of South African industry (which was already superior to all other regional competitors) in ways that also enhanced environmental performance. Climate change mitigation is not specifically mentioned. **Score**: 4. **Participatory design**. The Independent Evaluation observes that "At the outset, the standard NCPC model was applied for establishing the SA-NCPC. This was somewhat unfortunate as existing CP examples,

	methods and experiences had been insufficiently recognised in the project formulation and were therefore not explicitly built upon in project implementation". The Completion Note also notes that: "The project design had to be revised after 1.5 years of operation as it did not fully reflect the expectations of the different project partners. More time should have been dedicated to the development of the project document. Due to the time pressure for inaugurating the project in September 2002 during the World Summit in Johannesburg, no direct dialogue and preparatory missions were possible. The start-up was rushed and the different roles and responsibilities of the project partners were not clear." The Completion Note describes the 2004 redesign in these terms: "Following the evaluation in 2004, regular meetings of the members of the Funders Committee took place and high level staff from CSIR and the dti were appointed to better understand the CP concept and the NCPC work (e.g. through participation in the international UNIDO/UNEP NCPC meeting). This helped to establish a solid basis for future cooperation and also to enhance national ownership and long-term commitment of the dti and other national stakeholders." The project was extended by three years to a total of six year. Still only six of the intended 60 audits were undertaken in the 2002-2008 period and non of them was followed up to assess actual implementation actions. The NCPC- SA Impact Review states that as of Oct 2013 the NCPC is still not self-funded, but relies on funding by the dti to finance day to day operations. International donors fund special projects such as the IEE. The NCPC-SA Impact Review conducted a survey of 122 companies some findings that support the indirect evidence of the projects contribution to emission reductions are: 81% of companies trained on Industrial Energy Efficiency state that the training contributed to increased awareness about energy efficiency amongst staff and management and also resulted in changed behaviour (68%) and changes to operational activities (59%) as well as operational processes and procedures (41%). The same survey claims that about 24% of companies have reduced their carbon emissions after engaging with the NCPC. About 30% of companies surveyed have also identified additional savings options on their own which require significant investments, and an additional 24% have identified low costs energy saving options. The NCPC managed to raise awareness for energy efficiency improvements and establish a service sector of consultants in this area. NCPC is providing services at market rates with a number of private companies offering services at lower day rates. The Impact Review states "The NCPC's sustainability is closely linked to the development of market demand for RECP Services and the sustainability of the RECP consulting sector. There is a greater need for the visibility of services being offered. Private sector consultants indicate that they would be very negatively affected (in terms of revenue loss and retrenchments) if the NCPC was no longer present, which suggests that a significant portion of the RECP consulting sector is not yet self-sustainable." It also shows the relevance that the NCPC still has in supporting this market in a manner that involves private sector. **Score**: initially 1, subsequently 4.

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UR-00399), Industrial Energy Management Standard UNIDO
Documents used	(a) Credit Proposal (SECO 2009) (b) Country Evaluation (UNIDO, 2012) (c) Final Project Review (UK DFID March 2012) (d) NCPC- SA Impact Review (mthente, Oct 2013) (e) IIEP Energy Audit Trends (NCPC, Oct 2013)
People interviewed	Xolile Mabusela, Director Energy Efficiency & Environment, Department of Energy DoE (15:00-17:30, 4. Nov 2013, Pretoria) Claudia Giacovelli, Project Consultant, UNIDO (12:00-13:00, 8 Nov 2013, Pretoria) Gerswynn McKuur, National Program Manager, and Kevin Colliers, Technical Manager, SA NCPC (13:00-14:00, 4 Nov 2013, Pretoria) Zakhele Mdlalose, Director: Environment and Energy Efficiency, Industrial Development Division, and Gerard Fourie, Chief Director: Green Industries, the dti (14:00-15:00, 6 Nov. 2013, Pretoria)
Basic data	Start date: Apr 2010 (delayed from Oct 2009) / End date: March 2014 (extended from Dec 2012) Budget: CHF 3,2 million (according to Project file xls) / Disbursements: CHF 1,6 million (until end 2012) Total project budget: DTI (RSA): 1,5 million EURO – (implemented by NCPC); SECO (CH): 2,0 million EURO – (implemented by UNIDO, subject of present Note); DFID (UK): 2,0 million EURO – (implemented by UNIDO, mandate from Economic Cluster) DoE (RSA): 1,5 million EURO – (implemented by UNIDO, service contract concluded). Plus investments from the private sector (industrial equipment, and staff time) not reflected in the above budget.
Location	The Republic of South Africa (RSA) has the largest economy in Africa. South Africa's energy supply is largely dependent on coal (79%) followed by crude oil (10%) - the energy sources with the highest CO2 emissions intensity. RSA is the 14th largest emitter of GHG emissions (2010 data) on country level and 42nd on per capita level (2008 data) world wide. IEA analysis shows that between 16% and 26% of energy consumption in the industrial sector can be saved through energy system optimisation.
Partners	The United Nations Industrial Developmentorganisation UNIDO was entrusted by the Government of South Africa (represented by the DoE and the dti), and through the Economic Cluster Employment Creation Fund (financed by DFID/United Kingdom) and the bilateral donor agency SECO with the mandate to manage this Project. Implementing partners: The Department of Energy (DoE), has a mandate to promote energy efficiency and energy planning in South Africa. The DoE will be responsible for preparing and implementing relevant policies and regulations supportive of the implementation of the project. The Department of Trade and Industry (dti), has a mandate to ensure a healthy work environment for the growth of a productive industrial sector, to build capacity to formulate and manage effective best practise support structures and incentives that encourage use of industrial energy management. The dti can facilitate investment

	support for the industry, and trade barrier removal. Business Unity South Africa (BUSA) is a communicator, advocating business association, promoting business interests to ensure best possible environment for industry to implement energy best practices. South Africa Bureau of Standards (SABS) is a partner and target beneficiary for the formulation and implementation of the national EMS. National Cleaner Production Centre (NCPC), implementing partner at the level of interaction with industry. Adding industrial energy management to the portfolio of NCPC is assumed to enhance the medium to long term self reliance and sustainability of the organisation.
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: **Capacity building for mitigation (CBM)**. ("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")
Purpose	To increase the EE of industry in South Africa. To improve the industrial productivity and competitiveness and to create more jobs. Lead to significant CO2 emissions reduction. The project aims at contributing to a significant shift in industrial energy practices in South Africa and possible in the Southern African Region, by putting the methodology of Industrial EMS in place and ensuring that industries in agro-processing, chemical and liquid fuels, mechanical engineering, automotive and mining industry are using it. In order to achieve this goal, it is planned to stimulate the demand of EE services, through implementation of a national EMS based on ISO 50001, recognition and incentive schemes, training of industrial energy managers, specialized consultants and auditors, awareness raising and demonstration projects.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to mitigation, and initially classified by the review team as meeting validation criterion **Capacity building for mitigation**. Against the background of reduced energy for industrial processes and a steep increase in energy costs, energy savings are essential for every company to maintain its competitiveness. Investments in EE measures have in many cases very short payback periods. It is therefore expected that the targets of the project can be met and EE measures are implemented, resulting in measurable CO2 reductions.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	According to information provided by NCPC in the interviews, a total of 29 energy audits were conducted until Oct 2013, resulting in Emission Reductions of 225k tons. The credit note states that, in selected cases the CDM should have

	helped to mobilize investments by private sector, this did not happen, likely because of the low CDM prices and new projects from South Africa no longer being eligible to sell into the European Carbon Market as of 2013.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The overall target of the National Energy Strategy was to achieve an overall Energy Efficiency improvement of 15% against business as usual development from the 2000 baseline in SA industry resulting in: • A total reduction in annual energy used of at least 23,000GWh. • Reduced Greenhouse Gas (GHG) emissions of around 22 million tonnes per year. The project will contribute to this goal through training of auditors, energy managers and staff at private companies, as well as demonstration projects and the actual implementation of Energy Management Systems in Companies. According to Claudia Giacovelli at UNIDO the following outputs where achieved up to Sept 2013: 187 energy audits funded by the project (According to the NCPC figure only 29 of those resulted in actions by the audited company), 50 national trainers for Energy Efficiency Management System are available, 100 energy management experts were trained and these do provide audits and trainings at companies to implement Energy Management Plans. These numbers are in line with the budgeted numbers.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The evaluation report states that the project fell short on a number of targets by end of 2012, most importantly the number of companies implementing EE measures resulting in measurable CO2 savings. The latest Project Progress Reports and conducted interviews show that the number of trainings caught up in 2013, but the numbers of companies with an implemented EMS is still behind target. The Country Review reports a lack of a targeted approach to recruit energy intensive companies for demonstrations. The interview with Claudio Giacovelli revealed that current regulation forbids companies to share activity data; they are therefore reluctant to participate in activities where this information could be revealed. This also affects other reviewed projects such as the EE Monitoring and Implementation project. The NCPC Impact Review correctly notes that the current indicators for the NCPC do not measure effectiveness but rather report on numbers (e.g. amount of audits). The NCPC needs to redesign its monitoring approach. The Impact Review provides the following figures that establish the real effectiveness of the audit program: Out 65 companies that have received an audit of their energy efficiency (some of them under the IEE project), 53% of implemented actions. The level of implementation as percentage of total actions implemented out of all recommended actions is however only 37% on average. This means that the effectiveness of the audits is 20% of the identified energy reductions. The Evaluation Report also states that the influence of the project on the implementation of EMS standards and policies is unclear, and as stated by the evaluation report "would have happened otherwise as well".
Overall conclusion on effectiveness based on the evidence (1+2+3)	Score 4 with a positive outlook to facilitate a substantial mitigation through future Energy Management plans.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal shows good evidence and reasoning for the need to support the development of EE measures

	and its effect on climate mitigation. The project is aligned with the National Energy Efficiency Strategy published in 2005, which included a target for final energy demand reduction in industry of 15%. **Score:** a **Pathway integrity**. The credit note outlines a clear pathway with strong connections between the steps. 1. To Support (i) the implementation of the Energy Bill and Climate Change Response Strategy of South Africa, (ii) international benchmarks on industrial energy consumption in the SA region, (iii) a regional platform for African countries will be created to exchange views, experience and expertise in developing and implementing their national EMS (Together with the South African Bureau of Standards (SABS)). 2. Promulgate a national Energy Management Standard for South Africa – based on the ISO 50001 – and put in place the national structure for measurement and verification of compliance with the EMS: deliver training of assessors for accreditation and training of 30 auditors for verifications of compliance with the EMS. Develop an IT library and edit publications for practitioners. 3. Train and make available a stock of qualified industrial energy management and system optimization experts as technical resource to industry - 150 energy managers and 2000 staff within three years. 4. Enable targeted industry clusters to use system optimization techniques and services, and the EMS through implementation of 25 demonstration projects. 125 companies shall use EMS by 2013, 80% shall be assessed against standard compliance. Significant energy savings, and hence additional CO2 emissions reduction will be achieved by the demonstration cases. We could confirm in the interviews, that at the time of this assessment all targets have been met or are on track to being met. The project did run into difficulties in the beginning, mainly with regards to engaging companies in audits and demonstration projects. One downside identified by the UK DFID Evaluation in 2012 was that the participating companies were expected to share the cost of audits, which was an obstacle to engaging the targeted number of companies. The Evaluation puts that down to poor planning of this project step. UK DFID decided in 2012 to not continue funding of this project and instead work on a similar initiative with the National Business Initiative (NBI). Efficiency of the project was affected by delays in implementation, despite a high level of financial commitment by project partners, also from RSA government entities. According to Gerard Fourie, Director at the dti the project was delayed as "the different approaches in project management by the partners UK DFIT, SECO, and UNIDO caused a problem". **Score:** 6
General quality of project design	**Explanation clarity**. The link between energy savings and climate change mitigation in a country that produces energy largely from coal and oil is straightforward and well explained in the credit note. **Score:** 7 **Participatory design**. A number of key strategic partners were involved from the start and the credit note also states that companies that 51 Companies that are Signatories of the Energy Efficiency Accord have committed to achieve the government goal of 15% Energy Efficiency by 2015. Those companies have been consulted and have committed to be part of the project. According to Xolile Mabusela,

	Director at the DoE, "the UNIDO project was supposed to facilitate projects in accordance with the pledge, but it did not happen. As a result UK DFID decided to implement a similar project with the National Business Initiative." UNIDO's evaluation also identified a lack of a targeted approach to recruit energy intensive companies for demonstrations, resulting in a shortfall of demonstration activities. Trainings were in general received very well, however some key energy intensive sectors (e.g. foundries) where not covered. During the interviews we were able to confirm that over the course of 2013 the project managed to catch up against its targets for training, audits and demonstration projects. Claudia Giacovelli, Project Consultant at UNIDO claims "We managed to create a level of awareness at companies in a door to door approach. Now as we have proven the quality of our work companies are coming to us to benefit from our expertise". NCPC and UNIDO however agree that more could have been done in the correct selection of companies for audits and follow up after the audits to ensure implementation. It should be clarified in advance if the company has the right incentive to implement EE recommendations, improvements in building infrastructure are for example unlikely to be conducted if the building is not owned by the auditee. A better follow up will be developed by UNIDO via surveys at companies that were audited. According to Claudia Giacovelli "If a company is not following up on actions identified, the IEE project can provide a consultant to help prepare a business plan for the implementation of these actions and convince management of the RoI". The DoE is considering regulation that will require a large portion of industry (all companies with more than 180 TJ of annual energy usage) to develop Energy Management Plans. ACCording to Xolile Mabusela, Director at the Doe, the training work of the NCPC was essential in supporting this process and in the future the project should focus on providing trainings for this industry group. Additional incentives to implement energy efficiency measures and as such interest in NCPCs services are the energy rebate offered by Eskom against energy efficiency improvements, as well as the Manufacturing Competitiveness Efficiency Program (MCEP). **Score:** 4

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00568.01.01, Biotrade South Africa
Documents used	(a) Credit Proposal and Operations Committee Decision (SECO, March 2012) (b) Closing Report (IFAD, 2010) (c) Interim Report (Phytotrade, Sept 2012) (d) Bi-annual Report to SECO (Phytotrade, June 2013) (e) PhytotradeAfrica's website (www.phytotrade.com)
People interviewed	Dr. Sarah Venter, Director, Eco Products, beneficiary of project (12:30-13:00, 6 Nov. 2013, Pretoria) Cyril Lombard, CEO, Phytotrade, (16:00-17:00, Nov 28, Phone interview)
Basic data	Start date: June 2012 / End date: Dec 2014 Budget: CHF 2,8 million / Disbursements: CHF 0,9 million (until end 2012)
Location	The Republic of South Africa (RSA) has the largest economy in Africa. RSA is the 14th largest emitter of GHG emissions (2010 data) on country level and 42nd on per capita level (2008 data) world wide. The project supports producers of sustainable cosmetics and food projects in different parts of the country.
Partners	PhytoTrade Africa, (Project Manager) a not-for-profit Natural Products Trade Association in Southern Africa.
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: **Regulations & incentives for mitigation (RIM).** ("Strengthening of regulatory frameworks related to mitigation, including those to discourage GHG emissions and to remove barriers to or encourage, through fiscal, economic, legal and other incentives, investment in reducing GHG emissions.")
Purpose	To foster the development, branding and export of innovative cosmetics and food products based on indigenous, natural ingredients collected in the wild in an environmentally and biodiversity sustaining manner.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 50% relevant to mitigation, and initially classified by the review team as meeting validation criterion **Regulations & incentives for mitigation**. While it could be a possibility to include climate mitigation within the approach of collecting ingredients in the wild and not through (energy intensive) farming, the project information makes no reference to greenhouse gas reductions or more general climate change mitigation goals.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced,	No direct evidence of greenhouse gas reductions is available in the project documentation as climate change mitigation was not an initial goal of the project. Non of the projects seems to be certified for

adaptation)	production with minimal GHG or any other certification that relates to GHG emissions. To our knowledge there is no accepted methodology available to calculate GHG savings from collecting ingredients for the cosmetics and food industry in the wild. Dr. Sarah Venter of EcoProducts, one of the projects beneficiaries, stated that ten Baobab trees are planted by her company each year. This small number of trees will not sequester a considerable number of CO2 over the next 10 years. In the best case it will be hundreds of tons. Cyril Lombard, CEO of Phytotrade added "Project was not designed for the purpose of tracking CC mitigation. 10 Baobab trees a year is modest, but the project is working with other species as well, Esse is showing the commercial use of more ingredients to a wider audience. Other trees (not baobab) that do not have commercial value would be cut down for firewood is
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Mitigation of Climate Change might be attributed to the project, if it leads to/encourages the protection of existing forests that might otherwise be deforested or if the project leads to afforestation or reforestation activities. Dr. Sarah Venter of EcoProducts stated that "The Baobab tree was never and will never be cut, it is a sacred tree. By purchasing its fruit we also assign an economic value to the tree, but it would not be cut down anyway."
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The project does work with a variety of species and according to Cyril Lombard "the public is now interested in Amarula and other species. A follow up project will develop agroforestry in addition to traditional dry land agricultural farming. Very large quantities of trees could be grown to satisfy demand, if they can be grown in dryland that was not deforested it would be a considerable contribution to climate change." He compared the market potential to that of palm oil without the negative effects of cutting down natural forest for plantation. No scientific studies were provided to support his statement.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Climate Change mitigation was not established as a project goal in advance. None of the available project documents mention greenhouse gas reductions or even climate change. This includes the IFAD closing report for the first phase of this project that was not financed by SECO. It was not possible to establish any direct climate change mitigation effectiveness from the project documentation or the interviews with project management and beneficiaries. An indirect effect could stem from a better environmental awareness in the rural communities and also the customer base for the products that will ultimately lead to a more economic and thoughtful use of resources, incl. energy, and as such contribute to GHG reductions. Cyril Lombard stated "Conceptually what SECO is supporting is protection in dry land and preventing monocropping. Adding new species that now have value will make communities more resilient to climate change. A reclassification to adaptation would be a sound recommendation" We do not understand how this project is rated as 50% relevant for mitigation and suggest to not rate the project's individual contribution but look at the overall contribution of the biotrade cluster instead. Protecting biodiversity can contribute to climate resilience of the natural environment. As such there is an adaptation component to the project. **Overall (mitigation) effectiveness score**: 1 or N/A
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project does not mention a CC challenge, and therefore also no approach to address it. The project currently sponsors two companies, Esse and EcoProducts. The two businesses and the use of SECO funding are described in the bi-annual

	report as follows: Esse is a South African business which is part of the portfolio of brands and businesses collectively controlled by the Esse Trust and described as Esse for Project Biotrade. The businesses involved include NOF (Natural & Organic Formulations) which is the R&D arm, Esse - a quality focused brand of natural and organic cosmetics, Africa Organics - a multi-level mass market brand target being re-formulated with unique focused ingredients including for example, baobab, marula, mongongo (manketti) and others. The projects funds are used to enable Esse to promote its products via tradeshows and an improved website and to employ a consultant that works with Esse to develop a bankable business plan for the company to attract investors for further expansion of the business. EcoProducts is a PhytoTrade member that works with women in rural areas in South Africa to sustainably produce baobab seed oil and powder. The baobab oil is currently marketed as a raw material for the cosmetics industry. It is also sold as bottled pure oil into the South African retail market at mass market price point through health food stores and online. The project funds are used to employ a consultant that assist EcoProduct in developing a business plan. Phytotrade will also seek to further develop the skills of company's founder Dr. Sarah Venter, a specialist on the Baobab Tree, as an entrepreneur and business person. Funds were also used to recruit a South African-based tissue oil expert and a UK based cosmetic market consultant (the ex-head of beauty at Mintel). Together, they produced a highly focused market research report on the South African and International Tissue Oil market in order to help promote EcoProducts tissue oil product. In addition the project will work on research of market trends for natural ingredients, competitive know-how for oils and other ingredients, commercially effective and SABS compliant value chains facilitated from suppliers to brands, as well as institutional and strategic development. The project focussed in the first phase (until mid 2013) on supporting EcoProducts and Esse. In the second phase it is expected that more emphasis will be put on additional outputs that will support all of PhytoTrades member companies in a range of products. According to Cyril Lombard "Conceptual approach is long term and hard to evaluate 1.5 years in the process." **Score:** 1 or N/A **Pathway integrity**. We could not identify a pathway to reduce GHG emissions linked to the production and delivery of goods and services. There is no evidence in the documentation about an intended or unintended relation of the projects activities with regards to climate change mitigation. SECO overall program states the importance of protecting forests to combat climate change. Assigning a value to biodiversity and creating jobs in the area of sustainable management of natural resources will increase the population's valuation of ecosystems and might reduce deforestation activities. It is however unclear how the project intends to contribute to this goal. **Score:** 1 or N/A
General quality of project design	**Explanation clarity**. Addressing the Climate Change challenge is not a goal of the project it is therefore not explained in the project documentation or reports. **Score:** 1 or N/A **Participatory design**. PhytoTrade Africa is without doubt very successful in enabling the launch of new products and the success with those products on national and international markets. There is however no evidence about educating project beneficiaries about climate mitigation aspects of this project. As an example, the EcoProduct

	company as beneficiary of the project works with up to 1500 women in rural areas that collect the fruit in a sustainable manner. They have received training on sustainability and environmental impacts. The project brings a cash earning opportunity to communities that were still largely resource base. This availability of cash opens new opportunities for the villagers such as the purchase of electricity, or payment of school fees/material. **Score:** 1 or N/A

A.3. Field mission and people consulted

The South Africa field mission took place in November 2013, with meetings concentrated between 4-8.11.2013, which covered stakeholder meeting in the capital Pretoria, Johannesburg, Centurion and Midrand. The mission team consisted of Mr Robert Dornau (team leader) and Harmke Immick and AB an der Merwe of Promethium Carbon (as national consultants). A presentation of key preliminary findings was provided to SDC/SECO offices during the debriefing session at the end of the mission 08.11.2013 in Pretoria.

Table List of people consulted

Name	Organisation
Dr. Sarah Venter	Eco Products, beneficiary of project
Cyril Lombard	Phytotrade
Mr Xolile Mabusela	Energy Efficiency & Environment, Department of Energy DoE
Ms Claudia Giacovelli	UNIDO
Gerswynn McKuur	SANCPC
Mr Kevin Colliers	SANCPC
Zakhele Mdlalose	Environment and Energy Efficiency, Industrial Development Division
Mr Gerard Fourie	Green Industries, the dti
Mr Frank van Zanten Solleveld	Cobra Water Tech
Esbe van Zyl	Wispeco Aluminum
Mr Frans Dekker	SAIAT
Mr Lea Smith	PIRB
Mr Victor Smith	Master Builders Association
Dr. Ulrich Averesch	GIZ
Mfundo Xulu	Department of Public Works
Mr Barry Bredenkamp	Energy Efficiency, South African National Energy Development Institute (SANEDI)
Anise Sacranie	Danish Management A/S (DEM)
Ms Linda Manyuchi	Energy Efficiency, SALGA
Mr John Volsteedt	VSBK
Mr Peter du Toit	VSBK
Dries van Vuuren	Cermalab CC Materials Testing Laboratory, VSBK
Mr Juancho Hagnauer	VSBK, Regional Director Southern Africa, swisscontact, VSBK Partner Organisation
At Coetzee	Clay Brick Association, Strategic Project Partner
Mr Kevin Fruin	VSBK
Mr Niko Blake	Langkloofbricks
Ms Janice Golding	SECO, Embassy of Switzerland
Markus Schrader	SECO, Embassy of Switzerland
Mr George Johannes	Embassy of Switzerland
Mr Olivier Magnin	SDC, Climate Change Programme
Ms Anele Moyo	SDC, FDFA
Mr Reto Wieser	SDC

B. In- depth review of selected projects in Mongolia

B.1 Projects reviewed

Within the effectiveness assessment six projects were chosen to more detailed review, in line with criteria presented in the final Inception Report (dated 20.9.2013). These SDC projects are as follows:

- Coping with desertification Project (CODEP, Mongolia)
- Pasture Ecosystem Management: Green Gold
- Index Based Livestock Insurance Project (IBLIP)
- Mongolia Disaster Relief and Prevention Project (MODIREP)
- Sustainable Land Management for Combating Desertification in Mongolia
- Linking herders to carbon markets in Mongolia

A priori, five of these projects have been classified as climate adaptation relevant projects (four as being 100 relevant, one being 75% relevant, according to SDC classification), and one being climate mitigation relevant (100% relevant). Also all have been termed *principal* in their climate orientation as elucidated in the Handbook on the OECD-DAC Climate Markers.

The review results are presented in the assessment templates below (section B2). The field mission team and people consulted during the field mission are presented in section B.3.

B.2 Review results

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-05405 Coping with Desertification Project (CODEP), Mongolia.
Documents used	(a) CODEP Credit Proposal 2008, (b) CODEP Yearly Report for 2008, (c) CODEP Yearly Report for 2009, (d) Mid-Term Review of the Coping for Desertification Project (CODEP), (e) CODEP Yearly Report for 2012, (f) End of Phase Report (EPR, draft report) 2013, (g) Annual Report 2013 (June-September 2013) (h) Potential of Shelterbelt Plantations in the Buyant River Delta (2011)
People interviewed	See Mongolia mission programme (11.11-15.11.2013) and people consulted.
Basic data	Start date: 2007 (April). End date: 2013 (September) SDC total budget in Swiss Francs for the project, according to Credit Proposal is CHF 9,0 million. Accumulated SDC budget in Swiss Francs of previous phases: none. Information on partners and/or other donors' contribution (calculated in Swiss Francs): Central government: CHF 2,4 million Local government: CHF 1,8 million, Farmers' contribution: CHF 0,08 million (in kind), Other donors: CHF 0,07 million.
Location	The project is addressing desertification which is a national priority challenge problem with the overall objective of the project being to strengthen the adaptive capacity. In addition to national capacity the focus of the project in the field is in Khovd Aimag.
Partners	**Funding partners**: SDC **Government partners**: Ministry of Environment and Green Development, National Committee for Soil Protection and Combating Desertification, National Agency for Meteorology and Environmental Monitoring, Environmental Information Centre, Ministry of Industry and Agriculture, Ministry of Education and Science, Local government agencies in Khovd Aimag, Desertification Study Center, Geo-ecological Institute, Farmers and Water user groups **Research/academic partners, NGOs:** Desertification Study Center, Geo-ecological Institute, Mongolian Academy of Sciences, WWF Mongolia, Centre for Development and Environment (CDE) of University of Bern, Institut für internationale Zusammenarbeit (IZB) based in Switzerland
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation,** (b) **Adaptation against disasters** and (c) **Resilience for adaptation**.

Purpose	To support Mongolia's capacity to improve the effectiveness of national and international efforts on coping with desertification and promote sustainable livelihoods in arid and semi arid areas (source a). Outcome 1: Favourable policy and action oriented program are in place to effectively combat desertification and National Committee for Combating Desertification (NCCD) is the leading competency centre on desertification issues in Mongolia, effectively supervising the implementation of NAP Outcome 2: Local communities empowered in sustainable management of natural resources and diversification of livelihoods to cope with desertification. Field reality based knowledge generated and appropriate approaches, technologies and tools for combating desertification developed, piloted and prepared for dissemination. Outcome 3: Environmental awareness and knowledge about desertification and other challenges raised among Mongolia's youth as well as in the general public and behavioural changes initiated Outcome 4: Appropriate knowledge, technologies, approaches and tools to cope with desertification in Mongolia are identified, tested, collected, compiled in a database and disseminated in order to support project implementation and scaling up at grassroots level and informed decision making at policy level NOTE: the project priorities and outcomes have been slightly modified along the project implementation with CODEP yearly report 2013 (for final part June –September 2013, see sources f, g) regrouping the outcomes into three main components: Outcome 1: Local communities empowered in sustainable management of water resources and diversification of livelihoods (with main focus on irrigated farming) which secures fair access to water resources for all relevant stakeholders and maintains ecological integrity of Buyant, river basins. Outcome 2: Awareness on desertification and sustainable development raised among young generation as well as in the general public and with decision makers. Behavioural changes initiated. Outcome 3: National monitoring system for land degradation and desertification (including mapping of appropriate conservation measures) is in place and involved institutions are able to update it regularly and it is used as a basis for decision making. Reasons for these changes include the aim to reduce overlapping with other SDC projects, to better focus on successful parts and out phasing out of not successful components, etc. based on yearly progress reviews and reports, see e.g. Annual Report 2010)
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SDC/SECO as 100% relevant to adaptation (Rio Marker: principal), and initially classified by the Gaia review team as meeting validation criteria **Research & Monitoring for Adaption (RMA), Education &Training for Adaption (ETA), and Knowledge for Adaption (KFA),** which confirms our view of the climate relevance of the project but actually correspond more to the criteria for Results Chain 6 (see 'Result Chain' above). In Gaia analysis the intervention was included into cluster 3 (Ecosystem management). While this project has consisted of an exceptionally wide variety of components and project amendments during implementation phases, several classification options could have been considered.
Evidence for climate change mitigation and/or adaptation effectiveness	

1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Based on documentations and field mission findings, even if the project has been defined as 100% climate relevant (adaptation), the adaptation objective is not explicitly present in the project documentation or actual implementation – not as overriding principal objective, nor as direct objective of the 4 project outcomes. No evidence of direct CC effectiveness can be identified.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The annual report 2012 (source e) and the end of phase report 2013 (source f) note a long list of results which indirectly can contribute to adaptation. Some subcomponents could also contribute to mitigation. Among other stating that *"In cooperation with NCCD a national action plan on combating desertification (NAPCD) for the period of 2010-2020 was revised to align with the MDG-based National Development Strategy and the Government of Mongolia adopted this new policy in April 2010. This new NAPCD lays a foundation to mainstream several important objectives into the new policy document, including social and cultural dimensions crucial for successful implementation of the policy. For example, the new NAPCD provides clear directions of how to cooperate with and mobilize herders to encourage their participation in implementation of the measures specified in the policy document."* The annual report 2012 notes several concrete outcomes achieved so far by the project with regards to all 4 project components. Concerning outcome 1 the 2012 annual report notes e.g. i) " in April 2010 the Government of Mongolia by its Resolution No. 90 adopted an updated version of the National Action Programme for Combating Desertification (NAPCD). Since then Khovd aimag was the first to develop and implement an Aimag sub-programme for Combating Desertification (APCD), approved by the Citizens' Representative' Board members; and ii) in October 2012 "the Government renamed the current National Committee for Combating Desertification (NCCD) into the National Committee for Soil Protection and Combating Desertification (NCSPCD), thus making tasks of the operational unit clearer.". Also several other outcomes are reported that directly contribute to strengthening policy and institutional capacity to combat desertification. Based on documentation it is not possible to define how much of this development can be attributed to CODEP project. With regards to outcome 2, e.g. the working group set up by the Khovd government to ensure implementation and monitoring of the Aimag sub-programme for Combating Desertification (APCD), is one example of progress on local level. Also concrete progress for improved pasture irrigation, land-licensing, cadastre development and desertification mapping serve as signs of project progress. E.g. as part of this objective, the CODEP initiated an integrated water management among the water users who produce crops and vegetables along the Buyant river in Khovd. (this activity was conducted in collaboration with WWF Mongolia, and the results of it could be confirmed during the field mission to Khovd aimag). Also construction of the first irrigation channels on 395 ha was officially handed over to Khovd aimag State Property Committee, whereas a possession right was given to Khovd aimag Water User Association (WUA). The Land Agency established a comprehensive database system and updated digital maps for land use planning. For example, as of October 2012 about 73% of the cropland and 65% of farmers registered at Khovd land agency and have permit to hold the cropland up to 60 years of leasing. Based on field mission interviews, overall major increases in crop productive have been achieved and conflicts over water resources reduced. However, there are still considerable challenges in further processing of the agricultural products, value-

	chain development and marketing of the products. Concerning outcome 3 several concrete outcomes are noted in annual progress report, end of phase report 2013 (source f) as well as stated by stakeholders in Mongolia during field mission presented. E.g. eco-school beneficiaries amounting to 66 000 students and 3500 teachers, overall awareness raising among students and parents, installation in schools of electricity and water meters, creation of eco corners, replacement of tungsten bulbs with fluorescents, fixing of broken windows, etc. (contributing directly to energy efficiency improvements and energy consumption reductions). Likewise for outcome 4 the MONCAT database supported by the Information centre is reported as "smoothly operating to document knowledge, technologies, approaches, maps and tools to cope with desertification in Mongolia." The project also introduced technologies and approaches for sustainable management of soil and water by employing Participatory Technology Development (PTD). Plastic mulching and shelterbelt technology applied on 30 ha by over 100 farmer households and planted over 100,000 seedlings in 100 km by 38 WUGs. While climate change is not directly referred to in project documentation, nor recognized (or generally understood by most project partners or beneficiaries) the project outcomes are consistent with measures that can help reducing the vulnerability of local livelihoods to climate change, and strengthening the adaptive capacity to cope with climate variability as well as advancing impacts of climate change in an environment like Mongolia's. While during the field mission it was not possible to confirm all the results reported, and the ultimate effectiveness of some components was questioned by certain stakeholders, we recognize that the intervention can have contributed to strengthening the adaptive capacity in Mongolia, as many of CODEP project outcomes can be considered no-regrets CC solutions.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	As pointed out above, many of the outcomes are consistent with measures that increase the security and resilience of human and ecological systems to the effects of climate change in an environment like Mongolia's. While this aspect can be considered for the benefit of the project, simultaneously the project, according to several stakeholders in Mongolia, has not managed always to communicate about CC in a proper manner, and actually hampered in some cases the awareness raising about the key drivers of desertification in Mongolia, and addressing them effectively.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The evidence suggests that this project has been successful in reaching some of the stated objectives, which however have been modified along the way. Based on our analysis the classification of this project as a "principal CC" adaptation project can be challenged. Some of the measures also provide no-regrets measures in building capacity for climate change adaptation and risk reduction, and support increased community resilience to the consequences of climate change. We suggest a CC adaptation effectiveness score 3.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal presents the evidence for the need of this particular project, based on Mongolian national strategic priorities, referring to SDC country strategy. It also notes that Mongolian grasslands are sensitive to climate change and inappropriate management of these ecosystems. The context description in credit proposal provides some statements of climate change from Mongolia which based on field mission findings and climate research data received during field mission could not be

	verified (e.g. the statement of reduction precipitation in past years, and it being related to CC seems incorrect). Also the statement that "It is, however, important to note that desertification is not just because of a changed climate" provides a mixed contextual description as later on climate change is mentioned in credit proposal as one of the project risks that need to be addressed but not as the key driver and challenge of the project itself. In Annual Reports and end of phase report climate change is not presented as the key challenge being addressed. Beside this contextual confusion the evidence for the project and its overall approach is supported by a parallel SDC funded intervention, the Green Gold project experiences, and an entry phase of CODEP project in 2007-2008, the results of which are shortly presented in the credit proposal. It is interesting also to note that in the credit proposal data sheet, the Policy Marker for CC has been scored zero (i.e. not relevant). (score: 3) **Pathway integrity**. In terms of the SDC Result Chain definition, there is a disconnect in the sense that the project has been defined as 100 % climate relevant and serving to build adaptation capacity (RC7), while the climate change adaptation aspect (beyond contextual description) is rarely mentioned in the credit proposal or annual reports. The project included also components with mitigation aspects (e.g. reduced desertification helping to keep carbon in the soil, planting of trees to combat desertification, introduction of energy efficient stoves and other energy solutions) but these aspects are not recognized or noted in project documentation (score 5).
General quality of project design	**Explanation clarity**. CODEP started its first stage of the main phase from end of May 2008 with newly approved developed logical framework, presented in annual report 2008. The logframe is logical, providing clear descriptions of project component outcomes, outputs and action lines with appropriate indicators. However, the clarity and reasoning for the 4 different project components and their subcomponents, and in particular how they link together, why they all should be addressed in one project is not fully clear. Also the link to climate change remains unanswered (score 3). **Participatory design**. According to credit proposal the entry phase of the project has included systematic collection of information from all key stakeholders on national and local level, NGOs, research community, other international actors in Mongolia, and making use of experiences from previous projects in the same thematic area. The involvement and actual/concrete participation of project beneficiaries, is unclear (score 5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F -03461 Pasture Ecosystem Management: Green Gold, Mongolia.
Documents used	(a) Credit proposal Pasture Ecosystem Management -Green Gold (for Phase 3: from 01 Jan 2010 to 31 Dec 2012), (b) "Green Gold Project" Half Yearly Activity Report(1 January – 31 June 2012), (c) Green Gold" Pasture Ecosystem Management Project Annual Report 2011 (January 2012), (d) End of phase report (phase ending 31 December, 2012), (e) Project Document GREEN GOLD PHASE 4 (GG IV), 01.01.2013 to 31.12.2016
People interviewed	See Mongolia mission programme (11.11-15.11.2013) and people consulted.
Basic data	Start date: 1.3.2004 End date: 31.12.2020 and total budget CHF 12,8 million for 2002-2012 (according to SDC/SECO excel/spreadsheet) The end of phase 3 report (source d) notes as start of project: timing 1 January, 2005. Concerning the budgets it notes the SDC budget for third phase according to the Credit Proposal being CHF 6,1 million. Concerning information on partners and/or other donors' contribution it notes: Local government: CHF 2,0 million and Herders' contribution: CHF 0,75 million. A fourth phase has been launched in 2013 as is projected to continue until 2016. In this review we refer to total project period 2005-2016.
Location	The degradation of Mongolia's rangelands has reached an alarming level. The rangelands, which comprise 70 percent of the total national territory, are the backbone of the rural economy and provide food security for the entire nation. According to the Ministry of Nature, Environment and Tourism, more than 70 percent of all rangeland is degraded from a moderate to heavy level. It was previously thought that climate change was the main cause of degradation. However, in the past decade human factors – primarily livestock overgrazing resulting from the post-transition era of open access to pastures and a lack of government and community regulation mechanisms – have been identified as the prime cause of rangeland degradation (source d). During first phase 2004-2008 (source a) when research trials were conducted to identify how pastures could recover their vigour after suffering from livestock overgrazing. The trials revealed that the rehabilitation of heavily degraded pasture is difficult and costly, and that a better approach was to prevent degradation by facilitating a grassroots system of collective user control combined with improvements to the legal framework of land ownership. During the second, "transition" phase from January to December 2009, a study was carried out to assess the "-effectiveness of the territory-based collective-action approach (the Pasture-User Group system). The study concluded that the system contributes significantly to controlling open access and strengthening community control over animal stocking rates. In essence, pastures can be used sustainably for herding if herder communities have the rights, incentives and capabilities to manage their livelihoods and common resources. Subsequently the two main areas Green Gold has been pursuing are the transformation of open access to pastureland into a controlled management system led by Pasture-User Groups (PUGs) and accelerated livestock marketing to reduce the stocking rate. According to credit proposal (source a) focus

	during third phase was on 7 western aimags: Arkhangai, Bayankhongor, Govi-Altai, Uvs, Khovd, Bayan-Ulgii, Zavkhan – and in total some 40 soums.
Partners	**Funding partners**: SDC. Phase III financed by three strategic partners: 10 percent by herders, 26 percent by the local government and 64 percent by SDC. I**mplementing organisation:** Mongolian Society for Range Management, Green Gold Project Implementation Unit **Government and local partners**: Ministry of Food, Agriculture and Light Industry Ministry of Nature, Environment and Tourism, National Agency for Meteorology and Hydrology for Environmental Monitoring, ,Local governments, 700 Pasture-User Groups and 66 Soum Associations of Pasture-User Groups, Mongolian National Broadcasting TV **International partners:** ETH, Agroscope, Switzerland, and USA, Jornado Rangeland Experimental Station **Research/academic partners**: Mongolian National Agricultural University, Research Institute of Animal Husbandry
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation** ("*Supporting the integration of adaptation into national and international policy, plans and programmes, including through the development of adaptation-specific policies, programmes and plans, strengthening the capacity of national institutions (including finance and planning ministries) that are responsible for coordinating and planning adaptation activities and the integration of adaptation into planning and budgeting processes*"); (b) **Adaptation against disasters** ("*Building capacity for disaster risk reduction, preparation and management at local, national and regional level, by making disaster-relevant information and tools more accessible for adaptation negotiators and managers, by promoting disaster consciousness in adaptation policies, strategies and programmes, and encouraging systematic dialogue, information exchange and joint working between climate change and disaster reduction bodies, focal points and experts, in collaboration with policy makers and development practitioners*"); and (c) **Resilience for adaptation** ("*Making landscapes, farming systems, and communities more resilient to environmental change, including (as appropriate to changes anticipated in each location) through measures to safeguard or restore the ecological services of water catchments, floodplains, wetlands, mangroves, coral reefs, beach dunes and aquifer recharge areas, conserving water and introducing water-saving irrigation methods, introducing crops that are resistant to heat, drought, submergence and salinity, prophylaxis against vector -born and other diseases, amending fishery management practices in response to new ecological conditions and changing fish populations, promoting diverse forest management practices and species, developing emergency prevention and disaster preparedness measures (including insurance and engineering*

	works to relieve known threats, e.g. from glacial lake outburst floods and sea-borne storms)"). Included in Gaia review under cluster 3: Ecosystem management
Purpose	To enable communities of herders to preserve, protect and nurture enduring pasture ecosystems to underpin sustainable livelihoods. Phase III is aimed in particular at achieving four outcomes: - Outcome 1 will continue with research to identify strategies and technologies for restoring pastures and preventing their decline, research education, improve knowledge sharing, and harmonise scientific standards. - Outcome 2 will continue to advocate for policy and legislation to protect pastures while working to improve the implementation and coordination capabilities of the government and development partners. - Outcome 3 will focus on scaling up the herder collective-action model to limit the open-access issue in pastureland use to more soums. - Outcome 4 will seek to improve livestock productivity and marketing by closely cooperating with the Livestock Project and the Marketing Opportunities for Rural Entrepreneurs Project, both of which are supported by SDC.
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SDC/SECO as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Mainstreaming of adaptation**, **Resilience for adaptation** and **Adaptation against disasters** (see 'Result Chain' above). The basis for this was the level of coherence between the project purpose and the definitions of the criteria concerned.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Based on project reporting and field mission findings the following outcomes have been achieved. i) the establishment and successful launching of territory-based, herder-centred, collective range-management approach - Pasture-User Groups (PUGs) - the main aim of which was to strengthen local rangeland-regulation institutions. ii) increasing amount of rangelands controlled by herders themselves and the decrease in conflicts related to access to rangelands and water. According to end of phase 3 report, records show that 3.4 million ha of degraded rangelands are now being rested for a period of two to five years based on agreements negotiated between herders and soum governors in the past five years. E.g. the decrease in conflicts is confirmed by local stakeholders, encountered during field mission in Khovd aimag. iii) in Green Gold target soums, green forage planting has increased by a factor of 15 iv) direct influence on legislation development, when Green Gold's experience was used as a reference for a 2011 Ministry of Food, Agriculture and Light Industry resolution entitled "Rangeland Rotational Grazing and Resting". The resolution was designed to breach the missing regulatory framework in the absence of a Pastureland Law. While the adaptation capacity improvement cannot be further quantified, the points above provide direct evidence of the CC

	adaptation effectiveness of the intervention.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	In addition to direct evidence from reported project outcomes, the field mission provided an abundance of stakeholder statements and project beneficiary witnesses of the increased awareness of key drivers of pastureland degradation and individual statements of the experienced project benefits. While climate change was generally not regarded as the key driver, the improved livelihoods, increased awareness, PUGs etc were considered to help cope better with weather extremes and disasters. The Green Gold project outcomes, too, are consistent with almost everything known about how to increase the security and resilience of human and ecological systems to the effects of climate change in an environment like Mongolia's.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The fact that the project is considered in Mongolia as the key project for improving the sustainability pasture ecosystem management, and that a fourth phase has been launched building on results of previous phases can also be interpreted as a sign of success. During fourth phase the project objective is to promote collective actions for sustainable rangeland management and improving herders' access to markets and knowledge. It is also important to note that the intervention has synergies with CC mitigation and simultaneously contributes to improving the carbon sinks, which represents a major emission reduction opportunity for a country like Mongolia.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The combination of direct and indirect evidence suggests that this project has been effective both in achieving its stated aims and in building capacity for climate change adaptation and risk reduction, and increased community resilience to the consequences of climate change. Through improved rangeland (covering 21.7 Mio hectares of pastureland corresponding to some 20% of national total) practices the project is also contributing to carbon sequestration (at a minimum to preventing further emissions through soil degradation). While this aspect is recognized by SDC and project stakeholders this additional co-benefit has not been explicitly exploited in project communication, even if the importance has been recognized and future potential related to carbon finance has been noted. We suggest a CC adaptation effectiveness score '6'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project is addressing the root causes of over-grazing and desertification and builds on the evidence from a number of projects, including Swiss-funded projects addressing these overall challenges in Mongolia. The link to climate change is clear, admittedly not the sole or key driver for unsustainability being addressed, and reasoning (building reliance, turning unsustainable rangeland livelihoods) can be considered a logical no-regrets solutions to combating the impacts of advancing climate change (score: 6) **Pathway integrity**. As the climate change impacts in Mongolia (in coming years, decencies when CC can be distinguished from normal climate variability) is not explicitly addressed in the design, it does not provide a final confirmation for the fact that the solutions proposed are the best "no-regrets solutions". Due to this minor uncertainty, pathway integrity is considered good, but is scored slightly lower than features above (score 5)
General quality of project design	**Explanation clarity**. The design documents that explain the decisions for supporting this intervention and its key objectives are presented in a clear manner. Also the link to climate change is clear, admittedly not the sole or key driver for unsustainability but the

	design can be considered a logical no-regrets pathway to strengthen adaptive capacity also to advancing climate change (score 6) **Participatory design**. According to credit proposal (source a) *The project was planned in a participatory manner and involved stakeholders from all levels, from herder men and women to representatives from government institutions and civil society. It is fully in line with Mongolian Development Goals, the National Development Strategy and other government strategies and policies and complies with the Swiss Cooperation Strategy of Mongolia 2007-2012 (Country Outcome 1, 2 and 3).* Taking note of the previous phases of the project building on long-term collaboration with local stakeholders, beneficiaries as well as research institutions and national authorities, this project and in particular its third phase (and recently launched fourth phase) scores high on participatory design. Also the local financial contribution to project budget can be interpreted as a sign of buy-in and strong involvement in design (score 7).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC (7F-06642) Index Based Livestock Insurance Project, Mongolia
Documents used	(a) *Credit Proposal 2010 (dated 25.11.2010),* (b) *INDEX BASED LIVESTOCK INSURANCE PROJECT - ANNUAL PROGERSS REPORT Duration: From January 1 to December 31, 2012, prepared by Project Implementation Unit, Ulaanbaatar),* (c) *Implementation Report 2005-2012 (Project Implementation Unit, 2012),* (d) *REPORT ANNUAL FIELD BASED MONITORING – 2013(Findings, analyses, comments and recommendations of the monitoring), September 2012 – January 2013*
People interviewed	See Mongolia mission programme (11.11-15.11.2013) and people consulted.
Basic data	Overall project started in 2005 Swiss involvement: Start date: 1.1 2011. End date: September 2015. Total Swiss budget CHF 1,4 million(with CHF 0,8 million during first phase, and total SDC budget expected to become CHF 2,7 million according to credit proposal) NOTE: SDC budget is contribution to the World Bank
Location	The rural economy in Mongolia is based on extensive livestock husbandry which supports 40 percent of the population. However, Mongolia is prone to regular extreme climatic events that can cause high rates of livestock mortality, jeopardizing rural livelihoods. Since 2005, a World Bank project has introduced a novel approach to managing climatic risk with index-based livestock insurance (IBLI). This has been successfully piloted and now is being scaled up to be nationwide by 2012 In 2010, Mongolia experienced its worst dzud (extreme climatic event leading to high levels on livestock mortality) on record (for which SDC together with other donors provided immediate disaster relief). A range of interventions can help herders mitigate and manage this risk. SDC already supports among other things improved pasture management under the Green Gold (GG) program. The livestock insurance is an important complementary activity providing a market based instrument for risk management. At the moment of Swiss entry into project due to previous phases IBLI was available in 9 aimags (of total 21). In 2010, purchased by 6,947 herders, an increase of 2,657 (62 percent) from 2009. Total premium collected was USD295 000 equivalent.
Partners	**Funding partners**: SDC contribution to World Bank **Government partners**: Project Implementation Unit under Ministry of Finance. **Other partners**: Private Insurance Companies, banks

Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC6 - Adaptation: Awareness Raising**. A pathway to informed dialogue and decision making through the accretion and management of CC-related knowledge. **Output**: (a) generate, collect and analyse CC-related data; (b) involve multiple stakeholders in multi-level dialogue on CC. **Outcome 1**: (a) increase in knowledge and awareness on CC (trends and variability) and related vulnerabilities. **Outcome 2**: (a) decision making is based on improved climate risk information. **Expected validation criteria**: Education & training for mitigation (ETM); Research & monitoring for mitigation (RMM); Education & training for adaptation (ETA); Research & monitoring for adaptation (RMA); Knowledge for adaptation (KFA). NOTE: below Gaia review suggest inclusion of project into RC7 - Adaptation capacity.
Purpose	The development objective of the project is to ascertain the viability of index-based livestock insurance in Mongolia to reduce the impact of livestock mortality for herders. This should be achieved through scaling up IBLI in selected aimags and building the institutional capacity and legal and institutional framework for the sustainability of the program. In particular, the Swiss contribution to the World Bank states (credit proposal, source a) as the key outcomes (objectives) of this phase: to have insurance available in all provinces, to establish the institutional and legal framework for the future sustainability of the insurance, to improve delivery mechanisms for insurance, to understand how the insurance affects herder behaviour. The World Bank progress report (200-5-2012, source b) specifies the overall project objectives, and for component 3 (for which Swiss funding is directed) notes: *This component provides support for capacity building of the key public institutions that play important role on implementation of the project. The objective is to provide support for the implementation of IBLI, and to develop a legal framework for implementation of the IBLI at national level. The following activities run under this component:* • *Capacity building to strengthen livestock census data systems and its quality* • *Capacity building to the proposed FRC in considering regulations for future development of the IBLI* • *To assist in the development of a legal and institutional framework* SDC Mongolia website notes that as SDC has gained significant experience in social cash transfers over the last decade and the IBLIP is in line with SDC's decision to make Mongolia a pilot country for the Disaster Risk Reduction approach. SDC agreed to provide CHF 0,8 million for the period of 2009-2011 to contribute to Component 3 of this Project, *the development of institutional capacity for a financially sustainable IBLI in Mongolia. Additionally, SDC funds will be used to strengthen the National Statistical Office (NSO) in its data collection and data management.* SDC 's contribution will help strengthening livestock data systems, developing a regulatory framework for IBLI and examine options for national upscaling
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SDC/SECO as 100% relevant to adaptation, and as being principal (OECD/DAC Rio Marker guidelines) in addressing climate change.

	Index systems exploit known correlations e.g. between environmental conditions and livestock mortality (as is the case for this project, 7F-06642) thus simplifying and speeding insurance claims. Such measures require both research to establish and quantify correlations (or establish causality), and environmental monitoring to detect changes that would trigger claims. This research requirement may be why 7F-06642 has been initially assigned by SDC/SECO to RC6 on Awareness Raising (through the accretion and management of knowledge), but in our view the effect of building adaptation capacity is the dominant purpose and the project will be treated under Result Chain 7 (see analysis below). The project was initially classified by the Gaia review team as meeting validation criteria **Resilience for adaptation (RFA)**, under Results Chain 7. In Gaia analysis we have included the intervention into Cluster 7: Disaster risk insurance cluster.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The project implementation report 2005-2012 (source b) notes: the increase in the number of herder households covered by IBLI, number of insured livestock, premiums paid by herders /in MNT million, increase in the number of herder households who received indemnity payments as well as, increase in total indemnity payments paid to herders /in MNT million. All these facts can be taken as evidence for the success of the project so far, in particular in strengthening adaptive capacity of herders and to reduce the impact of livestock mortality for herders. When herders insure their livestock, which is the main resource if their livelihood, income, and savings, liabilities for losses to climate risks are shared between herders, private insurers, global reinsurers and the Government. The Project implementation experience reveals that Livestock Insurance is useful to support rural livelihood and to gather detailed information for risk management at the country level for both public and private sectors. In sum, the project documentation and field mission findings provide evidence of climate effectiveness, in addressing an adaptation gap (which in this case in many ways correlates with the overall development gap). What is also important to note is that when reviewing the premiums, the project implementation unit (PIU in UB) has also commissioned a study (by experts from the University of Columbia) that look into the potential future/forecasted implications of climate change for the insurance scheme. While based on the analysis no major changes to the premium have been considered necessary, this is a sign of climate proofing the scheme, and actively taking a step of not only addressing weather extremes but also the challenges of advancing climate change.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project implementation report 2005-2012 (source b) states t*hat The Government of Mongolia has made a decision on implementing the IBLI nationwide (21 aimags and Ulaanbaatar districts) as one of its major objectives. We are developing a legal framework and provide future sustainability.*, which can be taken as an indirect sign of overall project success so far. Also the report notes concerning component 3 that *- The NSO has accomplished the activities to reform the methodology for collecting agricultural statistical data, introduced an advanced methodology in the sector, restructured the livestock census form into inquiries, refined agricultural census indicators, created a national database of households for livestock census at soum/aimag level, and*

	developed software that is used at soum level. *- The mid-year livestock census combined with the sample survey has been tested in IBLIP implementing Bayankhongor, Khentii, and Sukhbaatar aimags. The pilot results revealed that the sample survey for mortality data was sufficient and cost-effective. In June 2012, the mid-year livestock survey was conducted in all 21 aimags for the first time.,* and also *- Under the NSO capacity building framework, a sample survey methodology to conduct the mid-year livestock census has been introduced in collaboration with the NASS, USDA (National agricultural Statistical Service, United States Department of Agriculture). With this methodology, the NSO was able not only to provide accurate mortality estimates for animals but also to conduct the Agriculture Survey 2012. Relevant software has been developed, and more than 700 people including aimag/soum statistic officers/soum government specialists/, deputy governors, officials of the MoFA have been trained.* Based on available data it is not possible to conclude how much of this progress is due to Swiss contribution to the overall project funding and activities. Overall it can be concluded that insurance pay-outs are likely to support local adaptation efforts because the claimant has the opportunity both to learn from what went wrong (i.e. to understand and quantify vulnerability) and to 'build back better' (i.e. more resiliently, using capital to invest in more robust farming systems or housing, or to relocate to a safer place). This would apply at the micro- and macro-levels, including the national level where strategic adaptation decisions on major infrastructure and development zoning can be taken (and also where ODA - with donors acting in effect as underwriters - can be more efficiently deployed in response to calamity both for investment and humanitarian relief purposes). Moreover, the risk-sharing nature of insurance promotes awareness of hazards, incentivizes investment in hazard reduction, and encourages social solidarity, which are all likely to be important in the face of climate change.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	IBLIP is in the process to investigate, in addition to the quantitative evidence of increased insurance number presented above, if and how the insurance system has influenced the values and behavior of herders and local stakeholders, which could provide further evidence of the climate relevance and potential climate change relevant benefits of this project. Gaia field mission collected statements from herders in Khovd aimag, expressing happiness with the system, encouraging them to focus on quality instead of quantity of livestock, hereby contributing also to reducing the stress on grasslands.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 100% relevant to adaptation, and as being principal (OECD/DAC Rio Marker guidelines) in addressing climate change. Based on available evidence, the project has been effective in reducing vulnerability towards climate extremes. The approach is also a no-regrets option for adapting to on-going climate change in Mongolia. What is important to note with this particular project is that when reviewing the premiums, the project has also commissioned a study that looks into the potential future/forecasted implications of climate change in Mongolia for the insurance scheme. While based on the analysis no major changes to the premium have been considered necessary, this is a sign of climate proofing the scheme explicitly for climate change, and actively taking a step of not only addressing weather extremes but also the challenges of advancing climate change This information accessed during field mission provides further evidence for a good climate effectiveness score for this intervention.

	We suggest a CC adaptation effectiveness score '5'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal (source a) presents a solid case for improved insurance schemes by stating *The agricultural sector plays a central role in the Mongolian economy, contributing around one-fifth of GOP. The most important agricultural activity is livestock husbandry, which has an 80 percent share of agricultural GOP and supports nearly half the population. Livestock provides an important source of income, jobs, food security, fuel and a means for households to invest and store their wealth. However, the country is prone to frequent extreme climatic events that can cause high rates of livestock mortality, jeopardizing rural assets and livelihoods. In particular, the frequent droughts and severe winters/springs (known as dzuds) can devastate herd numbers. During the winter 2009-10 Mongolia suffered a severe dzud total of livestock loss reached around 9.7 million head, total amount of around 477 million USD and 22 percent of livestock in the country*. The evidence and reasoning for project is solid, not necessarily directly linked to climate change – as extreme climate conditions exist also within natural climatic variability. The field mission revealed that the project has also reviewed explicitly forecasted impacts of climate change in Mongolia, and used that information to review the premiums. This additional step (climate proofing the index system), is a sign of the project, not only being a "no-regrets" adaptation measures but in addition to addressing climate extremes and natural climate variability, is also addressing advancing climate change. However, this aspect was not noted in the project documents (credit proposal, nor other project documents) (score: 5) **Pathway integrity**. The credit proposal notes that *The IBLIP is a logical improvement of the 'Cash for Herder' projects and attempts to institutionalize social cash payments in case of significant losses of livestock. Thus it meets the requirements of the 'Sudbotschaft' as it is providing assistance to overcome herders vulnerabilities in a comprehensive approach, involving the private sector, government and external partners. In this, the project is clearly pro-poor oriented. The project is gender-mainstreamed and will carefully monitor the impact on marginalized people and governance related issues during its implementation. Additionally, Mongolia is a Disaster Risk Reduction (DRR) focus country for SDC, the only one that is prone to disasters with longer-term climatic events.* Also the intervention strategy in the credit proposal (source a) refers explicitly to climate risks: *The strategy is to develop a sustainable, market-based insurance instrument for herders to mitigate climatic risk. This provides an important tool for vulnerable herders, in combination with other risk management tools, for herders to increase their resilience to climatic events.* Concerning the design concept it notes: *The concept of index-based livestock insurance (IBLI) provides an innovative approach to addressing the high levels of risk in the livestock sector in Mongolia, principally associated with severe winter weather, which is a major contributing factor to rural vulnerability and poverty. The project, based on an index of livestock mortality compiled and maintained by the National Statistics Office (NSO), pilots an approach under which herders purchase policies based on livestock mortality within their local district (soum). The Livestock Risk Insurance Product (LRI) is a commercial risk product sold and serviced by private* sector *stakeholders* (score 5).
General quality of	**Explanation clarity**. The project objectives are logically addressing

project design	livestock mortality for herders' livelihoods by piloting index-based livestock insurance program in selected *aimags*. The Index-based Livestock Insurance concept was developed from the experience of earlier World Bank support for poverty alleviation and international experiences of social cash transfer projects. The IBLI focuses on increasing the resilience of the herder households by providing financial security in times of disaster. The Index-based Livestock Insurance Project (IBLlP) was approved by the World Bank Board on May 26, 2005 and became effective in September 2005. The total loan amount was USD 7,78 million equivalent. Co-financing has been provided by The Japanese Government (PHRD), SOC, and the Korean Government. As of October 2010, IBLIP has completed four full insurance cycles 1, and the fifth cycle has begun. According to the SDC credit proposal (source a) implementation progress has been good and many of the original performance targets have been met or exceeded. Key achievements have been: ▪ Availability of the insurance in every soum (district) covered by the project since 2005; ▪ Increasing uptake of the insurance by herders, who recognize that the insurance is a worthwhile investment against climatic risk (between 2006 to 2010, total 3.2 million livestock of 23,000 herder households have insured under the IBLI) ▪ Poorer as well as wealthier herders purchasing the insurance ; ▪ Links developed with microfinance· (through reduced interest on loan products; and a specialized new loan specifically for premium payment); ▪ Increased interest from the local insurance market and international reinsurance market, which recognizes the potential for business development (Total 960 million MNT has been collected in IBLlIP account, and total 2.6 billion MNT indemnity payment was distributed to 8700 herders) The project represents a logical pathway to strengthen resilience of herder households overall and in particular towards weather extremes, and this aspect can be considered a no-regrets approach to climate change adaptation (score 5). **Participatory design**. According to credit proposal (source a) the project builds on previous phases which have included broad based participation of project beneficiaries and key project stakeholders. No separate mentioning of how or what kinds of participatory processes have been used for preparing the Swiss decision on its contribution to this project phase (score 4).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC (7F-07572) The Mongolia Disaster Relief and Prevention Project (MONDIREP), Mongolia
Documents used	(a) Credit Proposal 2010 (dated 4.3.2010 (b) MONGOLIA DISASTER RELIEF AND PREVENTION PROJECT REPORT, reporting period 15 April – 12 December 2010 (dated 15 February 2011)
People interviewed	See Mongolia mission programme (11.11-15.11.2013) and people consulted.
Basic data	Start date: 15 March 2010. End date: 31.12.2010. Total budget CHF 0,5 million.
Location	The project was implemented in 21 most affected (Green Gold project target) soums of 4 aimags (Zavkhan, Bauan-Olgii, Arkhhangai, Gobi-Altai) since mid of April 2010 in Mongolia (based on the success and lessons of Ider Dzud pilot project, which was launched in March 2010).
Partners	**Funding partners**: SDC (a number of bilateral and multilateral donors contributed to disaster reduction in 2010) **Government partners**: APUG – Association of Pasture User Group, MOFALI – Ministry of Food and Agriculture and Light Industry, MSRM- Mongolian Society for Range Management, PUG – Pasture User Groups, herder groups, APUGs – Associations for Pasture User Groups, local government agencies in four aimags
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: **(a) Mainstreaming of adaptation, (b) Adaptation against disasters and (c) Resilience for adaptation.**
Purpose	To respond to the most urgent needs and buffer livelihood impacts of the cold-weather disaster (dzud), and then to correct shortcomings in national policy and disaster preparedness - in particular disabling the factors that drive over-stocking and over-grazing). In line with credit proposal (source a) the two overall project objectives were: 1. To provide immediate disaster relief is provided to up to 10,000 vulnerable herder households via herder self-governing organisations and their local service providers in 20 of the most severely affected soums where SDC's Green Gold Project is working (Note: main part of budget was allocated for this purpose) 2. To influence the mainstream dzud response based on practical experience and contribute to improved dzud preparedness and policy in the future
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SDC/SECO as 75% relevant to adaptation, and as being "principal" in addressing climate change. The project was initially classified by the Gaia review team as meeting validation criteria **Adaptation against disasters (AAD)** and

	Resilience for adaptation (RFA). While this (SDC internal assessment, as well as correspondence to some OECD/DAC Rio Marker criteria, and validation criteria further elaborated by Gaia) provides indications of some climate relevance it must be stated that the project is a typical disaster relief and preparedness project addressing a natural disaster, with no explicit link to climate change per se. The project documents do not specify what will be the impacts of climate change in the coming years (more snow, less snow, increasing temperature overall, warmer winters …) and how the project will improve the preparedness specifically for climate change relevant disasters (hereby the preparedness aspect, in second project component, cannot be directly linked to CC either). Within natural climate variability weather extremes will continue to occur, but no evidence is provided for whether these kinds of events will increase or decrease. However, increasing the preparedness, strengthening the resilience against natural disasters can, and most likely will contribute to preparedness against climate change related risks and disasters in the future as well. In Gaia analysis included into cluster 10 (Disaster risk reduction).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The analysis provides direct evidence of immediate and positive disaster relief outcomes with the project report *(dated 15 February 2011)* stating e.g. *Herders all appreciated the dzud project relief support. They noticed that the aid money arrived just on time especially in difficult situation of spring*. *However,* no direct evidence for improved adaptation capacity and resilience for climate change can be extracted from the project documentation nor discussion with stakeholders in Mongolia. Based on documentation, even if the project has been defined as 75% climate relevant (adaptation) by SDC, a climate change adaptation objective is not explicitly present in the project documentation.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	In particular related to second project objective (To influence the mainstream dzud response based on practical experience and contribute to improved dzud preparedness and policy in the future), the documentation notes e.g. *The early recovery part of MONDIREP project provided opportunities for herders to exercise their knowledge into action to be better off in following winters*. While not referring directly to climate change, it refers to extreme weather conditions. The project report *(dated 15 February 2011)* provides a summary of nine early recovery activities, which of many if not all could contribute positively to resilience building for climate change impacts in the future. However, as no explicit analysis is presented of expected climate change in Mongolia, nor any analysis of whether the activities are climate proofed, or will help in climate adaptation, it is not possible to conclude, to which extent and how effectively the project contributes positively (or in worse cases for some activities negatively, i.e. to mal-adaption by proposing solutions that could hamper adaptation to future CC impacts which may differ from recently experienced impacts of weather extremes) to climate adaptation. With regards to the second project component, the project notes the objective of building sustainable longer-term strategies to cope with disasters. The report (source b, dated 15 February 2011) also concludes *The dzud of last year was a series of training for herders. Herders understood about their level of winter preparation, herding knowledge, pasture management, livestock quality from this hard and life training-dzud. The early recovery part of MONDIREP project provided opportunities for herders to exercise their*

	knowledge into action to be better off in following winters. During the field mission no confirmation could be received concerning any improved disaster preparedness thanks to this project, nor that the project activities implemented as part of the second project component would have been screened against forecasted climate change impacts in Mongolia.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Internationally it is recognized that DRR and CC adaptation measures can in many cases, if well designed (and climate screened and proofed) be mutually supportive. While in this no explicit measures to ensure these synergies could be confirmed, mutually supportive elements may still exist.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 75% relevant to adaptation, and as being "principal" in addressing climate change. Based on available evidence, the project has been highly effective in its explicit DRR objectives, but related explicitly to climate change adaptation the effectiveness is considered limited and the classification of the project being principally a CC project challenged by this analysis. We suggest a CC adaptation effectiveness score '3'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal (source a) presents the case for urgent assistance needed in Mongolia due to extreme weather conditions (extremely low temperatures, early snowfalls, persistently heavy snow cover, blizzards) during winter 2009-2010. With estimates of 120 000 people being affected, profound impacts on Mongolian herders, fifteen of Mongolia's 21 provinces having been declared disaster affected zones, with thousands of herder families with no livestock or losing more than 50 percent of their animals and thousands of families migrating to urban areas after losing all their livestock, the evidence and reasoning for project is solid but, as pointed out above, not necessarily directly linked to climate change per se (score: c) **Pathway integrity**. In terms of the SDC Result Chain definition, there is a disconnect in the sense that the project has been defined as "principal (OECD Rio Markers) and 75 % climate relevant and serving to build adaptation capacity (RC7), while the climate change aspect (including simply reference to the word "climate change") is not mentioned in the credit proposal or final report. However, a potential link can be seen in particular in second project component which aims to build resilience and contribute to improved dzud preparedness and policy in the future (score 4).
General quality of project design	**Explanation clarity**. The project objectives are logically addressing the problem posed by dzud 2009-2010. The credit proposal very clearly states that the project shall take due care of not refuelling the cycle of livestock overstocking, overgrazing, increased vulnerability. This aspect (even if not explicitly noted) can be considered to support a no-regrets approach to climate adaptation, too, and for that reason some signs of a logical pathway for addressing CC related aspects can be evidenced. Overall the credit proposal is extremely clear about the key objective in addressing the immediate needs after the dzud (score 7). **Participatory design**. According to credit proposal (source a) the project builds strongly on input from key local and national stakeholders. Local stakeholders, herders, Pasture User Groups and associations etc have had a direct say in how the project has been conceived and in particular how it has been implemented (various options have been made available to project beneficiaries themselves,

	to try to optimise the strengthening of adaptive capacity for each beneficiary). The report (source b, dated 15 February 2011) notes: *This is the first time that relief aid money was distributed by the decision of PUG herders/receivers themselves. Thus the project approach is different and the relief aid distribution was very open, transparent under the herders' participatory monitoring and control. Herders have freedom to share ideas and comments with the working group and among the PUG members during the meeting*. (score 7).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC (7F-06465) Sustainable Land Management for Combating Desertification in Mongolia.
Documents used	(a) *Sustainable Land Management for Combating Desertification in Mongolia 2008-2012, Final Report* (multiple donors, May 2013). (b) , *Semi -Annual Progress Report* (Nov 2007-Jun 2008), (c) *Annual Progress Report* (Jan-Dec 2009), (c) SLM for combating desertification in Mongolia – report of the terminal evaluation (December 2012)
People interviewed	See Mongolia mission programme (11.11-15.11.2013) and people consulted.
Basic data	Start date: 24 Jan 2008. End date: 30 Jun 2013. Total budget USD 4,15 million (USD 2,065 million contributed by SDC), co-financed by UNDP and the Netherlands. Project was officially closed in September 2013 (confirmation from field mission, meeting with UNDP).
Location	Mongolia has a growing population currently of about 2.9 million and a rapidly growing economy fuelled largely by mining. Forest cover is declining and is now 10.4 million ha (11% of land area), mostly in the north, plus two million ha of saxaul (*Haloxylon ammodendron*) bush forest and 3.6 million ha of degraded forest. There are about 3,500 lakes, many of them shallow and/or seasonal and some of them saline, and over 3,800 rivers and streams, many with extensive flood plains, occupying some 1.5 million ha. The steppe is the last big grassland ecosystem to be found in the northern hemisphere, and a sea of grass covers much of the country. There are also desert steppes, and part of the Great Gobi Desert lies to the south. The project is based at Ulaanbaatar and has field sites in 13 districts (*soum*) within the four provinces (*aimag*) of Uvurkhangai (Övörkhangai) in the south-central desert steppe, and Dornogobi (Dornogovi), Sukhbaatar (Sükhbaatar) and Tuv (Töv) in the central and eastern forest steppe and steppe zone.
Partners	**Funding partners**: SDC, the Netherlands, UNDP. **Government partners**: Ministry of Industry and Agriculture; Ministry of Environment and Green Development; Ministry of Roads, Transportation, Construction and Urban Development; Administration of land affairs and Geodesy and Cartography; provincial and district governments; National Committee for Combatting Desertification. **Research/academic partners**: Center for Desertification Study, Institute of GeoEcology; National University of Mongolia; Mongolian State University of Agriculture; Research Institute of Animal Husbandry.

Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**
Purpose	To combat land degradation and desertification by strengthening coordination and capacity for sustainable land management (SLM), mainstreaming SLM into national strategies, policies and laws, and piloting the community-based management of grasslands and water.
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SDC/SECO as 100% relevant to adaptation (principal) and initially classified by the review team as meeting validation criteria **Mainstreaming of adaptation** and **Resilience for adaptation** (see 'Result Chain' above). The basis for this was the level of coherence between the project purpose and the definitions of the criteria concerned.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Community-based organisations in all project target areas were encouraged and enabled to practice the fencing of hay fields, to the extent of 1-4 ha of pasture each year in each place. Fenced grassland recovers well from over-grazing and vegetation cover and plant yield were shown to increase dramatically, providing an emergency grazing reserve for livestock in harsh winters, a rehabilitation area for ill or weak animals, and a surplus of hay for sale. This technique is effective at increasing ecological resilience and is being replicated. Rehabilitating and protecting springs, wells and catchments has been shown to improve water supply and security, while planting of native trees and establishing mechanical and biological barriers has been shown to reduce wind erosion and sand movements. The project also piloted the use of large numbers of fuel-efficient stoves (provided by GTZ) with fuel savings of 40-50%, thus reducing pressure on woody vegetation.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project has successfully introduced a wide range of 'no regrets' measures to build social capital (e.g. by organising 109 herder groups and 13 forest user groups involving more than 1,200 households), to build public knowledge on SLM (e.g. by delivering 74 training sessions involving over 8,500 participants, 53% of them female, focused on pasture management, traditional rotational grazing practices and the planting of trees and shrubs, and by promoting environmental education at scores of schools), to improve local land management planning (e.g. by training land managers in planning and mapping), and to contribute to the further development and institutional coordination of national policy and legislation (e.g. revision of the National Action Plan for Combatting Desertification, capacity building at the National Committee for Combatting Desertification, drafting of pastureland laws, development of university curricula). These measures are considered very likely to contribute significantly to the project's three intended outcomes: (a) strengthened coordination mechanisms, institutional and human resources capacity and knowledge base to promote SLM and desertification control; (b)

	SLM mainstreamed into national, provincial and local policies, strategies and regulatory framework; and (c) pilot testing, demonstrations and scaling-up community based approaches in integrated natural resources management with focus on grassland and water management and sylvopastoralism (i.e. the grazing of livestock and growing of trees on the same piece of land).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The project outcomes are consistent with almost everything known about how to increase the security and resilience of human and ecological systems to the effects of climate change in an environment like Mongolia's, at least at the level at which it aggravates existing trends that have multiple causes (in this case an explosive growth in herding families and livestock numbers and a prevalent open-access grazing regime), and to an extent also at the level of disastrous winter weather (see under 'direct evidence'). It is also important to note that the intervention has synergies with CC mitigation and simultaneously contributes to improving the carbon sinks, which represents a major emission reduction opportunity for a country like Mongolia.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The combination of direct and indirect evidence suggests that this project has been effective both in achieving its stated aims (see above project purpose) and also in building capacity for climate change adaptation and risk reduction, and increased community resilience to the consequences of climate change. We suggest a CC adaptation effectiveness score 5.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. Based on documentation reviewed and field mission interviews, the project was formulated based on a thorough analysis of environmental and socioeconomic conditions and dynamics. This understanding drew on knowledge from a number of other SDC project experiences in Mongolia, including 7F-03461 *Pastoral Ecosystem Management* (started 2004) and 7F-05405 *Coping with Desertification* (started 2007), the point being that all these projects will have contributed to each other's founding evidence base (a process that continues with and 7F-06642 *Index Based Livestock Insurance Project*, started 2009, and 7F-07572 *Dzud Disaster-Prevention and Relief Program*, started 2010). Furthermore, the reasoning that to address the root causes of over-grazing and desertification would require mutually-supportive interventions at a number of levels, from central government to household, is hard to fault (score: 6) **Pathway integrity**. In terms of the Result Chain definition, there is a disconnect in that no attempt was made to integrate climate change adaptation itself (rather than SLM) into key sectoral development plans, so the effects on outcomes (i.e. increased capacity for CC adaptation and risk reduction, and increased community resilience to the consequences of climate change) are not logical consequences but are instead benign but unintended side effects. The question could be asked of what the project would have looked like had it been conceived as an adaptation measure from the start, but it is hard to think of many important differences (score 4)

General quality of project design	**Explanation clarity**. Since there is no available credit proposal, we are guided by other project documents, which indicate a rather clear design concept. (score b) **Participatory design**. According to the first semi-annual progress report, the Project Inception Workshop was held on 27 Mar 2008 and involved 95 stakeholders representing central Government, leading research organisations, local government and herders of pilot provinces and districts, NGOs and donor-funded projects relevant to sustainable land management and desertification. Thereafter, according to the *Final Report*, "The project organized partner and stakeholder's meetings in every three months to review their past quarter work and make the necessary changes and adapt its actions for the next project quarter. This was adaptive management in action", and also notes that "Project stakeholder participation has been very inclusive and successful". (score 6).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC (7F-07809) Linking herders to carbon markets, Mongolia.
Documents used	(a) Linking herders to carbon markets (Credit proposal, date 1.12.2010), (b) Project Idea Note (*Pre-draft 16*th*June 2012),* (c) Grassland Carbon Sequestration in Mongolia: Opportunities to improve herders' livelihoods through markets and policies (Summary for Policy Makers: An output of the SDC-supported 'Linking Herders to Carbon Markets' project, January 2013), (d) Final report Technical Guidelines on Data Collection for Grassland Carbon Project Design and Monitoring, January 2013, (e) Final Report Measured soil carbon stocks and stock changes modelled using the Century model in Tariat Soum, Mongolia, January 2013, (f) Sustainable Grassland Management for climate-resilient livelihoods in Tariat, Mongolia (project document V1.1, Date of Issue 25-Feb-2013) (g) Project Document GREEN GOLD PHASE 4 (GG IV), 01.01.2013 to 31.12.2016
People interviewed	See Mongolia mission programme (11.11-15.11.2013) and people consulted.
Basic data	Start date: 1 Jan 2011 End date: 31 Dec 2012. Total budget CHF 0,80 million (according to credit proposal). Project was extended until 2013, with PIU closed in January 2013 and project component on carbon sequestration and carbon finance completed and final report provided in December 2013.
Location	Pastoralism is central to Mongolian society, culture and economy. 40% of Mongolians earn a living as herders, and about half of the rural population lives in poverty. Livestock based range management continues to be their main productive activity and the land use with the greatest impact on environmental services in the country. Desertification already affects over 70% of Mongolia's grasslands. This is mainly due to overgrazing, but exacerbated by climate change, and presents a long-term threat to social stability and environmental sustainability. The credit proposal does not specify in which geographical locations the project will work in but subsequent documentation note that "Through the support of this project, a pilot grassland carbon finance project has been designed in Tariat soum, Arkhangai Aimag. The project is based on community-based institutions developed since 2010 in Tariat soum with assistance of the SDC-supported Green Gold project and Tariat soum government. The activities designed include many livestock productivity and marketing activities that are already targeted by the National Livestock Programme, but the pilot project links adoption of these activities to sequestration of carbon through improved grassland management." In the PD (February 2013) a more detailed specification of the project area is given as "is the summer pastures of 6 Pasture User Groups (PUGs) in Tariat soum, Arkhangai Aimag, Mongolia. Within the project area, 23,722 ha are currently under grazing management. In addition, there is a leakage management area of 24,150 ha that are currently unutilized pasture reserves.
Partners	**Funding partners**: SDC **Government partners**: the Ministry of Nature, Environment and Tourism, the National Climate Change Office (which is under the Ministry of Nature and Environment) and the Ministry of Food,

	Agriculture and Light Industry **Local /research partners**: the Mongolian Society for Range Management, the Mongolian State University of Agriculture, the Institute of Meteorology and Hydrology and a Mongolian policy research institute. **Coordination and synergies with other projects and actors**: SDC Green Gold project, World Bank Sustainable Livelihood project (SLP) and ADB Carbon Sequestration project
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC2 - Enabling Framework: Emission Trading**. A pathway to promote more universal participation in carbon financing mechanisms, which can be measured in terms of tonnes of carbon dioxide equivalent (tCO_2e) not emitted and finance mobilised. **Output**: Partner countries receive CD on CDM, JI & NMM. **Outcome 1**: (a) Partner countries register and implement programmes under CDM, JI & NMM. **Outcome 2**: (a) mitigated GHG Emissions; (b) revenue through trading of emission certificates. **Expected validation criteria**: (a) *Regulations & incentives for mitigation (RIM):* Strengthening of regulatory frameworks related to mitigation, including those to discourage GHG emissions and to remove barriers to or encourage, through fiscal, economic, legal and other incentives, investment in reducing GHG emissions.
Purpose	The overall objective is to help reverse grassland degradation, improve rural incomes and reduce herders' vulnerability to climate variability and risk through supporting adoption of sustainable grassland and livestock management practices and product marketing by Mongolian herders. A carbon finance pre-feasibility study mandated by SDC estimated that through improved range management practices, it may be possible to sequester between 45-70,000 t of C02 per district in Mongolia per year. The project aims to do this by developing a pilot carbon finance project in which atmospheric carbon is sequestered in grassland soils through adoption of sustainable grazing management practices, and using methods that meet international carbon market standards herders can be supported and incentivized by payments for the carbon sequestered.
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SDC/SECO as 100% relevant to mitigation (according to Rio Markers classified principal). Initially it was classified by the review team as meeting validation criteria **Capacity building for mitigation (CBM)**, **Regulations & incentives for mitigation (RIM)** as well as **Research & monitoring for mitigation (RMM)** (see 'Result Chain' above). The multibenefit aspects (beyond pure mitigation) of this project are strongly noted in the project documentation (e.g. the prefeasibility study notes that: *there is growing recognition that rangelands and extensive livestock production systems could play a significant role in mitigating climate change. As with many other agricultural mitigation activities, rangeland mitigation options can offer synergies with other priority functions of developing country agriculture, such as poverty alleviation, food security, adaptation to climate change and combating desertification*). However, the climate adaptation objectives and benefits are not quantified in any manner in the credit proposal (nor monitoring & evaluation measures foreseen in logframe of credit proposal) nor other documentation made available, or in the field mission interviews.
Evidence for climate change mitigation and/or adaptation effectiveness	

1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Based on documentation review and complementary mission findings the two key outcomes (source a, credit proposal: 1. Methods and approaches that Mongolian stakeholders can apply and which meet carbon market standards to implement sustainable grassland management practices with support of carbon finance have been developed. 2. Policy options for up-scaling climate-smart grassland management practices have been deliberated by policy makers.) have partly been achieved. Methods for assessing carbon sequestration and emission reduction have been identified and presented/documented (including guidelines for project developers to design and monitor grassland carbon finance projects in Mongolia following the Verified Carbon Standard Sustainable Grassland Management methodology). Also general policy synergies with Mongolian climate policy, agricultural policy and land management policy that could drive up-scaling of climate smart grassland management practices have been identified and presented in final project reporting and documentation (source c).
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	More concrete outcomes in line with credit proposal logframe (and outputs behind these are not present in documentation yet, such as livestock production and marketing options, Emission Reduction Purchase Agreement (ERPA) signed on the basis of an approved Project Design Document (PDD) etc) have not materialized. In light of poor global carbon market status the option of advancing the carbon market component under the NAMA framework is being considered, or optionally considering ways to promote sustainable grassland management practices supported by Payment for Ecosystems approaches. These considerations provide some indirect evidence of CC effectiveness of this intervention.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	In light of a global climate change agreement that is expected to be signed in Paris 2015 under the UNFCCC, with all countries taking on some kinds of emission reduction commitments, interventions like this one, contribute to building capacity for required MRV (monitoring, reporting and verification) of GHG emission reductions in Mongolia, and also strengthen the capacity to stepwise gain access to climate finance that should by 2020 reach the level of 100 billion USD (from developed to developing countries).
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 100% relevant to mitigation (according to Rio Markers classified principal). While these kinds of projects have the potential to contribute to reverse grassland degradation, improve rural incomes and reduce herders' vulnerability to climate variability, this particular has not yet directly contributed to reduced GHG emissions, or flow of climate finance. However, it has contributed to important methodological work, supporting research, awareness and lessons about the potential role of market mechanisms (including climate finance) in funding of GHG mitigation measures, and can hereby serve SDC, its Mongolia partners and other stakeholders in any concrete follow-up measures. We suggest a CC mitigation effectiveness score '5'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. Based on the credit proposal (source a) the project has been formulated based on a sound analysis of environmental and socioeconomic conditions and dynamics. The needs assessment builds on several years of experience, including the Green Gold Project (since 2004) and other Swiss funded projects (including 7F-03461 *Pastoral Ecosystem Management* (started 2004) and 7F-05405 *Coping with Desertification* (started 2007), 7F-06642 *Index Based Livestock Insurance Project*, started 2009, and 7F-07572

	Dzud Disaster-Prevention and Relief Program, started 2010). The challenging aspect of integrating and making use of potential carbon market revenues is transparently recognized and considered and one of the key issues to be clarified by the project (score: 6) **Pathway integrity**. The expected outcomes have been clearly defined and refer to increased capacity, i.e. *methods and approaches* and p*olicy options deliberated by policy makers* (in line with RC 2 Enabling framework: Emission trading) and the key outputs foreseen logically can contribute to achieving these outcomes. Also based on this review, key uncertainties in the reasoning and pathway integrity related to the time schedule (tough time schedule to develop an applicable methodology for voluntary carbon market) and to carbon revenues have been addressed in the credit proposal in a logical manner (including applied research foreseen to address project risks, as well as conservative assumption made on carbon prices forecasting the melt down of carbon markets and low prices of carbon credits evidenced in recent years). Also the credit proposal notes *Should the access to the carbon market not be possible it will also be assessed if the project could be converted into a Payment for Ecological Services scheme,* which indicates a solid understanding of the state of carbon markets and foresees required flexibility within project design (score 5)
General quality of project design	**Explanation clarity**. Based on the credit proposal the clarity of logical pathway from CC challenge to response is high. However, while the project objectives refer among other to "… improve rural incomes… this is partly built on the assumption that carbon revenues will be available in the longer term. However, looking at the expected outcomes, this project phase will only aim to establish the enabling framework, which in next phases could allow accessing carbon revenues. Obviously improved grassland and livestock management practices can already on shorter term contribute to carbon sequestration and strengthened resilience to climate stressors, and hereby improve rural incomes somewhat. In particular, project output *3 Livestock production and product marketing options identified,* could already in shorter term somewhat contribute to improved rural incomes (score 5). **Participatory design**. No explicit mentioning of participatory design is mentioned in the credit proposal. Based on other SDC funded projects serving as basis and input to this project it can be concluded that a good understanding of project context has served the design phase. While the project is (confirmed by field mission findings) by nature a research project the participation aspect can be considered adequate (score 4).

B.3. Field mission and people consulted

The Mongolia field mission took place in November 2013, with meetings concentrated between 11-15.11.2013, which covered stakeholder meetings in the capital Ulaanbaatar, as well as in the province (aimag) of Khovd, which is a concentration of several SDC activities. The mission team consisted of Mr Mikko Halonen (team leader) and Ms Solongo Tsevegmid (national consultant). A presentation of key preliminary findings was provided to SDC offices during the debriefing session at the end of the mission 15.11.2013 in Ulaanbaatar.

Table List of people consulted

Name	Organisation
Ms Battsetseg, Ts.	Climate Change Coordination Office, Ministry of Environment and Green Development
Mr Gerelt Od, Ts.	Climate Change Coordination Office, Ministry of Environment and Green Development
Mr Bayarbat, D.	Secretary for National committee for Soil protection and combating desertification, Ministry of Environment and Green Development
Mr Tseveenravdan, D.	Governor of the Khovd aimag
Mr Nergyi, Ch.	Governor of Buyant soum, Khovd aimag
Markus Waldvogel	Director of Cooperation
Daniel Valenghi	Head of the Programme
Ms Batzaya, Ts.	National Programme officer
Mr Erdenebileg, B.	National Programme officer
Johan Ramon	Natural Resource Management Advisory
Ms Bunchingiv, B.	UNDP CO Mongolia
Mr Gomboluudev, P.	Institute of Meteorology, Hydrology and Environment
Mr Gantumur	The University of Khovd
Mr Auyrzana	Geography Department, Natural Science and Technology School, The University of Khovd
Mr Chimed Ochir, B.	WWF Mongolia
Ms Baigalmaa, D.	"Altai Sayan" Field Office
Mr Sanjmyatav	Federation of Water User Groups in Khovd aimag
Mr Battsagaan	Federation of Water User Groups in Khovd aimag
Mr Baatarzorig	Federation of Pasture User Groups in Khovd aimag
Mr Makhal	Federation of Water User Groups in Khovd aimag
Ms Enkhamgalan	Green Gold Project, SDC
Mr Ulziibold	Index Based Livestock Insurance Project
Ms Batkhishig	Linking herders to Carbon market
Mr Enkhbold	CODEP
Mr Munkhkuu	Pasture User Group, PUG
Mr Nemekhee	Pasture User Group, PUG
Mr Damdindorj	Pasture User Group, PUG

Mr Jamsran	Pasture User Group, PUG
Mr Baatar	Pasture User Group, PUG
Mr Nyamaa	Pasture User Group, PUG
Mr Zayabazar	Pasture User Group, PUG
Mr Batchuluun	Pasture User Group, PUG
Mr Bayarsaikhan	Pasture User Group, PUG
Mr Batjargal	Pasture User Group, PUG
Ms Jangaa	Pasture User Group, PUG

C. In- depth review of selected projects in Serbia

C.1 Projects reviewed

Within the effectiveness assessment three projects were chosen to more detailed review, in line with criteria presented in the final Inception Report (dated 20.9.2013). These SECO projects are as follows:

- Rehabilitation of the National Control Centre (NCC)
- Nikola Tesla Thermal Plant B (TENT B): modernisation of the monitoring and control system
- Combined Heat and Power Plant (CHP) fuelled by biomass in Padinska Skela / Belgrade

A priori, all these projects have been classified as climate mitigation relevant (the first one being 50% relevant, the last two as being 100 relevant, according to SECO/SDC classification. The first one being termed significant in its climate orientation as elucidated in the Handbook on the OECD-DAC Climate Markers, and the last two as being principal

The review results are presented in the assessment templates below (section C.2). The field mission team and people consulted during the field mission are presented in section C.3.

C.2 Review results

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UR-00005.01.01) Ex-Yu: Nat Control Cent.-Supl. EMS/SCADA, Serbia
Documents used	(a) SRB_YU_FRY_NCC_Formulaire_Engagement_30052002_UR00005_01. (b) SRB_YU_FRY_NCC_Note_Entree_Decision_18042002_DMS305757_1 (c) NCC Completion Note 2007 (d) NCC Completion Note 2009 (2009-05-04/298 bou \ COO.2101.104.5.1065360) (e) NCC Final Report V2, Rehabilitation of the National Control Centre, April 2008 (f) Independent Evaluation. SECO Development Cooperation in the Energy Sector in Eastern Europe and Central Asia. Economic Cooperation and Development Division Evaluation and Controlling Bern, July 2010
People interviewed	See Serbia mission programme (25.11-29.11.2013) and people consulted.
Basic data	Start date: 12.3.2002 (SECO excel), End date: 31.12.2006 (SECO excel) Budget: 1 326 326 (according to excel of which 50% dedicated to mitigation, i.e. CHF 0,7 million). The NCC final report V2, April 2008 (by AF Consult, former Colenco) notes that "*SECO decided in 2002 to finance the project: **"Rehabilitation of the National Control Centre" (NCC)** by applying a grant in the volume of **CHF 15,3 million**. An agreement on Technical and Financial Cooperation was concluded between the Government of the Swiss Confederation and the Council of Ministers of the State Union of Serbia and Montenegro on the 21st February 2003, followed by an Agreement between the two countries on the granting of a financial assistance for the NCC project, signed in Belgrade on the 29th July 2003".* The Swiss-funded budget component noted above (CHF 1,3 million) concerns "Package 1", the largest component of the total rehabilitation of NCC project in terms of goods and services for the entire SCADA (Supervisory Control and Data Acquisition system)/EMS (Energy Management System) of the NCC. A state-of-the-art Power Application Software (PAS), interfaces with the telecommunication equipment and modifications to the Area Control Centers are included.
Location	The center for monitoring and control of the Serbian high voltage network (400/220/partly also 110 kV) did not correspond to the requirements of the Electric Power Industry of Serbia (Elektroprivreda Srbije, EPS) as a modern integrated Power Utility and future Transmission System Operator (TSO) – nowadays: EMS. The NCC Project foresaw the upgrade of the SCADA/EMS system at the National Control Center in Belgrade (Serbia & Montenegro at the time), as well as the upgrade of various other components of the transmission network. In parallel, EPS has been reconstructed and the telecommunications transmission network modernized (Telecom Project), jointly financed through EPS own funds and EBRD and EIB loans.
Partners	**Funding partners**: In addition to SECO (with funding focused on the NCC component), funding was provided by EBRD and EIB for the telecom component. I**mplementingorganisation:** ELECTRIC POWER INDUSTRY OF SERBIA (EPS), with parts contracted out by public tenders (Note: EPS spun off its transmission operations in 2005, creating PE Elektromreža Srbije, EMS to be responsible for the functioning of the NCC). AF Consult Switzerland Ltd, former Colenco Power Engineering Ltd. (Colenco) was the lead project consultant throughout the project implementation.

Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. The project is one of the hand-picked ones, which was not among the 123 projects originally passing Gaia validation criteria (not grouped into any of the clusters). A priori, projects grouped into RC 4 should pass the following validation criteria: (a) **Applied technology for mitigation** ("*Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management*"); and (b) **Capacity building for mitigation (CBM)**. *("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")*
Purpose	The overall objective of the Rehabilitation of the National Control Centre (NCC) project was to establish a secure and cost-effective power system that is able to participate in the regional electricity market, by modernizing the National Control Centre and a remote metering and billing system.
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SECO as 50% relevant to mitigation (and significant CC project, according to OECD/DAC/Rio Marker guidelines). The intervention did not originally pass the Gaia validation criteria (the Result Chain proposed above is suggested by SECO) as it was not considered to be relevant from CC perspective.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The project component and budget referred to above (and in the SECO/SDC excel shared with Gaia consortium), is the largest of the project that includes goods and services for the entire SCADA/EMS system of the NCC, which can be considered as the key-package ("Package 1") out of a total of 10 packages of the entire NCC project. In this analysis we assess the climate effectiveness of the total NCC project, as it is impossible to assess the effectiveness of separate project components. Hence, any climate effectiveness that can be noted is attributed to all project packages (including the SCADA/EMS package), including also the Telecom project financed by EBRD. The NCC Final Report V2 (source (e)) states that with the completion of the NCC project major parts of the 400 kV and 220 kV transmission systems were restored and the Serbian transmission system was re-synchronized to UCTE on 10th October, 2004. Also it states that at the time of the installation of the system, EMS as the end-user, had one of the most modern SCADA/EMS systems in Europe, allowing energy exchange between neighboring countries according to UCTE requirements. As pointed out above, several other activities have been on-going in Serbia related to transmission and production rehabilitation and upgrades, with e.g. EMS further extending its power system IT-infrastructure, e.g. by installing a Market Management System (financed by EAR), with UCTE appointing EMS to be control block operator for Serbia, Montenegro and Macedonia. The completion notes 2007 and 2009 (sources (c) and (d)), give good overall

	scores for the project related to relevance, effectiveness, efficiency and sustainability. However, no explicit assessment of reduced GHG emission is available in the project documentation or could be extracted from field mission stakeholder meetings or additional information gathered during mission.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The overall objectives of rehabilitation of the National Control Centre (NCC) (the control centre managing the electricity flows in the country and at its borders) was considered as a key component not only for revitalization of the SEE-WE grid interconnection but also for an efficient, reliable and economic operation of the Serbian power system. In sum the project had two main aims: i) introduction of a modern on-line power system control, enabling a secure and efficient operation of the high-voltage (HV) transmission system, in line with western European standards; and ii) enabling the establishment of the electricity market and power trade in the region, as well as between south-eastern European (SEE) and Western power systems. As pointed out above, no direct reference to climate mitigation aspects can be noted in the reasoning. However, the monitoring system used by the Project Implementation Unit (PIU) and consultant provides evidence of a linkage to energy security, reduction of power losses and black/brown-outs (reductions in power losses estimated in Completion note 2007, source (c), to some 10%, making reference to experiences from similar kinds of projects in other countries). Also, the completion notes (sources (c) and (d)) state that a *positive impact on the environment, achieved by a more efficient use of existing production capacity (including fossil and nuclear energy) is reported. The completion note states that 68% of Serbia's 38.5 GWh electricity production is of fossil origin, mainly for base load production (band energy). It is reasonable to conclude that the achieved technical losses reduction lower the use of fossil energy in the same proportion (6.8% of 38.5 GWh) by a better use of the available resources.* This aspect does not take into account potential rebound effects, but generally the project outcome can be taken as indirect evidence of some climate effectiveness. The recent Independent Evaluation (source (f)) also provides evaluation results that support an overall rating of satisfactory effectiveness (also relevance, sustainability, efficiency and impact) of the NCC project, and hereby indirect contribution to reduced GHG emissions. For example it notes (p 49) that *"The new SCADA/EMS system (within the NCC project) improved grid reliability, power quality, and availability of energy and capacity in Serbia and—because of Serbia's importance as a regional trading hub—in the Balkans."* With regards to technical losses (in transmission and distribution) the evaluation report notes (p 51) that "*Transmission losses decreased from 2001 to 2008 by 28.9 % (from a level of 3.53% to 2.51%) and that losses continued the decline in 2009, falling to 2.35% (and with the reduction in losses saving roughly 355,000 MWh per year in electricity, and depending on wholesale price of that time or the cost of replacement power in lieu of generation the sector saved at least USD 14 million/year as a result of the reduced losses)".*
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The Swiss-funded component was an important software component in the overall NCC intervention, as it contributed to the above benefits, which can be considered typical of energy efficiency measures in the energy sector, and generally as pro-mitigation measures
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was classified by SECO (HQ) as 50% relevant to mitigation (CC as significant/secondary objective). While the project design documents do not make reference to climate change, nor more specifically to GHG emission reductions, some indirect benefits from CC perspective can be identified, and part of these CC mitigation benefits attributed to the Swiss funded project component. Based on final reporting & completion notes as well as stakeholder

	interviews during field mission it can be confirmed that the reduction in technical losses have contributed positively to CC mitigation. However, as no objectives for GHG mitigation were set, nor indicators are available, more detailed attribution of CC mitigation benefits to Swiss funding is problematic (the Swiss funded component was mainly a software component of the total interventions i.e. not the only one contribution to reduction of losses e.g. with an important Telecom part, interventions at substations, improvements in transmission systems). The final CC effectiveness is positively affected by the fact that the project has subsequently allowed interventions that contribute to further energy efficiency improvements in Serbia (and better quantification of GHG emission reductions achieved, see e.g. the Swiss funded intervention at the "Nikola Tesla B" thermal power plant). We suggest a CC mitigation effectiveness score of '4'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning:** No logframe was established for the project. The project design does not in any way make reference to climate change, nor more specifically to GHG emission reductions. The Verplichtungsformular (Formulaire d´engagement, source (a)) notes among main expected project benefits "reduction of power losses due to optimal power flow", which can be considered a co-benefit from climate change perspective (score: 3) **Pathway integrity**. An indirect pathway to CC mitigation (the increase of reliability and efficiency of "clean" energy production) can be recognized in our comprehensive analysis of the intervention. While this pathway is also recognized ex-post in the project documentation (linkages with energy efficiency and emission reductions is referred to in the Completion Notes 2007 and 2009, which also try to quantify the transmission losses, sources (c) and (d)) this pathway is not yet described in the project design phase (score: 3)
General quality of project design	**Explanation clarity**. The documents that explain the decisions for supporting this intervention and its key objectives are presented in a clear manner. (Score: 5) **Participatory design**. The project has been outlined and initiated by Serbian partners, and launched in the aftermath of the Balkan conflicts. Based on project documentation and field mission findings we score the participatory nature of the design process as moderate (score 4).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UR-00269.01.01) SRB – Nikola Tesla Thermal Plant B (TENT B): modernisation of the monitoring and control system
Documents used	(a) Modernisation of the Monitoring and Control System Appraisal Study, Revised Draft of Final Report (V.1.0), November 2007 (b) UR-00269-SRB TENT B Energy Project Decision Note 2008 (Operations Committee decision 04 March 2008) (c) UR-00269 SRB TENT B Projet Energie Project document, 14.04.2008 (Serbie 852.3/2005/02077 / 2008-04-10/106 bou) (d) Overview Tent B SCO – document (no date indicated) (e) QARTERLY PROGRESS REPORT No. 14 2nd Quarter 2013. Modernisation of the Monitoring and Control System of Nikola Tesla Thermal Power Plant B (f) QUARTERLY PROGRESS REPORT No. 15, 3rd Quarter 2013. Modernisation of the Monitoring and Control System of Nikola Tesla Thermal Power Plant B (g) Beat Müller, AF-Consult Switzerland Ltd, email 29.1.2014
People interviewed	See Serbia mission programme (25.11-29.11.2013) and people consulted.
Basic data	Start date: 1.7.2008, End date: 31.12.2013 (SDC/SECO excel/spreadsheet) Budget: CHF 10,6 million. Source (b) (The Project decision Note 2008) states that the total budget of the project, estimated on the basis of budget offers, is CHF 28,6 million. Electric Power Industry of Serbia (EPS), the end beneficiary, is prepared to co-finance the project to a level of 63% (CHF 18,0 million) of the value of the project; SECO's share is 37% (CHF 10,6 million). This cost split results from a preliminarily agreed 50% minimum Serbian contribution, from SECO's budget frame for Serbia and from the project's scope and structure. The agreement between the Serbian Government and the Swiss Government concerning granting of a Swiss financial assistance for contributing to the project was signed in Belgrade on 5 May 2009. Due to the approved extension of the project implementation until end 2015, we use in our analysis the period of 2009-2015 as project duration (and not the period 2009-2013 noted in the source (d)).
Location	The Decision Note 2008 (source (b)), states that the project proposed by EPS consists of the replacement and the upgrading of the monitoring and control system (MCS) of the "Nikola Tesla B" thermal power plant (TENT B, in the vicinity of Belgrade) commissioned in 1985 (Unit B1 1983, Unit B2 1985) and currently producing one fifth of Serbia's energy with 2x620 MW 3 stages steam turbines. Reasons for the replacement are clearly the equipment's age and its subsequent financial and ecological costs: the system is fully outdated in respect of its reliability and performance. The pollution emissions (SOx, NOx, CO_2, ashes) are increased because of sub-optimal operating conditions. The risk of outage due to a breakdown and to the unavailability of spare parts has increased in the recent years. The overview Tent B SCO – document (source (d)) notes that production records show that 50% of the outages are caused by failures in the control system; restarting the plant following interruptions necessitates the use of polluting, heavy oil and is therefore detrimental to the environment.
Partners	**Funding partners**: In addition to SECO funded intervention, several

	other donors are collaborating with the power sector, with e.g. EAR and EBRD being active at Nikola Tesla Thermal Power Plant. I**mplementingorganisation:** Direct beneficiary is Elektroprivreda Srbije EPS (ELECTRIC POWER INDUSTRY OF SERBIA) TENT B, as the owner and operator of the power plant, with parts contracted out by public tenders, AF Consult Switzerland Ltd, former Colenco Power Engineering Ltd. (Colenco) acting as the lead project consultant.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: (a) **Applied technology for mitigation** ("*Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management*"); and (b) **Capacity building for mitigation (CBM)**. *("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")*
Purpose	To increase energy efficiency (by ca 0.75%) and reliability, and to reduce GHG and other emissions by replacing and upgrading the monitoring and control system of a large, old (generating 20% of Serbia's electricity production since 1985) and polluting thermal power plant (source (b)). Furthermore, the new monitoring and control system (MCS) is a pre-investment for the installation of electrostatic precipitators to reduce the particulate emissions to be financed by KfW and EAR, as well as the desulphurization plant, possibly to be financed by a JICA loan .The project is closely related to the sector policy dialogue on energy efficiency and environment, in which the Swiss country office participates. It is seen as a significant contribution to the objectives of the Serbian energy sector development strategy and to the enforcement of the legal framework for environmental protection. The project document (source (c)) presents the key objectives with a slight modification (highlighting more the quality of live aspects) outlining as the expected major impacts: (1) The improvement of life quality of the inhabitants in the vicinity of the TENT B Power Plant, thanks to the reduction of emissions and residues; (2) the improvement of the reliability of the Serbian electricity grid and of the South East European grids
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SECO as 100% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Applied technology for mitigation** ("*Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and*

	equipment, or demand-side management") As GHG reductions are stated as an explicit goal of the project the review team expects that emission reductions achieved by the project can and will be measured. The project was grouped by Gaia into Cluster 2: Energy efficiency.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Expected environmental improvements are defined in more detail in source b (see Project Decision Note, section 3.1.3), which specifies that the two key outcomes of the project's implementation are (1) the efficiency increase of the plant by 0.75% (estimation based on comparable projects) and the associated annual reduction of coal consumption by 226'000 tons; (2) the reduction of the emissions of pollutant gas, including emission of CO_2. Further, a more detailed assessment of emission reduction potentials is presented in the document with potential reduction levels set for the various pollutants, including an annual CO_2 saving goal of some 177 000 tons of CO_2/year. The importance of these reductions is further stressed in the same document stating that "Serbia is heavily depending on coal, even in a mid-term: measures aiming at reducing pollution of coal fired power plant will have an impact over several years." While the progress reports do not provide information about the climate change relevant outcomes and impacts, a separate preliminary assessment has been prepared by the project consultant (AF Consult, dated 23.10.2013), which provides quantified data of realized emission reduction. Even if this preliminary assessment needs to be confirmed by a more detailed assessment (with updated data e.g. on coal quality) it confirms positive climate mitigation achievements. According to the consultant "the summary of the calculation based on received data for operational period of Unit B1 from 1.1. – 15.10.2013 shows a significant reduction of CO_2 compared to the status as before the revitalisation performed in 2012. However, the figures from this attachment are not to be deemed as final." The info provided by consultant notes states "If, as an example, the CO_2 emission for an annual power generation of 4 000 GWh (approx. one Unit's power generation in 2007) is compared, then with the actual situation about 130'000 t/annum of carbon dioxide are saved". The additional information received during the field mission at Nikola Tesla Tent B (including operations figures and emission levels data for various dates before and after rehabilitation of the MCS, including i) Energy saving mode 27.09.2013, ii) Full Power 12.10.2013, iii) Unit stop 29.10.2013, and iv) Unit start 31.10.2013), confirms positive achievements in environmental management. According to further evidence provided in late January 2014 (source g) by the project consultant, as no detailed analysis is yet available from Serbian project partners, it is reasonable to assess the potential emission reductions/savings to roughly 2% (corresponding to approximately 88'500 t/a using for 2013 the estimate for Unit TENT B1 of total emission 4'233'500 t/a). It is again important to note that these figures will have to be verified and validated by AFC, once the final results of efficiency measurements by Institute Vinca are made available to AFC. The overhaul of unit B2 is scheduled for 2015 and it is estimated that the impacts will be similar to those from unit B1.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The fact that EPS has considered accessing carbon markets as part of the rehabilitation activities at TENT serves as an indication that the GHG emission objectives are step-wise being recognized by the national project partner (EPS) as an integral part of the energy sector

	development in Serbia.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	While energy efficiency improvements in the energy sector can universally be considered positive from CC mitigation perspective, the rehabilitation of the coal fired power production, and hereby the extension of the life-time of fossil fuel based energy production (in this case at Nikola Tesla possibly contributing to the doubling of the life-span of the facility) is contradictory to the overall objectives of CC mitigation.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was classified by SDC (HQ) as 100% relevant to mitigation (CC as principal objective). In our review and analysis the project planning and design documents clearly state the expected outcomes of the intervention, (1) the energy efficiency increase of the plant by 0.75% (estimation based on comparable projects); and (2) increased reliability of the power plant, contributing to the reduction of the emissions of pollutant gas, including CO2 emission reduction in the range of above 100 000 CO2 tons; (3). The potential reductions are stated in the Decision note and integrated into the logframe. The project outcomes so far provide solid evidence of progress towards all three project outcomes. With regards to emission reductions, including GHG emission reductions, preliminary estimates are available indicating positive development. The progress on CC mitigation benefits needs to be confirmed by additional data & analysis on lignite quality and longer surveillance period covering processes/plant efficiency. Also the attribution of the overall CC benefits at Nikola Tesla Power Plant need to take into consideration a number of other interventions funded by EPS as well as other international donors. Despite the above positive impacts, taking also into account the fact that the intervention contributes to the prolongation of the life-span of the plant we suggest a CC mitigation effectiveness score '5'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. As noted above, the CC relevant objectives are clearly integrated into project design, in particular related to i) the efficiency increase of the plant by 0.75% (estimation based on comparable projects) and the associated annual reduction of coal consumption by 226'000 tons; and (ii) the reduction of the emissions of pollutant gas, including CO2 emissions. While these project objectives were shared by all project stakeholders, the field mission highlighted the high priority Serbian partners (in particular at the site) attributed to the reductions of outages and the expected health benefits (due to less emissions of particulate matter in particular) in the vicinity of the facility, and optimized processes and improved capacities in managing the monitoring and control system. (score: 6) **Pathway integrity**. The logframe presented in the annex of the Project Decision Note 2008 (source (b)), is clear in describing the general pathway from the CC challenge to response given by the intervention. However, the actual challenge of CC is not stated in the documentation (as the key/core problem that will be addressed), but taken as an overall problem to the solution of which the project contributes (score 5).
General quality of project design	**Explanation clarity**. The design documents that explain the decisions for supporting this intervention and its key objectives are presented in a clear manner. As presented in the decision note (source (b)) SECO's grant contribution to the project is justified for the following reasons: (a) Impact on EPS' investment schedule for energy efficiency and environmental projects. The grant has a clear trigger effect. (b) The grant allows a Swiss technology transfer to EPS in a timely moment. (c) EPS has only limited access to other sources of financing, considering that the project is only marginally economically

	viable. The project will be implemented under the Agreement of Technical, Financial and Humanitarian Cooperation between Serbia and Switzerland signed on 21.02.2003. It is fully in line with the Cooperation Strategy for Serbia and the Internal Country Strategy Note. A Project Trilateral Agreement (TA) will be concluded between SECO, the Ministry of Energy, Development and Environmental Protection and EPS, based on the model of the National Control Center project agreement (project implemented by EPS/EMS), which covered the previous infrastructure project in Serbia (Score: 6) **Participatory design**. The project Decision Note, 2008 (source (b)) refers to a feasibility study (source (a)) that served the design of the project: A feasibility study, aimed at addressing the open points mentioned in the advocacy note and the questions of the OpCom, was conducted by the AF Consult (former Colenco), from mid August 2007 to late November 2007, including a one week long mission in the country. Beside an in-depth description of the project and of itsorganisation with the Serbian partners, the study contains a detailed analysis of the economic and financial aspects, which are a key decision factor for the present project. This can be taken for evidence of a participatory process, also noting that this project is a follow-up to a previous Swiss funded intervention that helped to rehabilitate the National Control Center (score 5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UR-00516) 'Combined Heat and Power (CHP) Plant Fuelled by Biomass in Padinska Skela / Belgrade'
Documents used	(a) Project appraisal study for CHP fuelled by biomass in Padinska Skela, Belgrade, Final Report December 2010 (b) Defining responsibilities of all parties and clarifying institutional, financial and administrative issues of the project "Combined Heat and Power Plant Fuelled by Biomass in Padinska Skela / Belgrade" , Final Report, Belgrade, December 2011 (c) Overview CHP _ SCO (summary/project description sheet: date not indicated) (d) Decision Note 19.4.2011 (e) Kreditantrag (Formulaire d´engagement) signed in June-August 2011 (f) Project Agreement Serbia_CHP_City of Belgrade, signed 19.12.2012 (g) Inception report for the project "Combined heat and power plant fuelled by biomass in Padinska Skela", draft November 2013, with annexes including among other Annex 11 Final Energy Audit Report for Elementary School Olga Petrov – 06112013, and Annex 12 Final Energy Audit Report for Hospital Dr Laza Lazarević – 26112013
People interviewed	See Serbia mission programme (25.11-29.11.2013) and people consulted.
Basic data	Start date: 4.10.2010, End date: 31.12.2013 (SDC/SECO excel/spreadsheet) Budget: SECO's grant contribution of 6.8 million euro for the project implementation has been approved. The own contribution of the City of Belgrade for the project implementation was planned at 1.5 million euro. The project has been delayed and inception report is being finalized at the time of this RE 2014 effectiveness assessment. The project overview document (source (c)) states as project duration period 2012-2014 and as total budget 7 918 200 euro, which of the Swiss contribution being 6 780 700 euro (grant). The draft inception report (source (g), dated 22.11.2013 and received during the mission) notes that "A "Project Agreement" concerning the implementation of the Combined Heat and Power Plant Project has been signed by the Swiss Government, and the Serbian Ministry of Energy, Development and Environment Protection and the City of Belgrade on 19 December 2012. The implementation of the project is expected to be completed within approximately 36 months, but not later than December 2016. The overall project budget amounts to EUR 7'918'200, of which EUR 1'500'000 (18%) are financed by the City of Belgrade. This means some updates to time schedule and budget shares have recently taken place (e.g. in comparison to project overview). It (source (g)) also notes that the amount of 2.580.200 euro is allocated for construction of the CHP plant, while 2.588.000 euro is allocated for reconstruction of the school and hospital. In addition to these two main components investment costs into so called 'internal infrastructure' (biomass storage, transportation system, spare parts…) are estimated to 1.250.000 euro, while amount of 1.500.000 euro is envisaged for so called 'external infrastructure' (heat distribution pipelines and substations, permits…). Finally, the budget for consultancy services during project implementation is 473.400 Swiss Francs.
Location	SECO was requested by the City of Belgrade to support a demonstration project that would produce heat and electricity

	(Combined Heat and Power Plant; CHP) from biomass waste (straw). Despite the recent introduction of feed-in tariffs for renewable energy, no similar projects have been implemented so far, also because the chances of receiving commercial financing for such a project in Serbia are currently minimal. As stated in the Decision Note 19.4.2011, "The overall objective of the project is to use a renewable energy source (biomass) to produce heat and electricity. The key objectives are (1) the generation of heat for the heating of greenhouses and for public buildings (school, mental hospital), (2) the generation of electricity and sale to the Serbian national electricity company EPS, (3) the improvement of the energy efficiency of the school and the mental hospital, (4) support of the demonstration effect of the project and (5) the continuation and intensification of the policy dialogue within the 'Donor working group on energy'".
Partners	**Funding partners**: SECO together with a contribution from the City of Belgrade **Implementing partner:** The City of Belgrade (Energy Department) is the main Serbian partner for implementation of the project. Responsible ministry partner - Ministry of Energy, Development and Environmental Protection **Other parties** (and beneficiaries): Agricultural Corporation Belgrade – PKB, Special Hospital 'Laza Lazarevic', Primary school 'Olga Petrov', District Heating Company of Belgrade 'Beogradske elektrane' – BE, Power Distribution Company of Belgrade – EDB, Power Utility of Serbia (EPS), Ministry of Infrastructure and Energy, Vinca Institute
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC3 - Mitigation: Renewable Energy.** A pathway to promote renewable energy through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of power substituted (MWh) and tCO_2e conserved. **Output**: (a) remove regulatory obstacles to RE and create incentives for RE; (b) facilitate access to finance & technology for investments in RE. **Outcome 1**: (a) increased production of RE; (b) increased access to RE in rural areas. **Outcome 2**: (a) increased use of RE reduces GHG emissions; (b) people have better access to affordable energy; (c) reduced dependence on energy imports **Expected validation criteria**: (a) **Applied technology for mitigation** ("*Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management*"); and (b) **Capacity building for mitigation (CBM)**. *("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")*
Purpose	The overall objective is to use a renewable energy source (biomass) to produce heat and electricity, and also demonstrating a way in which energy sources in Serbia might be diversified. This project is aimed at improving the energy efficiency of public buildings (school and mental hospital) in Padinska Skela and at construction of a new

	biomass fired combined heat and power facility, which will heat greenhouses of the Agricultural Corporation Belgrade (PKB) and public buildings in Padinska Skela and feed generated electricity into the distribution network. While substituting the existing fossil fuel fired plant (coal and heavy/light fuel oil) by a biomass plant, the expected main results of this project are (sources (b), (c), (d) and most recently in (g)): • the reduction of the CO_2 emissions by replacing fossil fuel with biomass waste for the operation of the CHP plant and by increasing the energy efficiency of the public buildings that should be connected to the CHP facility; • the improved air quality and therefore better living conditions of the local inhabitants; • the sustainable use of renewable energy for heat production for public buildings in the Padinska Skela settlement and greenhouses at PKB; • the increase of agricultural production profitability by using the straw for combustion in the CHP plant instead of leaving it to rot on the fields or actually burning it; and • the replication of similar projects in Serbia using similar technology and renewable energy with private financing
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SECO as 100% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Applied technology for mitigation** GHG reductions are stated as an explicit goal of the project and hereby the project is highly relevant for CC mitigation. While the project is only in its inception phase the potential emission reductions and catalyzing effect (in case of successful implementation) for climate impacts and effectiveness cannot yet be estimated. The catalysing idea is also noted in the project overview document stating "As a pilot project, it has the potential to serve as an example for profitable green energy production facilities with replication potential". The project was grouped by Gaia into Cluster 1: Renewable Energy
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Due to delays in project design and initiation phase, the project was only in its preparatory phase at the time of this assessment. The assessment of CC effectiveness in this case is therefore based on planned project activities and projected outcomes of the intervention. In particular, the Inception Report (source (g)) and the field mission findings serve as basis for this assessment. Based on available latest information the project has the potential for considerable climate effectiveness. Expected environmental improvements are defined in Decision Note (source (d)), with logframe (Annex 4) noting as objectively verified indicators: - Reduction of CO2 emissions of the plant as well as the buildings to be heated by approximately 1325 CO2 tons / year - Increase of the energy efficiency and the renewable energy share (%) - Decreased energy consumption in the public buildings included in the project For the latter two indicators no quantitative targets or baselines are provided. However, the Inception Report further confirms the CC relevant objectives and the existing logframe. The energy audits prepared so far, provide clear indication of major emission reduction

	potentials through targeted energy efficiency measures. E.g. the Energy Audit Report for specialised Hospital "DR. LAZA LAZAREVIC" (26.11.2013) estimates a major mitigation potential for the hospital noting "Annual CO_2 emission under current conditions being at 2 180 781 kg and after proposed measures have been implemented falling to 977 622 kg i.e. it will be reduced by 55.17%." Likewise the Energy Audit Report for Elementary School "OLGA PETROV" (26.11.2013) noting "Annual CO_2 emission under current conditions being at 215 600 kg and after proposed measures have been implemented falling to 29 687 kg i.e. it will be reduced by 86.23 %."
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The replication status is defined as a separate indicator for the expected outcomes (source g). This aspect is highly relevant in the current Serbian energy production context, and the Swiss approach to consider the replicability in a pro-active manner as part of this intervention is appreciated by the evaluation team, and in particular stakeholders in Serbia. While the need to identify and concretely scale-up renewable energy solutions in Serbia is widely recognized, there is an urgent need for successful "lighthouse projects" in biomass energy solutions (as well as other renewable energy solutions) in Serbia. The Swiss funded Padinska Skela CHP project has the potential to serve as such lighthouse project if successfully implemented and systematically reported and lessons learned shared with Serbian and other international partners. During field mission several parallel initiatives were reported (and also noted in source (g)) but no major success stories can yet be reported from Serbia on biomass based CHP with commercially viable up-scaling potential.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The fact that the project addressed simultaneously energy savings (contributing to cost saving for project partners), provides business opportunities (e.g. for provider of biomass), improves the working and living conditions (at hospital and school) and serves national energy sector priorities, while contributing directly to CC mitigation, can be considered a major asset for the intervention, and should improve the likelihood of achieving the project goals (and hereby high CC mitigation effectiveness).
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was classified by SDC (HQ) as 100% relevant to mitigation (CC as principal objective). In our review and analysis the project planning and design documents clearly state the expected outcomes of the intervention, with CC mitigation being at the core of the project objectives as well as concrete project activities. Due to delays in project design and initiation phase, the assessment of CC effectiveness is in this case based on projected outcomes of the intervention. However, based on available documentation and field mission findings we suggest at this stage a forecasted CC mitigation effectiveness score of '6'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project design phase documents clearly state the objective related to mitigation of GHGs, as one of the principal objectives. Also the Kreditantrag (source (e): decision signed, confirming funding), explicitly states the reduction of GHG (and other emissions) as one of the project objectives. The goals to improve energy efficiency and increase the use of renewable energy sources, replacing use of fossil-based energy, are clearly stated and the reasoning solid. Early on, design documents indentified important areas of improvement (pointing out the need to consider demand and market access for both electricity and heat) in order to

	increase economic viability and sustainability of the intervention and the subsequent replicability (score 7). **Pathway integrity**. The logframe is clear enough and describes the pathway from the CC challenge to response given by the intervention. The more detailed GHG emission reduction estimates can be expected to be produced during first phases of project implementation (score 6).
General quality of project design	**Explanation clarity**. The design documents are rather clearly written and taking note of the high number of various stakeholders involved, is also addressing particularly the share of responsibilities (score '6'). **Participatory design**. The numerous planning documents, the processes that have taken place for identifying multiple stakeholders involved in the project, as well as already prepared suggestions and negotiations for share of role within the intervention, provide an indication of wide and in-depth stakeholder participation in project design (score 5).

C.3. Field mission and people consulted

The Serbia field mission took place in November 2013, with meetings concentrated between 25.11-29.11.2013. The mission team consisted of Mr Mikko Halonen (team leader), Ms Christina Stuhlberger (public report and communications specialist) and Ms A Aleksandra Siljic (national consultant). A presentation of key preliminary findings was provided to SDC/SECO offices during the debriefing session at the end of the mission 29.11.2013 in Belgrade.

Table List of people consulted

Name	Organisation
Mr Srecko Sevic	City of Belgrade - Energy Department
Mr Dragoljub Dakic	Vinca Institute - Laboratory for Thermal Engineering and Energy
Mr. Borislav Grubor	Vinca Institute - Laboratory for Thermal Engineering and Energy
Mr Dejan Djurovic	Vinca Institute - Laboratory for Thermal Engineering and Energy
Mr Slobodan Ruzic	Energy Saving Group (ESG)
Mr Vladimir Obradovic	Electric Power Utility of Serbia (EPS)
Mr Ljubomir Strbac	Electric Power Utility of Serbia (EPS)
Mr Bogoljub Radojcic	TENT B
Mr Predrag Vasic	TENT B
Mr Dusko Tubic	Transmission System Operator (EMS.)
Mr Dejan Trifunovic	Ministry of Energy, Development and Environmental Protection (MoE)
Ms. Milena Djakonovic	MoE, Sector for Sustainable Energy, RE and Strategic Planning
Mr Aleksandar Puljevic	MoE, Energy Efficiency Department
Ms. Danijela Bozanic	MoE, Division for Climate Change in Environment
Ms. Vesna Simic	MoE, Department for RES
Mr Dejan Djuric	MoE, International Cooperation Department
Mr Ian Brown	EBRD - Resident Office in Sebia
Mr Juergen Welschof	KfW Office Belgrade
Ms. Jasmina Vulovic	KfW Office Belgrade
Mr Branko Dunjic	Cleaner Production Center Serbia
Ms. Bojana Vukadinovic	Cleaner Production Center Serbia
Ms. Duska Dimovic	WWF Danube-Carpathian Programme
Mr Beat Müller	AF-Consult (former Colenco)
Mr Josef Starzner	AF-Consult (former Colenco)
Mr Juerg Staudenmann	UNDP - Resident Office Serbia

Mr Dejan Gojkovic	European Integration Office, Department for Planning, Programming, Monitoring and Reporting on EU Funds and Development Assistance
Mr Dragan Mrkalj	European Integration Office, Department for Planning, Programming, Monitoring and Reporting on EU Funds and Development Assistance
Mr Milos Golubovic	European Integration Office, Department for Planning, Programming, Monitoring and Reporting on EU Funds and Development Assistance (incl. Swiss Develoment Assistance)
Mr Gligo Vukovic	EU Delegation to the Republic of Serbia, Department for Transport and Energy
Mr Guy Bonvin	SECO/WEIN

D. In- depth review of selected projects in Albania

D.1 Projects reviewed

Within the effectiveness assessment three projects were chosen to more detailed review, in line with criteria presented in the final Inception Report (dated 20.9.2013). These SECO projects are as follows:

- DRIN RIVER CASCADE REHABILITATION PROJECT (DRCRP)
- POWER TRANSMISSION AND DISTRIBUTION PROJECT (PTDP)
- POWER LOSS REDUCTION PROJECT

A priori, all these projects have been classified as climate mitigation relevant (the first two as being 100 relevant, the third one being 50% relevant, according to SECO/SDC classification. All have been termed significant in their climate orientation as elucidated in the Handbook on the OECD-DAC Climate Markers

The review results are presented in the assessment templates below (section D.2). The field mission team and people consulted during the field mission are presented in section D3.

D.2 Review results

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UZ-00574.01.01) DRIN RIVER CASCADE REHABILITATION PROJECT (DRCRP), Albania
Documents used	(a) DRCRP Entscheidungsnotiz 1994 (in French: Note de Décision: DRCRP; seco; January 1994) (b) Albania – KESH PSRP – Quarterly Report October -November-December 2005, (c) Albania – KESH PSRP – Quarterly Report July August September 2006 (ALBANIAN POWER CORPORATION (KESH) Tirana, Albania POWER SECTOR RECONSTRUCTION PROJECT Formerly DRIN RIVER CASCADE REHABILITATION PROJECT) (d) Overview Drin River DRCRP (overview document by SECO, SCO office Albania, no date indicated) (e) DRCRP Evaluation Report Final Version (Evaluation of Drin Cascade Hydro Power Project Albania. Evaluation Report, Commissioned by: Austrian Development Agency ADA. 14 December 2005) (f) SECO Completion note DRCRP signed (2007-12-6/62) (g) Independent Evaluation. SECO Development Cooperation in the Energy Sector in Eastern Europe and Central Asia. Economic Cooperation and Development Division Evaluation and Controlling Bern, July 2010 (h) Table with the forced outages (in hour) per each unit at Fierza HPP before and after the implementation of Fierza HPP rehabilitation project (material received 6.12.2013 from Marialis Çelo, project director at KESH) (i) The Implementation of Rehabilitation Project of Main Hydropower Plants in Albania, a way for Improvement of Operational Reliability, Safety and Environmental Standards (Paper received 6.12.2013 from Marialis Çelo, project director at KESH, and which was presented at Medpower Conference on 2008 in Thesaloniki Greece) (j) Generators imported to Albania (data on generators imported to Albania received during field mission in Albania: source Mr Gentian Dermishi, Former Head of Project Implementation Unit (PIU) at KESH, and former national consultant of the Independent Evaluation, commissioned by SECO, which assessed 4 energy projects: (i) Critical Imports Project; (ii) Power Loss Reduction Project; (iii) PTDP; (iv) DRCRP, in Albania, in 2010)
People interviewed	See Albania mission programme (2-6.12.2013) and people consulted.
Basic data	Start date: 1.1.1994 and end date: 1.3.2008 (SDC/SECO spread sheet/ excel). Project overview document (d) states as project duration 1994-2007 with the budget: CHF 11,8 million (grant). The Completion Note (f) states as total planned budget for the entire DRCP (with input from several other donors, see below) was 45,5 million euro, actual total being 55 million euro, with planned SECO CHF 10,7 million, and actual 12,1 (plus CHF 3,4 million Swiss Counterpart Funds).
Location	Hydro power Plant Fierza (Drin River). The Fierza HPP is the first cascade on the Drin river in Albania, i.e. the head pond at the river Drin. The reservoir is created by a 152 m high and 380 m long rock-fill dam and has a capacity of 2.7 billion m^3 (source g). The Drin River Cascade Rehabilitation Project (DRCRP) was conceived in 1993/94 based on an independent study and had the aim to rehabilitate 4

	hydropower plants (HPP) on the Drin and Mat River, which have a combined installed capacity of 810 MW, equivalent to 50 % of the hydro power capacity installed in Albania. The DRCRP was designed to be parallel-financed by several donors: EBRD, the Austrian Development Agency (ADA), Japanese Bank for International Cooperation (JBIC), Mediocretito (Italy) and SECO. Together with the Komani HPP (600 MW) on the Drin River they account for more than 90 % of the hydro-power capacity installed in Albania. Therefore, the DRCRP is the most significant project in the attempt to increase power generation, to extend the lifespan of existing plants and to improve the reliability of electric energy, which in turn reduces the economic damages incurred by poor electricity supplies and last but not least to improve the utilization of the stored water. Within the support by the donors and lenders, the Swiss grant contribution is focused on the delivery of mechanical equipment for the Fierza hydro power plant.
Partners	**Funding partners**: SECO, in collaboration with European Bank for Reconstruction and Development (EBRD), Cooperazione Italiana, Japan Bank for International Cooperation (JBIC), Austrian Development Agency (ADA), World Bank (WB) **Project partners and beneficiaries:** Albanian Power Corporation (KESH), Ministry of Finance, Albania, VA TECH Hydro, Switzerland (Contractor), Colenco Power Engineering (Consultant)
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. The project is one of the hand-picked ones, which was not among the 123 projects originally passing Gaia validation criteria (not grouped into any of the clusters). A priori, projects grouped into RC 4 should pass the following validation criteria: (a) **Applied technology for mitigation** ("*Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management*"); and (b) **Capacity building for mitigation (CBM)**. *("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")*
Purpose	To rehabilitate four large hydropower plants on the Drin and Mat rivers and to ensure its sustainability in order to enable the country to cover its home demand and to export any excess power. Within the support by the donors and lenders, the Swiss grant contribution focused on the delivery of hydro-mechanical equipment for the Fierza hydro power plant.
Pre-review estimates of CC relevance (Prima	The project was assessed by SECO as 100% relevant to mitigation (and significant CC project, according to OECD/DAC/Rio Marker

***facie* CC relevance)**	guidelines). The intervention did not originally pass the Gaia validation criteria (the Result Chain proposed above is suggested by SECO) as it was not considered to be directly relevant from CC perspective.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The Swiss funding has contributed to the broader intervention of the Drin River Cascade Rehabilitation Project (DRCRP). Where feasible the analysis here looks at the Swiss funded intervention separately, but if not separately mentioned the analysis looks at the intervention in its totality (not explicitly and only on the delivery of hydro-mechanical equipment for the Fierza hydro power plant), and any signs of climate effectiveness is attributed to the DRCRP intervention all funding partners, including SECO. No direct evidence of CC relevance and effectiveness can be identified in project documentation. The DRCRP Evaluation Report (source e, page III) notes about the achievements that "The project is highly relevant for the socio-economic development of Albania as it contributes substantially to a reliable generation of the main primary source of energy. The plants will be rehabilitated to a satisfactory technical standard which prolongs the lifespan and ensures a reliable production of electric energy. In combination with the sector reform and institutional development projects run parallel with funds of WB and EBRD it contributes to the modernization of the power generation as a basis also for integration in the regional power supply market." This is a clear statement of the project priorities, objectives and impacts – not being explicitly aimed at CC relevant objectives and impacts (see also below *Project design aspects)*. The Completion Note (source f) states that the rehabilitation of the Fierza HPP was successfully completed in the beginning of 2007, inaugurated in March 2007. Also in notes that the HPP was rehabilitated to satisfactory technical standards, according to actual "state-of – the art", with tests indicating a gain in efficiency at maximum output of 5 % for the two units with the new runners. Therefore energy can be produced with less water. The 2010 Independent Evaluation (source g) states as the achieved outcomes: - Forced outages declined following the completion of the project. From 2001 to 2008, the number of hours of forced outages went from 8,625 to 2.5. - Efficiency at the Fierza power plant improved 3-4 percent - The expected lifespan of the Fierza power plant was extended up to 25 years - The rehabilitation contributed to the Fierza Power Plant avoiding 1.077 million MWh in outages in 2008, compared to 2001. In addition the Independent Evaluation (g) provides an economic estimate of the benefits achieved through the entire DRCRP. It notes that the wholesale electricity price in Albania in 2008 was USD 89.4/MWh, meaning that the rehabilitation was worth roughly USD 96 million annually in electricity revenues to KESH, noting that this is likely an underestimate to the extent that the wholesale market price is below the full cost of production. The project achievements according to the points stated above were confirmed during field mission and site visits, with particular achievements for the entire DRCRP confirmed in the areas of extension of lifetime, improvement of reliability; increase of efficiency of the units, elimination of unplanned stops, increase of safety, and reduction of environmental pollution (source i). Stakeholders working at Fierza HPP and/or directly with the Swiss

	funded intervention at Fierza, did not see the project directly being of relevance from CC mitigation perspective, pointing out the stated priority objectives and the success in achieving those objectives despite unsatisfactory overall efficiency in project implementation (see also source g). During field mission Ms Marialis Çelo, KESH (involved since 1996 and former project director of Drin River Cascade Rehabilitation Project, DRCRP), stated that during the intervention there was an attempt to get Green Certificates for the project but this was refused, based on the argument that the project was not increasing RE potential/hydro, but was only aimed at maintaining existing capacity. From CC mitigation perspective, this is a clear signal from methodology perspective that additionality of any emission reduction were considered non-existent by a strict and direct CDM type of approach to GHG emission reductions.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	While no direct evidence for CC effectiveness can be identified, nor GHG emission reductions can be quantified nor directly attributed to the Swiss funded intervention, the DRCRP project contributes indirectly to CC mitigation. By improving the reliability of a renewable energy source and improving the efficiency of hydropower plant operational aspects. The overall rehabilitation and promotion of hydropower has obvious benefits from CC perspective, e.g. in comparison to the use and/or promotion of non-renewable, fossil based energy sources. Even if this has not been the explicit objective of the project, nor have any baseline information been gathered or indicators been established and progress monitored concerning potential GHG emission reductions achieved thanks to the project, this aspect can be noted as an indirect CC benefit of the Swiss funded intervention at Fierza, and more broadly of the entire DRCRP. This benefit can be further exemplified and confirmed by two particular facts: i) when energy production in Albania is not sufficient (almost fully based on hydropower), energy of higher carbon intensity is imported to Albania, and hereby contributing to increased GHG emissions (alternatively in cases of execs energy production, Albania can export no-carbon electricity no neighboring countries). However, discussions and data requested from Albanian stakeholders during field mission do not allow quantification of this positive CC benefit (among other due to lacking baseline information and information of origin and carbon intensity of imported electricity). ii) due to lacking electricity production (or access) and problems in reliability (in production, transmission and distribution), a considerable number of diesel generators have been imported to Albania (since 1999 annually from 11 180 to over 100 000 generators have been imported to Albania annually, see source j), causing increased GHG emissions. The quantification of the avoided emissions due to Swiss funded intervention and/or the DRCRP more broadly is however not possible, taking note of lacking baseline information, hard data on the usage of generators. Also the fact that a considerable number of other interventions have taken place in Albania during this period (including projects addressing transmission and distribution losses) quantification and attribution of CC benefits is not feasible. The field mission findings and discussions with several key stakeholders in Albania support the findings of indirect evidence of CC mitigation effectiveness. The Completion Note has also noted this pathway of CC impacts (source f, section 2.2) and the potential overall environmental benefits of hydropower.
3. Reasons to expect CC effectiveness of this kind	The field mission findings and discussions with several key stakeholders support the findings of indirect evidence of CC mitigation

of project based on other knowledge	effectiveness and of the overall benefits of sustainable hydropower production. The Completion Note has also noted this pathway of CC impacts (source f, section 2.2). In addition, it is important to note that the DRCRP (and its follow-up interventions on Dam Safety) which contribute to improved reliability and safety of hydropower production in Albania, have a climate change co-benefit aspect that initially contribute to improved capacity for climate change adaptation in Albania. This is an issue that is only stepwise being recognized as a challenge to sustainable energy provision, disaster risk reduction and CC adaptation, and more broadly sustainable economic development for Albania. It is also an issue that exemplifies potential sectors where both CC mitigation and adaptation benefits and synergies could be identified and increasingly harnessed in the future – possibly also in Albania.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was classified by SECO (HQ) as 100% relevant to mitigation (and CC significant according to OECD/DAC-guidelines). However, CC and more specifically GHG reductions were not stated (at all) among goals of the intervention, with key goals being in increased (clean) power production, energy reliability and security, prolongation of life span of utilities, improving dam safety and optimization of usage of water. The field mission findings confirm and update documented data and experiences on i) improved reliability and energy security (outages declined / erased, even during recent floods), ii) efficiency improvements at the Fierza power plant in the range of 3-4 percent, and iii) extension of lifespan of HPP. Also the final analysis identified clear but indirect pathways for CC mitigation benefits that can be attributed to this overall intervention (with implications for entire cascade) through avoided GHG emissions that would have been cause by electricity import (with higher CO_2 intensity in all neighboring countries) and above Business-as-Usual use of other non-renewable energy sources (including diesel generators). However, GHG emission reduction quantification (and attribution to Swiss contribution) is not possible. We suggest a CC mitigation effectiveness score of '4'. We also recognize that this intervention and its follow-up activities have contributed to addressing dam safety in a more systematic manner, with some initial benefits for CC adaptation, too.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project decision (see e.g. DRCRP Entscheidungsnotiz 1994) is based on priority objectives related to improving of energy production, reliability and access, energy security, prolongation of life span of utilities, improving dam safety, optimization of usage of water. These are extremely clear and fully understandable in the context of urgent development needs in Albania at that time. Also among many objectives is mentioned the goal to increase the production of clean energy (without stating more clearly what it means) at affordable level for households and exports. No reference is made to climate change or reduction of GHG emissions. Also the Evaluation Report.2005 (source e) states as the project´s objectives being "to increase power generation, to extend the lifespan of existing plants, to improve the reliability of the supply of electric energy and to improve the utilization of the stored water". As additional objectives the evaluation report notes, i) to improve the physical conditions of important structural parts (dams) up to international standards, ii) to improve work safety in the plants , and iii) promoting a clean and cheap source of energy production. The term clean as such can refer to a number of types of emissions,

	including GHG emissions. Taken note of the timing of this statement (2005, when generally CC issues are much more prominent in the public debate, and step-wise being introduced into ODA frameworks (as cross-cutting issue, as one of the issues being mainstreamed), the absence of reference to CC (not mentioned in the 2005 evaluation report, nor GHG or emission reductions) can be taken as sign of CC not being at the core of project objectives. The evidence and reasoning are clear, with no specific reference to CC aspects as such (**Score**: 3) **Pathway integrity**. An indirect pathway to CC mitigation (the increase of reliability and efficiency of "clean"energy production) can be recognized in the comprehensive analysis of the intervention. However, it is not at the core of project design phase - nor later in the project implementation phase analysis or documentation. (**Score**: 2)
General quality of project design	**Explanation clarity**. The documents that explain the decisions for supporting this intervention and its key objectives in a very solid and clear manner. (Score: 6) **Participatory design**. Taking note that the project was initiated in 1994, data on project design phase remains limited. **(Score**: Not reasonable to provide score, as no solid data is available about the preparation of the project and the participatory nature (or lack thereof) of the design process)

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UZ-00745) – Power Transmission and Distribution Rehabilitation Project (PTDP), Albania
Documents used	(a) Decision Note 1995 (in German, Enstcheidungsnotiz, 20.11.1995) (b) Project overview document by SECO, SCO Albania (date not stated) (c) Entscheidungsnotiz 24.8.2004 (DMS #442963.1, with SAP code UZ-00745.01.02 , and the original code being Basismandat: UZ-0745.01.01) (d) FIRST QUARTERLY PROGRESS REPORT for the period January – March 2006 (POWER TRANSMISSION AND DISTRIBUTION PROJECT, AND POWER SECTOR RECONSTRUCTION PROJECT PART B & PART 2) (e) FIRST HALF PROGRESS REPORT for the period January – June 2008 (POWER TRANSMISSION AND DISTRIBUTION PROJECT, AND POWER SECTOR RECONSTRUCTION PROJECT PART B & PART 2) (f) Abschlussnotiz (2009-01-09/289 \ COO.2101.104.5.1483461) – Comletion Notice (in German – parts oft he footnoter refers to document being from 2007- parts refer to 2009) (g) Independent Evaluation. SECO Development Cooperation in the Energy Sector in Eastern Europe and Central Asia. Economic Cooperation and Development Division Evaluation and Controlling Bern, July 2010 (h) Generators imported to Albania (data on generators imported to Albania received during field mission in Albania: source Mr Gentian Dermishi, Former Head of Project Implementation Unit (PIU) at KESH, and former national consultant of the Independent Evaluation, commissioned by SECO, which assessed 4 energy projects: (i) Critical Imports Project; (ii) Power Loss Reduction Project; (iii) PTDP; (iv) DRCRP, in Albania, in 2010) (i) Evaluation of Power Sector Restructuring Project and Power Distribution Rehabilitation Project. (EBRD internal evaluation results shared by Mr Donald Mishaxhi, Senior Banker EBRD, during field mission)
People interviewed	See Albania mission programme (2-6.12.2013) and people consulted.
Basic data	Start date: 2.9.1996 (SDC/SECO spread sheet/ excel), End date: 24.2.2005 (SECO excel). Project overview doc notes as project duration 1994-2006 but noting also "in 1996 various donors under the lead of the World Bank have launched with Albania the PTDP, as well as "from 1997-2001, the PTDP was suspended due to the public unrest after the break down of the pyramid saving schemes in Albania, and due to pending electricity sector reforms. The Independent Evaluation (source g) states as project period 1996-2007, which will be used in this analysis as the official project period. Budget: planned budget CHF 13,0 million, with final budget/Swiss Grant Contribution: CHF 14,0 million. The Independent Evaluation (source g) also concludes: "The Power Transmission and Distribution Rehabilitation Project was delayed three years, and ran over budget by CHF 1,0 million (9.1 percent over planned budget) because of the 1998 financial and political crises, and because of poor cooperation from Government counterparts."
Location	Under the Power Transmission and Distribution Rehabilitation Project (PTDP), investments aimed at ensuring continued reliability in high load growth areas. The Swiss contribution allowed the construction of a new electricity substation in the city of Durrës and provided funding

	for the consultant in charge of the World Bank project management unit (PMU) for the entire PTDP, i.e. the PMU which also oversaw implementation of components funded by other donors under the PTDP.
Partners	**Funding partners**: SECO, World Bank (WB), European Bank for Reconstruction and Development (EBRD), European Investment Bank (EIB), Cooperazione Italiana, Japan Bank for International Cooperation JBIC) **Project partners and beneficiaries:** Albanian Power Corporation (KESH), Ministry of Finance **Consultants:** ABB Switzerland (Contractor), Colenco Power Engineering (Consultant)
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. Expected validation criteria for projects in RC 4: (a) **Applied technology for mitigation** ("*Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management*"); and (b) **Capacity building for mitigation (CBM)**. *("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")*
Purpose	The PTDP aimed at modernizing the national power transmission and distribution system, according to the European standards. The medium term vision was including Albania into the Executive Team for North-South Resynchronization (UCTE), respectively into the European electricity grid. Under the PTDP, Switzerland financed two components on a non-reimbursable grant basis: i) Technical assistance to KESH's Project Management Unit (PMU) in Tirana, in order to prepare and implement projects financed by other donors, such as JBIC and EIB; and ii) Construction of the new, turn-key 110- 220kV substation in Rrashbull, near the city of Durrës, in order to help provide sufficient and reliable electricity supply in the Durrës region, and reduce system losses, outages and load shedding.
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SECO as 100% relevant to mitigation (and CC principal project, according to OECD/DAC/Rio Marker guidelines). The intervention did not originally pass the Gaia validation criteria (the Result Chain proposed above is suggested by SECO) as it was not considered to be relevant from CC perspective.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the	The Swiss funding has contributed to the broader intervention of PTDP – Power Transmission and Distribution Project in Albania (with a total

project (GHGs reduced, adaptation)	budget of approximately CHF 100 million, according to Abschlussnotiz/Completion note 2009, source f). Where feasible the analysis here looks at the Swiss funded intervention separately, but unless explicitly mentioned the analysis looks at the intervention in its totality and any signs of climate effectiveness is attributed to the PTDP intervention with its all funding partners, including SECO. This approach also supported by the analysis and statement in the Independent Evaluation report (source g): "*SECO's contribution was not likely the only reason for the improvement in reliability. SECO's intervention targeted a specific area, not the entire system, and therefore would have contributed only in a specific area to loss reductions and improved reliability. Moreover, there were many other improvements, financed by other donors that were made to the electricity system since 2002. However, SECO's intervention targeted the area with the highest demand in the country, and chronic problems meeting that demand. We therefore assess SECO's contribution to impact as highly satisfactory.*" With regards to CC mitigation, no direct evidence of CC relevance and effectiveness can be identified in the available project documentation, nor confirmed based analysis of additional information collected and stakeholders interviewed conducted during the field mission. During field mission representatives of the Albanian Transmission System Operator (OST) as well as engineers working with the PTDP project at Durres as well as engineers working at the site did not find the issues of CC effectiveness of relevance for the intervention.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	While the Independent Evaluation (source g) of PTDP project considers SECO's contribution to impact as highly satisfactory, again, no direct linkage to GHG emission reductions is presented in project outcomes. The evaluation considers also the project *highly satisfactory* for relevance and impact, *satisfactory* for effectiveness (both outputs and outcomes and sustainability). With regards to final outcomes, the evaluation summarizes that: - since the completion of the substation, there have not been any significant outages in Durrës - before the new Durrës substation was built, KESH had to shed load, on average, 3.7 hours per day in Tirana in order to serve Durrës. 2008 was the first year that load shedding was not scheduled by system operators. Following the completion of the project in 2007, load shedding dropped 83.2 % in 2008 (from 0.89 TWh to 0.15 TWh). - the new substation reduces electricity losses during peak periods by 7.5 MW (16.9%). The operation of the new substation has reduced voltage and frequency fluctuations. - The project contributed to the end of load shedding in Tirana and Durrës. The average volume of load shed from 2003 through 2007 was, on average 640 million kWh per year. The value of lost load (VoLL, or the cost of electricity not served) during those years has been estimated at 1.1 Euro/kWh. In other words, the average Albanian forewent 1.1 Euro in income for every kWh they were not able to use during this time. SECO's intervention therefore can be seen as contributing to the savings of roughly 700 million Euros per year. These findings were confirmed during the field mission, with operators at Durres substation noting the continued excellent operation of the substation, without any outages also in the past years (site visit 5.12.2013). While no direct evidence for CC effectiveness can be presented for the project (and as stated in this analysis, CC has not been an explicit objective of the intervention), indirect linkages with CC can be identified, and co-benefits with CC mitigation recognized, through a number of pathways for the entire PTDT intervention, with the Swiss funded activities contributing to these co-benefits. In

	particular, i) when energy production in Albania is not sufficient (almost fully based on hydropower), considerable amounts of energy of higher carbon intensity is imported to Albania (e.g. from Bulgaria, Romaina, Bosnia-Herzegovina), and hereby contributing to increased GHG emissions. In this respect the reductions of outages, electricity losses and load shedding at Durres (as explicitly listed above for this Swiss funded part of PTDP) has most likely contributed to avoiding some import and possibly also contributed in some years to increased export (to countries with higher carbon intensity in their energy production portfolios). ii) due to lacking electricity production (or access) and problems in reliability (in production, transmission and distribution), a considerable number of diesel generators have been imported to Albania (since 1999 annually from 11 180 to over 100 000 generators have been imported to Albania annually, see source h), causing increased GHG emissions. Also lacking access and reliability of electricity causes increased use of biomass, with deforestation causing reductions in carbon sinks. The quantification of the avoided emissions due to Swiss funded intervention (e.g. through retracting the carbon intensity of the avoided electricity import linked to this intervention in particular) and/or the PTDP more broadly is however not possible, taking note of lacking baseline information (source f, section 2.1, and source i, noting that reductions in transmission losses have not been matched by reductions in distribution losses and major variations have occurred) and hard data on the usage of generators. Also the fact that a considerable number of other interventions have taken place in Albania during this period (including projects addressing transmission and distribution losses) quantification and attribution of CC benefits is not feasible. With regards to technical assistance the Independent Evaluation (source g) summarises that *"technical assistance was provided to KESH for engineering project implementation management. The technical assistance was mostly in the form of the on-the-job training. The effectiveness of the consultancy support was, however, negatively affected by frequent changes in the KESH management, and disagreements among donors and the utility about the most appropriate model for private sector participation"*. The Schlussnotiz (Completion Note, 2009, source f) is slightly more positive about the outcome of the 10 year capacity building (Section 2.1: "Die 10-jährige Zusammenarbeit Vorort des Beraters mit der PMU resultierte in einer umfassenden Wissensvermittlung"). Based on field mission findings, the benefits of collaboration with Swiss experts and consultants, and the capacity building aspects were highly appreciated by Albania stakeholders in Durres, and at OST.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Interventions addressing energy losses, outages and reliability, which more broadly aim at improved energy efficiency can be expected to have CC relevant benefits in all parts of the world but in particular in a country like Albania, where the key source of electricity is hydropower. Statements collected during field mission 2-6.12.2013 by several Albania experts, referring to PTDT, as well as a number of other projects addressing energy efficiency, outages, losses and in general improved production of hydropower in Albania during the 1990s and early 2000 stress the importance of these interventions also for curbing the Albanian GHG emissions. However, due to comprehensive GHG inventories only being established in Albania, lacking baseline information and explicit indicators for mitigation benefits in most interventions implemented with international partners, quantification

	of mitigation benefits is not feasible. With regards to the Swiss funded intervention, in addition to the indirect benefits noted above, the new Durres substation has allowed follow-up activities in distribution and transmission that can further contribute to feeding renewable energy (such as the planned solar power park in Porto Romano) into the Albanian grid in the coming years, and hereby reduced GHG emissions.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The Swiss funded intervention has been successful (highly satisfactory) in achieving the project objectives. Concerning CC relevant effectiveness no direct evidence can be identified and the classification of the project as CC principal according to Rio Markers is in our view not justified. Indirectly, positive impacts on GHG reduction have been achieved. Our final analysis identified indirect pathways for CC mitigation benefits which can be attributed to the PTDP intervention through avoided GHG emissions that would have been caused by electricity import and by use of non-renewable energy sources (including diesel generators). However, GHG emission reduction quantification (and attribution to Swiss contribution) is not possible. We suggest a CC mitigation effectiveness score of 3.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project documents state that the aim is to help modernize the national power transmission and distribution system, according to the European standards with a medium term vision of including Albania into the Executive Team for North-South Resynchronization (UCTE), respectively into the European electricity grid. Also the objectives for the Swiss funded part are extremely clear and fully understandable in the context of urgent development needs in Albania at that time. However, no reference is made to climate change or reduction of GHG emissions in the design documents. (**Score**: 2) **Pathway integrity**. An indirect pathway to CC mitigation can be recognized in the comprehensive analysis of the intervention. However, CC aspects are not mentioned in project design phase - nor later project implementation phase analysis or documentation. (**Score**: 2)
General quality of project design	**Explanation clarity**. The documents that explain the decisions for supporting this intervention and its key objectives in a very solid and clear manner. (Score: 6) **Participatory design**. Taking note that the project was initiated in 1994, data on project design phase remains limited. **(Score**: Not reasonable to provide score, as no solid data is available about the preparation of the project and the participatory nature (or lack thereof) of the design process).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO (UZ-00574.02.01) Power Loss Reduction Project, Albania
Documents used	(a) Abschlussnotiz. (17.2.2003, in German) – Completion Notice. (b) WB Implementation Completion Report (June 1998, available at http://documents.worldbank.org/curated/en/1994/12/697793/albania-power-loss-reduction-project) (c) Independent Evaluation. SECO Development Cooperation in the Energy Sector in Eastern Europe and Central Asia. Economic Cooperation and Development Division Evaluation and Controlling Bern, July 2010
People interviewed	See Albania mission programme (2-6.12.2013) and people consulted.
Basic data	Start date: 17.8.1994 (SDC/SECO spread sheet/ excel), End date: 16.5.2000. Budget: CHF 4,1 million. According to (a) Completion Notice, the total budget of the intervention with contributions from other donors (in particular World Bank) was 8,2 million USD.
Location	The project was initiated in a period when Albania was experiencing major development challenges, with the economic structures being rapidly changed, and with the energy sector (energy access, energy poverty and security) at the core of the transformation challenges in Albania. Under the Power Loss Reduction Project, investments aimed at reducing technical and commercial losses throughout the system.
Partners	**Funding partners**: SECO , World Bank **Project partners and beneficiaries:** Albanian Power Corporation (KESH) **Consultants:** Entreprises Electriques Fribourgeoises EEF, Hofer AG (Medienkampagne)
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. Expected validation criteria for projects in RC 4: (a) **Applied technology for mitigation** ("*Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management*"); and (b) **Capacity building for mitigation (CBM)**. *("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")*
Purpose	The overall objectives of the Power Loss Reduction Project was: 1) to reduce non-technical electricity losses (mainly due to theft of electricity) thereby reducing uneconomic use of electricity and increasing electricity revenue; and 2) to support institutional reform and strengthening in the power subsector. The project (source b) consisted of the following components: an action plan to reduce non-technical power losses, technical assistance and training for the

	power loss reduction program, and support for institutional reform and strengthening. The action plan included: transferring the electricity inspectors to the Albanian Electroenergetic Corporation (KESH), increasing their numbers, reorganizing them, improving their equipment and assuring police support if needed; replacing broken or faulty meters in the cities of Tirana, Durres, Elabasan, Shkoder and Vlore, and upgrading meter testing, calibration and repair; improving consumer services management through establishing consumer contracts, creating a better database, carrying out a publicity campaign, and introducing incentive schemes in the distribution entities. KESH will be converted to a joint stock company and establish new accounting and financial systems. The Swiss funded project covered the supply, installation and monitoring of electric meters, transformers, and the creation of a workshop for meter repair for the Albanian state-owned electricity companies, KESH, for the five largest cities in Albania (Tirana, Shkoder, Elbasan, Vlore, Durres). Also SECO funded 12 TV commercials to increase public awareness of the new metering and billing system (source b).
***Pre-review estimates of CC relevance (Prima facie* CC relevance)**	The project was assessed by SECO as 50% relevant to mitigation (and significant project, according to OECD/DAC/Rio Marker guidelines). Iinitially the project classified by the Gaia review team as meeting validation criteria Applied technology for mitigation (ATM). In Gaia analysis the intervention was included into Cluster 1: Renewable energy
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The Swiss funding contributed to the broader intervention of the Power Loss Reduction project, a project concept elaborated within the World Bank, and its sector studies. Where feasible the analysis here looks at the Swiss funded interventions separately, but if not separately mentioned the analysis looks at the intervention in its totality. No direct evidence of CC relevance and effectiveness can be identified in project documentation nor could be confirmed during filed mission and meetings with stakeholders in Albania in December 2013.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The Independent Evaluation, 2010 (source c) states that the Power Loss Reduction Project did not reach its objectives of reducing commercial losses. While it notes that SECO's interventions have during the past years in general successfully contributed to improving reliability and quality of electricity supply in Albania, concerning this intervention and losses it summarizes that -"osses were lower before the project (1993) than immediately after (1998). Prior to the project, distribution losses accounted for 43% of electricity produced. Losses in 1997 were 56%. Since 1998, distribution losses have fallen to 32% (2008), but not to the levels sought by the project. SECO's target was to reduce losses to 26% during the four years of the project. " The WB Implementation Completion Report, June 1998 (source b), states that *The main objective of the project was not met*. However, it continues and states that *Since power distribution losses rose instead of fell, the economic benefit of the project was nil. This result does not, however, mean that the meters installed as a result of the project were a total waste. Meters are essential equipment for ensuring efficient and fair billing for the legal connections. This benefit was not taken into account at the time of appraisal.* The WB report 1998 also praises Swiss input concerning the awareness raising component: *The performance of the Swiss consultants (financed by the Swiss Government) was highly satisfactory. The consultants created an innovative publicity campaign (encouraging consumers to get legal connections and pay their bill), helped power distribution companies to establish computerized billing and loss detection systems in the six largest Albanian cities, established a meter repair and calibration workshop, and developed a scheme to provide legal electricity to a community of migrants to Tirana who had been stealing*

	electricity from neighboring areas. The field mission and new information gathered during filed mission confirm the persistence of the major problems in losses still existing in Albania, in particular in non-technical component of losses in distribution. Also the recent developments in Albania (with separation of electricity production and distribution, and with the distribution company CEZ Trade Albania being the owner of Swiss provided equipment) and license of CEZ being revoked by the Albania government, in practice the Swiss funded equipment is not being utilized in any manner. With regards to climate change relevance, no mentioning of CC relevant objectives can be found, nor indirect evidence of CC mitigation effectiveness established.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	In theory, the reduction of losses in the power sector can be linked with energy efficiency improvement and reductions of GHG emissions. However, in this case it is not reasonable to credit the project for any mitigation benefits. However, the objectives of the intervention have been pursued under the Power Transmission and Distribution Project (PTDP, also reviewed under this assignment), and indirectly at least some of the benefits related to CC mitigation from that intervention could be attributed to efforts and lessons learned from this Power Loss Reduction Project.
Overall conclusion on effectiveness based on the evidence (1+2+3)	No direct evidence of CC relevance and effectiveness can be identified. The project was classified by SECO (HQ) as 50% relevant to mitigation. Based on our analysis this classification can be understood and justified based on original project objectives but not defended based on project achievements. The project did not reach its objectives of reducing commercial losses (Independent evaluation report 2010: Prior to the project, distribution losses accounted for 43% of electricity produced. Losses in 1997 were 56%. Since 1998, distribution losses have fallen to 32% (2008), but not to the levels sought by the project. SECO's target was to reduce losses to 26% during the four years of the project.). Field mission findings confirm the still 2013 remaining major challenge in reducing distribution losses (transmission losses below 3%, close to EU level). In conclusion, no direct or indirect evidence of climate effectiveness can reasonably be established. We suggest a CC mitigation effectiveness score of 2.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project documents state as project objectives the reducing commercial losses. The evidence and reasoning is strongly linked to the urgent development priorities of the country in the early and mid-1990s, and no reference to CC relevant objectives is mentioned in project documentation or by stakeholders in Albania. (score 2) **Pathway integrity**. The documents that explain the decisions for supporting this do not provide evidence for a pathway - chosen or utilized by this project - for addressing the CC challenge by this intervention. In hindsight, an indirect linkage to CC through reduced losses and potential energy efficiency improvements through more appropriate pricing of electricity delivery can be identified (score 1).
General quality of project design	**Explanation clarity**. The documents that explain the decisions for supporting this intervention and its key objectives in an understandable manner. (Score: 5) **Participatory design**. Taking note that the project was initiated in 1994, data on project design phase remains limited. The Completion Note states that the project was developed by WB, based on sectoral studies, which had identified clear and urgent needs in Albania. However, based on documentation review and field mission statements by knowledge holders it is not possible to assess in hindsight what was the true participatory quality of the design process (score: N/A, not available)

D.3. Field mission and people consulted

The Albania field mission took place in December 2013, with meetings concentrated between 2.12-6.12.2013. The mission team consisted of Mr Mikko Halonen (team leader), Ms Christina Stuhlberger (public report and communications specialist) and Ms Marieta Mima (national consultant). A presentation of key preliminary findings was provided to SDC/SECO offices during the debriefing session at the end of the mission 29.11.2013 in Belgrade.

Table List of people consulted

Name	Organisation
Mr Holger Tausch	State Secretariat for Economic Affairs, SECO
Mr Eduart Rumani	State Secretariat for Economic Affairs, SECO
Mr Agron Hetoja	The Albanian Energy Corporation, KESH
Ms Marialis Çelo	The Albanian Energy Corporation, KESH
Mr Besim Islami	National Agency of Energy / The Minister of Energy
Mr Gentian Dermishi	Project Implementation Unit (PIU) at KESH, which was in charge of PTDP / The Independent Evaluation, commissioned by SECO, 4 energy projects: (i) Critical Imports Project; (ii) Power Loss Reduction Project; (iii) PTDP; (iv) DRCRP
Mr René Eschemann	KfW office in Tirana
Mr Taulant Bino	University of Polis
Mr Rebion Biba	Co-Plan
Ms Mirela Kamberi	UNDP office in Tirana
Mr Ergys Verdho	Fierza HPP
Mr Agim Hajdini	Fierza HPP
Mr Elio Voshtina	PMU
Mr Engjell Zeqo	Transmission System Operator, OST
Mr Ylli Demiraj	Transmission System Operator, OST
Mr Genci Dango	Transmission System Operator, OST
Mr Helmut Obermoser	AF-Consult Switzerland Ltd
Mr Gazmend Daci	World bank (WB) office in Tirana
Mr Sokol Haxhiu	State Secretariat for Economic Affairs, SECO

E. In- depth review of selected projects in Peru

E.1 Projects reviewed

Within the effectiveness assessment, six projects were chosen to more detailed review, in line with criteria presented in the final Inception Report (dated 20.9.2013). These SECO and SDC projects are:

SDC

- Social Forestry in the Andean Region (Ecobona)
- Clean Ari Programme (PRAL)
- Climate Change Adaptation Programme (PACC)

SECO

- Green Credit Trust Fund
- Peru Biodiverso
- Cleaner Production Centres

A priori, and according to SDC classification, the Ecobona project has been found 50% relevant to adaptation and 50% to mitigation. Furthermore PRAL project was given a 50% relevance to mitigation while PACC received 100% relevance to mitigation. With regards to SECO projects, they all received 50% relevance to Climate Change mitigation. All have been termed significant in their climate orientation as elucidated in the Handbook on the OECD-DAC Climate Markers

The review results are presented in the assessment templates below (section E.2). The field mission team and people consulted during the field mission are presented in section E.3.

E.2 Review results

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-02164, Program for Social Forestry in the Andean Region
Documents used	• ECOBONA final report (12/2011)-FR, • Phase I Report Template • ECOBONA MidTerm review (Sep-2008) • ECOBONA INFORME FINAL • Master Plan for ECOBONA, Exit phase 2010-2011" • Operational Plan for ECOBONA May 2010 - Dec 2011 • "Programme Régional pour la Gestion Sociale des Forêts andines ECOBONA 7F-02164.07 Phase de clôture (07 – 01.05.2010-31.12.2011)"
People interviewed	Roberto Kometter, Project National Coordinator (see mission programme)
Basic data	• Start date: 01-04-2006 (Credit proposal) • End phase I date: 31-12-2009 (Credit Proposal) plus an extension up to 30-06-2013 (Modification de la durée d'un crédit No. 7F-02164.06. Referenz/Réf. 1536/2001/2703 - 2009-12-14/73) • Start date exit phase: 01-05-2010 (FR) • End date exit phase: 31-12-2011 (FR) Budget: • Phase (01-04-2006 to 31-12-2009): CHF 7 million (CHF 6,970,000 + 30,000) (Modification de la durée d'uncrédit No. 7F-02164.06 . Referenz/Réf. 1536/2001/2703 - 2009-12-14/73) • Exit Phase: CHF 1,8 million (exit phase 2010-2011), CHF 7,0 million (previous phases), CHF 8,7 million (all phases together). CHF 1,4 million from donors and partners (FR) Disbursements (CHF): disbursement plan, not necessarily really disbursed • Phase (2006-2010): 0,68 million (2006); 2,1 million (2007); 2,3 million (2008), 1,9 million (2010) (According to information in Credit Proposal). • Exit Phase (2010-2011) 1,804,000 (according to addendum).
Location	The main stakeholders of ECOBONA are communities and subnational governments (local governments) in 5 areas: 2 in Ecuador, 2 in Bolivia and 3 in Peru. The project involved fragile forest ecosystems such as mountain forest ecosystems specifically the native mountain forests, which include livelihood of indigenous communities. In Bolivia 2 provinces were selected: the Province of Ayopaya and the municipalities of Independencia and Morochata; and the Municipal Association of Chuquisaca Centro that includes the municipalities of Alcalá, Azurduy, El Villar, Padilla, Sopachuy, Tarvita, Tomina and VillaSerrano. In Ecuador 2 provinces were selected: the Province of Napo, the municipalities of Archidona and Quijos; and the Province of Loja, the municipalities of Espíndola, Gonzanamá, Loja, Macará, Quilanga and Sozoranga. In Peru the Regional Government of Piura provinces of Ayabaca and

	Huancabamba, and in the Government of Apurimac in the provinces of Abancay and Andahuaylas.
Partners	Public Institutions - SG-CAN: the Andean Community Secretariat had a strong relation with the programme since the beginning. This institution was in charge of the development of the Andean Environmental Agenda 2006-2010 and the National Biodiversity Strategy, as well as the Andean Information and Monitoring System. - Ministry of the Environment and Water of Bolivia: In the project the Ministry developed a proposal of a National Strategy for Native Mountain Forest, contribute to the development of a project to address vertical ecosystems. - Ministry of the Environment of Ecuador: developed policies and laws regarding Native Mountain Forest plus the strengthening of technical capabilities. - Ministry of the Environment of Peru: developed policies and laws regarding Native Mountain Forest, the project helped strengthen their technical capabilities. - The Province of Ayopaya (Bolivia): in both municipalities they introduced the topic of Native Mountain Forest in their planning and management. - The "Mancomunidad of Chuquisaca Centro" (Bolivia): developed actions such as implementing new local legislation, reforestation projects and supporting new economic activities. - The Province of Loja (Ecuador): worked on sustainable livestock management, reforestation projects, prevention of forest fires, and environmental education, and promoted economic activities to reduce pressure on forests, such as increasing the value chain of the local crop "tara" (*Caesalpinia spinosa*, a source of tannin) and organic coffee. - The Province of Napo (Ecuador): promoted land planning, sustainable livestock management, ecotourism and economic activities to reduce pressure on forests, such as increasing the value chain of locally grown cacao, by closely working with producer associations to include their projects in the Operational Plans of municipalities. - The Apurimac Regional Government (Peru): developed policy and regulations related to Mountain Ecosystems. - The Piura Regional Government (Peru): developed policy and regulations related to Mountain Ecosystems. - The "Mancomunidad Saywite-Choquequirao-Ampay" (Peru): led the "mesa de concertación" (roundtable) - activities related to policy and regulations regarding Mountain Forest Ecosystems. - Ayabaca Local Government (Peru): Lead the "mesa de concertación" – activities related to policy and regulations regarding Mountain Forest Ecosystem. Research and Academic Institutions: - San Andrés Mayor University: implemented a Social Management of Mountain Forest Ecosystems programme within its MSc in Ecology and Conservation. Their Forest Seeds Centre provided know how. - Private Technical University of Loja (UTPL) and The Pontificia Catholic University of Ecuador: disseminated the topic of Social Management of Mountain Forest Ecosystems and included it in their curricula. - La Molina Agrarian University (Peru): disseminated the topic of Social Management of Mountain Forest Ecosystems and included it in their curricula. Non-Governmental/Non-Profitorganisations

	- The "Rural Economicorganisations Coordinator for the Integration -CIOEC" (Bolivia) is the highest representative institution on economic topics for rural and indigenous communities, and promotes the implementation of the economic model of Commonwealth Economy (Economia Solidaria) with food sovereignty. Within the project, CIOEC worked in the promotion of economic activities that can reduce pressure over forests such as organic coffee and cacao. - Conservation International (CI), - The Nature Conservancy (TNC), - Nature Serve - Consortium for sustainable development of the Andean Ecoregion – (CONDESAN)
Result chain	**RC1: CC sensitive strategies:** A pathway to the reform of ODA through multi-national dialogue, leading to enabling frameworks for mitigation and adaptation. **Validation criteria**: Mainstreaming of mitigation (MOM); Mainstreaming of adaptation (MOA). **Output**: (a) positive influence on CC discussions, etc. **Outcome 1**: (a) shifting of MDG actions towards low-carbon and CC-resilient development; (b) elaborated national/regional CC AdMit strategies; (c) increased multilateral funding for AdMit in developing countries. **Outcome 2**: (a) GHG-sensitive energy supply, transport and production; (b) CC is integrated into development and sectorial plans; (c) developing country access to funds for AdMit actions.
Purpose	The projects aimed at contributing to the sustainable management of biodiversity and the improvement of the quality of life of the population that live within the mountain forest in Bolivia, Ecuador and Peru. Furthermore, it envisaged the development of a comprehensive Mountain Forest Ecosystem policy framework that helped to see the need for mainstreaming CC in specific policies related to these ecosystems.
Pre-review estimates of CC relevance (*Prima facie* CC relevance)	The project was assessed by SDC as 50% relevant to adaptation and 50% to mitigation. It was validated by the review team according to the criterion Applied Ecology for Mitigation (AEM), based on: - The programme raised awareness of local and national authorities, and private users, of the value of mountain forest ecosystems in Peru, Bolivia and Ecuador; and increased their capacity to conserve them by supporting the design of appropriate policies, regulations and instruments. - The project helped to develop CC sensitive strategies. Due to the development of mitigation activities in the local level and promote activities related to Reducing Emissions from Deforestation and Degradation in a national scale un Peru giving positive influence to climate change discussions relating to REDD. - At the local level, the project worked in promoting sustainable forest management and helping local communities to establish their forest management plans. The project also helped to reduce the incidence of forest fires through public awareness activities and by encouraging stakeholder groups to control open fires. - At a national scale, ECOBONA provided the leadership of the technical group formed by MINAM to work towards a National REDD strategy. The project was also validated according to the criterion Mainstreaming of Mitigation, since it included practical actions for

	mitigation (as above) as well as measures to build institutional capacity related to REDD, including actions related to REDD policy advocacy and CC in sustainable forest management.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	**Peru**. There is no information on direct GHG emission effects, but the area of mountain forest within the project area increased by 1.43%, implying an increase in carbon stock. **Ecuador**. There is no information on direct GHG emission effects, but an important project goal was fulfilled in that the area of mountain forest in the project area was maintained as Mountain Forest, so (to the extent that deforestation was a risk) avoided deforestation can be seen as a mitigation (and adaptation) gain. **Regional**. The project provided 240 new cooking stoves that use about 40% less firewood than traditional stoves, so (to the extent that they replaced older stoves), some mitigation effect can be assumed. The project also developed a document, *Climate Change Scenarios in the Mountain forest in the Andean Region* for use as a basis for adaptation measures and strategies, thus facilitating adaptation mainstreaming by providing relevant information in a form that can be used by local government staff and decision makers.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	**Peru**. Reasons to attribute mitigation effects include: a. The project included activities on policy development related to mountain forest ecosystems and the implementation of activities to promote their conservation through the promotion of value chains of new products which reduced pressure over the forest, such as honey production. b. By optimizing the production of agricultural areas and promoting new products such as cacao, tara and organic coffee, the project may have relieved conversion pressures on natural forests. c. The project promoted reforestation of abandoned areas formerly used for agriculture. d. The project promoted good practices in agriculture to reduce risks of fire, developed local strategies, helped to set up fire brigades in participating communities, developed an early warning system and worked with local authorities to establish fines for community members that start open fires. e. The project conducted capacity building and public awareness activities (such as the Rumicruz festival and Eco Aventura in Pacobamba) highlighting the importance of the forest to sustain the life and prosperity of the communities. f. Awareness-raising activities such as festivals may have helped to increase local tourism, thus generating an alternative income for the communities while protecting the forests. g. The project helped local authorities to design reforestation projects within the national investment system framework to increase forest cover and carbon sequestration. h. The project facilitated testing of the Cristal tool to include REDD in the Forest Management Plan (FMP) of Pacobamba, thus demonstrating the feasibility of mainstreaming CC into existing FMPs. i. The project led the national thematic group for REDD implementation in Peru and participated in the socialization of Readiness Preparation Proposal – Peru (RPP-Peru), while also contributing to the RPP review. j. The project developed guidelines for REDD+ in mountain forest ecosystems based on the experience of the three countries involved. k. The project undertook a gap analysis and prepared a report on

	actions needed regarding Climate Change In the Andean Community. l. Reasons to attribute adaptation effects include: m. The project contributed to improving agricultural management practices, the participation of local authorities in promoting best practices, the development of new products, and the increase of local production per hectare, all of which are relevant to adaptation. n. The project intervened to prevent deforestation and promote ecological maintenance in water catchments, and published technical information regarding CC and hydrology in Mountain Forest ecosystems.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	CIFOR in its reports notes the integration of adaptation and mitigation in forestry projects and policies, and mention that this would maximise local benefits and contribute to increased capacity to cope with the risks associated with climate change. More over CIFOR states that forests play an important role in both adaptation and mitigation, as they provide local ecosystem services relevant for adaptation as well as the global ecosystem service for carbon sequestration, which is relevant for mitigation. Nepal Swiss Community Forest Project (NSCFP) in its Discussion Paper No.7 by Dr. Bharat K. Pokharel and Sarah Byrne Forest especially addresses the importance to the livelihoods of the poorest people, who depend on the forest for timber as housing materials, fuel wood for heating and cooking, and its relations with climate change. Climate Change 2007: Working Group III: Mitigation of Climate Change states that forest management activities play a key role through mitigation of climate change. However, forests are also affected by climate change and their contribution to mitigation strategies may be influenced by stresses possibly resulting from it.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project shows how local actions in a specific forest ecosystem can promote the reduction of GHG emissions and promote carbon sequestration, and these actions have the potential for scaling up. There was also progress on promoting national policy regarding REDD for mountain forest ecosystems. Although there are few relevant measurements, we are inclined to score this project '4' overall (moderately effective) for both mitigation and adaptation.
Project design aspects	
CC-relevance of project design (Evidence and reasoning, Integrity of the RC pathway)	**Evidence and reasoning**. There is no mention of climate change in the project design so this aspect is scored '2' (poor). **Integrity of the RC pathway**. Any thoughts on the steps within the project that contributed to following "RC1: CC sensitive strategies: A pathway to the reform of ODA through multi-national dialogue, leading to enabling frameworks for mitigation and adaptation"? Multi-national dialogue perhaps, resulting in lessons learned by donor(s) and partner(s), policy reform, new laws, better projects? Maybe none of this was explained in the project design, and if so it would get a '2' (poor) at best.
General quality of project design (Clarity of explanation, Extent of participation)	**Explanation clarity. 6** the project design explains clearly in the proposal its objective (which doesn´t include climate change) and the strategy it will use to implement it. In general terms it explains the activities it will cover in the field work. Although specific activities were identified during implementation phase. **Participatory design. 6** The project builds on the experiences and products of two previous SDC interventions: The Regional Program of Native Andean Forests Conservation (PROBONA) and The Andean Development Programme for Forest Seed –FOSEFOR- in the Ecuadorian, Bolivian and Peruvian Andes).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-02172, Regional Clean Air Programme.
Documents used	• Plan for Phase I (Nov.2003-Dec.2006) "Regional Clean Air Programme in Peru" (Swisscontact, Nov 2003) • Credit Proposal Phase II • Phase II Report • Cooperation Agreement "Regional Clean Air Programme".(Jan 2004) • Cooperation Agreement "Regional Clean Air Programme" Phase 2, (May 2007). • Operation Plan, Phase II "Regional Clean Air Programme" January 2007 – December 2009. (Nov 2006) • Phase (2007-2009) Experience Systematization "Regional Clean Air Programme"
People interviewed	• Eduardo Talavera (Present: Ministry of the Environment representative, Past: CONAM as regional expert in Arequipa) • Ismael Sutta (Present: council Member of the Municipality of Cuzco. Past: Transport Manager of the municipality of Cuzco) • Luis Zapata (Swisscontact-regional expert in Cuzco) • Zacarias Madariaga Coaquira (Past: president of the technical group in Arequipa. Present: health expert responsible of the area of ecology and Environment protection of Arequipa)
Basic data	• Start date: 11-2003 (Phase II Report) • End Phase I date: 12-2006 (Plan for Phase I) • Start date Phase II: 01.-2007 (Cooperation Agreement) • End Phase 2: Dec. 2009 (Cooperation Agreement) Budget: - Phase I: CHF 5, million (CHF 4,5 million Swiss and CHF 5,0 million local) - Phase II: CHF 3,3 million (CHF 3,0 million Swiss and CHF 0,3 million local) Disbursements (CHF): - Phase I: No information available - Phase II: (Phase II Report) 2007- 1,0 million 2008- 1,0 million 2009- 0,9 million 2010- 0,91 million Fund utilization: (Phase (2007-2009) Experience Systematization "Regional Clean Air Programme") Phase I: CHF 3,3 million (CHF 2,9 million Swiss and CHF 0,3 million local) Phase II: CHF 2,6 million (CHF 2,4 million Swiss and CHF 0,2 million local)
Location	The project focuses its activities in three growing cities of Peru: Arequipa, Cusco and Trujillo (for both Phase I and Phase II).
Partners	- The National Environmental Council (CONAM) was established in December 1994. It is the national environmental authority of Peru and its mission is to articulate cross-sectoral policies into a national environmental policy. CONAM seeks to promote sustainable development by fostering a balance among socioeconomic

	development, the use of natural resources, and environmental conservation. CONAM chairs several national commissions in charge of implementing the Conventions on Biological Diversity (CBD), Climate Change UNFCCC), and Desertification (UNCCD); it also heads a special Commission on the Global Environmental Facility (GEF). Under CONAM leadership, baseline studies and the Clean Air Plans for Cusco, Arequipa and Trujillo were prepared. In 2008, CONAM was replaced by a new institution: the Ministry of the environment (MINAM). - The Association of Social Communicators (Calandria) is a civilian institution that uses communication socially, politically, and economically in an effort to influence Peru's development and promotes democracy by strengthening its institutions. - Swisscontact aims to promote private economic and social development in selected countries through advisory services, training and continuing education, and has been carrying out clean air projects for SDC in Asia, Central America, Bolivia, and Peru since 1992. - The Municipality of Arequipa has key responsibility for implementing three priorities of the CONAM Clean Air Plan: introduction of mass transport, inspection of vehicle emissions, and control of emissions from restaurants and chicken cookeries. - The Municipality of Cusco is a member of the Clean Air Study Group that prepared the Clean Air Plan, operates a vehicle inspection plant and has conducted a study to improve traffic flow in the historic centre of the city, which are now being implemented. – The municipalities of Cusco and Arequipa lead their respective air quality boards and are in charge of transport sector arrangements and management, with powers to request changes to transport regulations such as implementing a new taxation scheme and apply some restrictions in old-used cars in their jurisdiction. – MINSA-DIGESA-DESAs: The Ministry of Health (MINSA), specifically the General Directorate of Environmental Health (DIGESA), has the mandate to monitor environmental aspects that pose a health risk to the population. DIGESA is responsible for carrying out surveillance of urban air quality, and has been monitoring air quality in Lima since 1980. Starting in 2005, the local offices of DIGESA, the DESAs, are monitoring air quality in Arequipa, Cusco and Trujillo. With the project´s support, they have obtained the equipment they need and their personnel have been trained in the operation and management of the air-monitoring network.
Result chain	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through access to credit for low-carbon technologies in SMEs, and can be measured in terms of percentage of efficiency increase, tCO_2e avoided, and economic competitiveness. **Output**: (a) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient; (b) increased use of EE standards in manufacturing processes. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to greener products. Validation criteria: Applied technology for mitigation (ATM), Capacity building for mitigation (CBM), Mainstreaming of mitigation (MOM) and Education & training for mitigation (ETM)
Purpose	The project (PRAL) aims to strengthen local capacities that will implement measures to improve urban air quality in Peru and to reduce the health impacts of air pollution on the population. The project goal is to strengthen the institutions responsible for air quality

	management at the national level and in the 3 biggest cities, in order to implement at the national, regional and local levels sustainable and replicable air quality management models. The purpose of Phase I of the project was to contribute to the strengthening of management bureaus to cope with air quality at the local level in Arequipa, Cuzco and Trujillo, and the creation and promotion of an environmental culture to foster the implementation of measures to improve air quality. The purpose of Phase II of the project was to ensure that the institutions responsible for air quality management had implemented in Cuzco and Arequipa sustainable and replicable models of their respective Clean Air Plans.
Pre-review estimates of CC relevance (*Prima facie* CC relevance)	The project was assessed by SDC as 50 % relevant to CC mitigation. Applied technology for mitigation (ATM). Reducing GHG emissions in the transport and industrial sectors through application of measures to improve the energy efficiency. Capacity building for mitigation (CBM). Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control emissions of GHGs in transport and industrial sectors.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Traditional brick manufacture is a major source of air pollution in Cuzco, and improved practices promoted by the project resulted in sector-wide GHG savings of about 1,400 tCO_2e/year.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Reforms to practices in the traditional brick-making sector were replicated through the EELA energy efficiency programme, also in Cuzco, achieving an additional 15,572.5 tCO_2e/year in GHG emissions reductions. Further replication is anticipated as the Ministry of Production has taken on board the lessons learned. The national environmental authority (CONAM) created the environmental technical study groups of Arequipa and Cusco (GESTAs). These include regional and local government, as well as public and private institutions working in areas of education, health and environmental protection within the cities. Using this existing platform, the Project promoted and assisted the development of the Clean Air Plan in Cusco and Arequipa. Nationally, the project supported MINAM in developing a National Air Quality Policy, and cross-sectoral coordination and environmental mainstreaming, including the inclusion of air quality in national energy policy. Also promoted were the enforcement of a law that mandates the removal of sulphur from diesel, the application of a new tax system on fuels, and implementation of national policy by developing the legal framework, directives and guidelines. In Arequipa, the project supported the GESTA in developing the Clean Air Plan. Within this activity, PRAL developed studies/designs for a sustainable public transportation system and with it a new circulation model for the city to mitigate emissions. The new routes and model area were partially implemented; some routes were constructed and are still in use. But the public transport project, based on Bus Rapid Transit (BRT), was not fulfilled due to political issues, although is still in the local government investment plan. BRT is a high performance service for public transport, which aims to combine exclusive bus lanes with high quality bus stations. Another initiative promoted by

	PRAL was related to restaurants cooking chicken which are abundant in Peru and one of the main sources of particulate material (PM) in the cities (and a great consumer of fire wood), after transport and brick manufacturing. New more efficient ovens for cooking chickens, that use wood or carbon as fuel but avoid the dripping of chicken fat in the fire thus reducing PM, were promoted. The adoption of said ovens was not very successful in Arequipa and only one of these is reported to be operational. Furthermore, guidelines for good practices were developed to increase energy efficiency, diminish air pollutants and at the same time GHG emissions such as CO_2 due to carbon and firewood combustion. While building capacity in the population to understand the importance of air quality maintenance. The Ministry of Health has institutionalized the air quality monitoring system in the city of Arequipa. In Cuzco, PRAL developed two models of air quality management: for the public transportation system, and the traditional brick-manufacturing sector. Before 2006, both the public transport and private car fleets were essentially obsolete, being on average 25-30 and 15-20 years' old respectively. The project promoted a mandatory Vehicle Emissions Inspection Programme and emissions testing regime, which were subsequently implemented under municipal law. It also raised public awareness through communication campaigns, and supported random emissions testing by the police, introducing the first Vehicle Emissions Testing Portable Station in 2007. In 2007-2008, the project induced a nationwide whole-vehicle testing programme, including emissions. It also supported a study on vehicle circulation in downtown Cuzco, where the historical area of the city is located. These initiatives resulted in improved traffic flow, increased pedestrianisation, and reduced GHG emissions. Meanwhile, energy efficiency guidelines were developed for traditional brick manufacturers, and the sector was organised and sensitised, with good practices being developed jointly with local stakeholders, and widely applied thereafter.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	IPCC's Fourth assessment stated that addressing GHG mitigation in cooking stoves can be made to burn more efficiently and combust particles more completely, thus benefiting village dwellers through improved indoor-air quality, while reducing GHG emissions. Local sources of improved, low GHG materials can be identified. Some projects have developed not only technologies to address GHG mitigation on cooking stoves, but also on reducing of greenhouse gas emissions through the dissemination of cook stoves. This can be compared with the potential on more efficient ovens for cooking chickens, that use wood or carbon as fuel. Furthermore, Chapter five of said document considers road vehicle efficiency might be improved by 5–20% through strategies such as improved maintenance and better traffic management. Moreover, in Lima, Peru´s capital and larger city received a grant provided by the Global Environment Facility (GEF) with the objective of helping facilitate greenhouse gas reduction from ground transport in the Metropolitan Area of Lima-Callao through contributing to the promotion of a long-term shift to more efficient and less polluting forms of transport, such as non-motorized transport and high-capacity public transport vehicles operated on segregated bus ways". The project was implemented and GHG emissions are still being mitigated. A project to Mitigate Climate Change by improving Energy Efficiency in traditional brick manufacturing in Latin America (EELA) was developed using PRAL´s experiences as the foundation for the project.

	The EELA project is soon to start its second phase.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Although data are scarce outside the brick-making sector, we accept that the project contributed to reduced air pollution in various ways at the municipal level, as well as contributing strongly to mainstreaming environmental policy in the national energy and production sectors. We are therefore inclined to accept for it a score ('4') representing moderate effectiveness.
Project design aspects	
CC-relevance of project design (Evidence and reasoning, Integrity of the RC pathway)	There is no intention or reasoning that directly addresses climate change in the project design therefore, the evidence and reasoning or the pathway integrity cannot be assessed directly connected with CC but evidence and reasoning and integrity of the pathway can be assessed. The project in its 2 phases was directly related to Air Quality and Policy strengthening to diminish air pollution. At a national level it promoted air policy and regulatory improvements, and it also developed local actions related to energy efficiency and transportorganisation. Although there is not information regarding climate change in the projects, its outputs have some relation to GHG mitigation Since the measures prioritized for clean air strategies are also GHG mitigation measures. The project helped the implementation of national environmental policy by developing and reinforcing the national legal framework. PRAL helped the development of the National Air Quality Policy and instruments for monitoring, and coordinate other sector's policies mainstreaming environmental aspects. Also gave support in incorporating air quality in the national energetic policy by the enforcement of the law that mandates the removal of sulfur in diesel and the application of the new tax system on fuels. The project technically supported the clean air plans in Cuzco, Arequipa and Trujillo, were air pollution mitigation actions were prioritized. PRAL implemented monitoring pollution systems with a strong communication strategy, making information available and disseminated among actors. By strengthening local institutions capabilities and including local population in the decision making process and the surveillance of the air quality PRAL promoted environmental awareness in the local stakeholders. PRAL also supported the development of Clean Air Plans in 3 cities and promoted its implementation (including transport, bricks production and chicken restaurants). PRALs work can be replicated in different cities and can scale up to a national level improving the local air quality and mitigation GHG emissions due to the implementing best practices in brick production (including energy efficiency) and improving transport circulation. Reviewing the project information indirect relations with Mainstreaming of mitigation (MOM) and Education & training for mitigation (ETM) can be inferred. MOM can be identified indirectly since GHG mitigation was a co-benefit of the air quality improvement activities in the process of integrating the transport sectororganisation, in activities addressing energy efficiency in the brick production and in the kitchen improvement in chicken restaurants. On the other hand ETM can be also considered as a Co-benefit when addressing air quality as a priority in the development processes and including it in the regional related policy. In terms of ETM, promoting air quality campaigns, dissemination of information regarding air quality and the importance of it includes some indirect GHG

	mitigation education. Public awareness activities regarding air pollutants and their impacts on health were developed and implemented in the cities included in the projects area In terms of ETM, promoting air quality campaigns, dissemination of information regarding air quality and the importance of it includes some indirect GHG mitigation education. Public awareness activities regarding air pollutants and their impacts on health were developed and implemented in the cities included in the projects area. Score : 4
General quality of project design (Clarity of explanation, Extent of participation)	The Phase I included the following aimed to contribute to the improvement of air quality and diminish its negative effects on population. To accomplish so the project's design included the strengthening capabilities to cope with air quality at the local level in Arequipa, Cuzco and Trujillo, and the creation and promotion of an environmental culture that would foster the implementation of measures that can improve air quality. Included the generation of technical capacities and give advice for the application of prioritized measures with emphasis in mobile sources (transport sector). While in its Phase II, it included the development and implementation of the Clean air Plans in Cuzco and Arequipa, and at the same time promote the citizen involvement in the executions and monitoring of the anti-air-pollution policy and plans. The projects´ design was developed with the National environmental authority of that time, The National Environmental Council, aligning the projects outcomes with the institutional and national priorities. The cities chosen to be included were selected with the national authority, but there is no evidence of regional consultations during projects design. Score: 4

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-05409, Adaptation Program in Peru (PACC)
Documents used	• Fiche technique du projet "Programme d'adaptation au changement climatique (PACC)"; • End of Phase Report; • Operative Planning 2012 - Adaptation Program in Peru (PACC); • PACC-Phase I Consolidation Period & planning Annex up to April 2013. (original date Jan 24 2012 (extension annex) November 2012." • Phase report 01 Feb 2009 – 14 Feb 2012. • Cooperation Agreement - PACC Phase 1 from February 2012 until 30 April 2013 • PACC- Operational Planning 2012 Period for Phase I consolidation and Planning Annex April 2013. Original date Jan 24th 2012 (Extension Annex) Nov 2012 " • Cooperation Agreement: Adaptation Program in Peru- PACC Phase I from Feb 2009 till Jan. 31st 2012. • PACC´s Master Plan Feb 2009 – Jan 2012" • External Evaluation for Phase I – PACC.
People interviewed	• Martha Bautista, Social development manager in Cusco Regional Government • René Bonern, Planning and Budget manager in Cusco Regional Government • Lino Orccohuarancca, Economic development manager in Cusco Regional Government • Ninoska Rozas, Natural Resources and Environmental manager in Cusco Regional Government • Patricia Camacho, Country Officer for Peru of helvettas-Intercooperation • Lenkiza Angulo , National Program Coordinator
Basic data	Start date Phase 1: Feb. 2009 End phase 1: Jan. 2012 extended until Dec. 2012 Start phase 2: 01-05-2013 End phase 2: 31-12-2016 Budget: Phase 1: CHF 4,9 million Phase 2: CHF 5,5 million Fund utilization: (complete information was not found in the available documents) 2009: CHF 1,2 million 2010: CHF 1,7 million 2011: CHF 1,9 million
Location	Regions of Cusco and Apurimac, in Peru. In the micro watersheds of

	Huacrahuacho in Cusco and Mollebamba in Apurimac.
Partners	- Ministry of the Environment (MINAM): participates in the execution and monitoring of PACC through the Deputy Ministry of Strategic Development of Natural Resources and the Climate Change Direction. Within PACC, the National Climate Change Strategy, the National Climate Change Adaptation Strategy and Plan, which are policy tools and measures, are being implemented on the ground. Within the Program, MINAM is part of the executive bureau of the program. MINAM is a strategic institution in the decision making process. - Regional Governments of Cuzco and Apurimac: subnational counterparts, which lead Program´s implementation via the directorate board. - Local Governments of prioritised micro-watersheds: The Municipalities of Kunturkanki and Chacca in Cuzco, and Juan Espinoza Medrano in Apurimac were the local counterparts, responsible for implementation of the Program in their areas of influence, and for leading the Program´s Local Pilot Program on CC adaptation. - The National service of hydrology and meteorology (SENAMHI): in charge of the National Climate information Centre, and Program executor of climate change scenarios for the Program. - A consortium led by Helvetas-Intercooperation with the consultant firm LIBÉLULA and the Centre for disaster prevention-PREDES, was the executor of the Program, responsible for providing Program technical support and facilitation.
Result chain	RC6 - Adaptation: Awareness Raising. **Output**: (a) generate, collect and analyse CC-related data; (b) involve multiple stakeholders in multi-level dialogue on CC. **Outcome 1**: (a) increase in knowledge and awareness on CC (trends and variability) and related vulnerabilities. **Outcome 2**: (a) decision making is based on improved climate risk information. A pathway to informed dialogue and decision-making through the accretion and management of CC-related knowledge. **Validation criteria**: Education & training for mitigation (ETM); Research & monitoring for mitigation (RMM); Education & training for adaptation (ETA); Research & monitoring for adaptation (RMA); Knowledge for adaptation (KFA). RC7: Adaptation Capacity **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectorial and cross-sectorial adaptation planning and to deliver resources to support local adaptation efforts.

	Validation criteria: Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).
Purpose	"To mainstream climate change awareness and adaptation options within the policies and strategies of the Cusco and Apurimac regional governments, and to institutionalise climate change research and open-access knowledge management."
Pre-review estimates of CC relevance (*Prima facie* CC relevance)	The Program was assessed by SDC as 100% relevant to CC PACC also meets the RC 7: adaptation Capacity criteria
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The program has not register the amount of water available in the watersheds, but local stakeholders' opinions reflect that as a result of the intervention water catchments and aquifer recharge was accomplished. They mentioned as direct evidence the availability of water through the whole year, which didn't happen before. During the field mission the work of the program related to improving water catchment capabilities were visited and also pictures of the catchments areas with were shown to the reviewers.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	This was the first SDC project in Latin America regarding adaptation to climate change. The program developed a diagnostic tool for assessing climate change vulnerability in the two focal regions and two prioritised catchments. This was done with the active participation of authorities and local population affected by CC impacts. Supported by SENAMHI, PACC developed climate change scenarios for the two focus regions and has studied the correlations between extreme events and climate variability in the 2 regions, foreseeing up to 2025-2050 and 2100. In order to develop the scenarios, the first actions implemented are related to strengthen the institutions capabilities for climate observation, forecasting and modelling climate change within the region. In the 2 prioritized watersheds (Huacrahuacho in Cuzco and Mollebamba in Arequipa) the Program delivered and published studies regarding vulnerability within the water and agriculture sectors, including economic implications and the attitudes of local people. The program helped in implementation and capacity strengthening of a regional climate information system in collaboration with SENAMHI that will contribute to the national climate scenarios. The program developed an information system on climate change adaptation in Cusco and Apurimac as part of the regional information systems, and 35 institutions were certified for their operation. Institutional framework was developed for the programs execution to make climate change relevant information lead to better climate sensitive decision-making in the 3 levels (local, regional and national). PACC was designed considering platforms in which the 3 levels of decision making were involved and participated in the different program decisions and shared the results. Due to its operational arrangements diverse and multilevel stakeholders were involved in the program. At a local level families and communities were involved in the planning process of the activities and got feedback of the researches outcomes Moreover PACC worked in the Regional and local Adaptation Strategies and helped the Regional and local stakeholders in prioritizing adaptation measures that were also implemented later on within the program cycle. Climate Change relevant aspects were

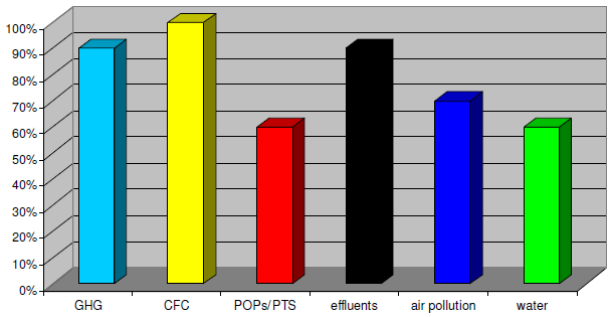
	integrated into development plans in the regional governments such as in the regional development and food security agenda, and in local development plans. PACC supported the implementation of 2 Regional Adaptation strategies and mainstreaming CC into other regional strategies and plans. The program articulated 36 local development plans with the communities and local authorities supporting CC mainstreaming in the plans. On the ground adaptation actions were implemented including the traditional knowledge and local perceptions. More over PACC helped adaptation and risk reduction be part of the National Climate Change Agenda with on the ground technical and scientific information. PACC developed pilot projects in which local cultural knowledge, local practices and adaptation practices were identified and developed on the ground. The program included the revalorization of local cultural knowledge in CC impact identification and adaptation practices. Public policies at the local and regional level scaled into national level, and the proposals were also considered for CC negotiations process. The information gathered and the on the field practices implemented by that helped to create a better knowledge of the adaptation process on the ground and gave direct input to the national adaptation strategy and the international negotiation process. PACC includes Resilience for Adaptation (RFA) since it includes the restoration of ecological services of water catchments and aquifer recharge in the micro watersheds of Huacrahuacho in Cuzco and Mollebamba in Apurimac. It also includes Knowledge for Adaptation (KFA) since the program promoted stakeholder environment monitoring and networking to enhance the sharing of knowledge on CC. at the local level the program worked with local stakeholders to involving them in the Climate monitoring and capacity building activities. They develop a communication strategy and a platform for knowledge sharing. The program developed research studies and technical documents about the effects and impacts in the CC process in Cusco and Apurimac. The research was not limited to climate and physical conditions over landscapes, it emphasizes aspects regarding rural production systems, the risks related to disasters that could be exacerbated by CC, the impact over the water resources-its demand and offer as well as probable impacts or conflicts due to water scarcity. A special emphasis was given to the socio cultural perceptions of CC impacts in the peasants' society through their Andean Cosmo vision. The program also enable frameworks for adaptation: PACC also worked in Mainstreaming of adaptation (MOA). PACC supported mainstreaming adaptation into local and regional (subnational) plans and supported national policy implementation. PACC developed vulnerability studies and climate change scenarios and with the information and the local authorities promoted the elaboration of CC strategies at the local level and also the integration of CC into local development plans, therefore in the local authorities' agendas and budgets. At a regional level (subnational) The program supported the development of the Regional Climate Change strategy for Apurimac and Cuzco. Moreover, in Cusco PACC helped to mainstream CC issues into the regional social development strategy, linking poverty alleviation and food security with CC. At a National Level the program promoted the inclusion of risk disaster reduction into the national investment system and has promoted the CC inclusion into the National Investment systems. The program supported the Ministry of the environments initiatives regarding CC adaptation and risk disaster reduction at a National Level and also dissemination of the programs experiences and results give on the field

	information to the International Climate negotiations. The program also developed adaptation against disasters (AAD) building capacity for disaster risk reduction, preparation and management at local and national level. Recognizing the links between disaster risk reduction and climate change adaptation. The program included education and training for adaptation (ETA): Research is carried out by Peruvian regional (sub-national) and national technical-scientific institutions, which receive support from Swiss scientific entities. The studies cover a wide range of themes linked to the problem of climate change, to understand CC impacts on the rural populations of Cusco and Apurimac and their livelihoods. At a formal University level PACC had as principal international partner at University of Zurich as leader of the Swiss Scientific Consortium integrated also by Meteoswiss, meteodat, WSL-SFL, Agroscope and the University of Genève. They developed research and trained local specialists into CC and relevant subjects. The program also launched in association with the regional university in Cusco a post grade specialization on climate change, emphasizing adaptation; and seminars and short courses. At an international level the program generated learning generated at an international event as: the second world platform for DRR in Genève (2009), the COP16 in Mexico (2010), The United Nations Conference Rio+20 and the World Climate conference in Genève (2009). Research & monitoring for adaptation (RMA). The program promoted and developed research focused on environmental change, weather and climate monitoring. Including observation and forecasting, impact and vulnerability assessments, farming systems and make communities more resilient to climate change.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The program considers UNFCC approach on assessing the impacts of and vulnerability to climate change and subsequently working out adaptation needs in adapting to the effects of climate change. UNFCC recommends analysing the vulnerability of developing countries to future climate change; develop adaptation plans, strategies and actions; and future adaptation options and identify needs. The project includes up streaming and down streaming interventions, which is also proposed by IIED Climate Change Working Paper No. 1, November 2011, "Tracking adaptation and measuring development proposes an approach to the evaluation of adaptation 'success' that combines assessment of how well climate risks to development are managed by institutions ('upstream'), with assessment of how successful adaptation interventions are in reducing vulnerability and keeping development 'on track' in the face of changing climate risks ('downstream').
Overall conclusion on effectiveness based on the evidence (1+2+3)	The program systematically addressed a broad suite of issues concerning the development of capacity to adapt to climate change at all levels of society, and appears to have done so with very effectively, so we are inclined to reflect this in an adaptation effectiveness score of '6'
Project design aspects	

CC-relevance of project design (Evidence and reasoning, Integrity of the RC pathway)	**Evidence and reasoning**. According to the program proposal, PACC was inspired by the message of the Federal Council of the Swiss Parliament; the SDC supports the vision that in rural areas, in particularly vulnerable areas, a sustained effort to adapt the effects of Climate Change is fundamental to sustainable development. The SDC program in Peru has three areas of interventions aimed at a sustainable management of natural resources. Several Programs funded in the framework allowed accumulate significant know-how in economic development and social decentralized in the Andean region of Cusco, Apurimac and Cajamarca. The program focuses its intervention in Cusco and Apurimac. One of the main goals of the program is the strengthening of local capacities and regional authorities, in order to guide public policy in their favour of Policy advocacy. (Score: 5) **Pathway integrity**. The program started with clear intended outputs and outcomes including climate adaptation in a detailed logical frame. The pathway followed by the program included vulnerability assessments as the first step towards the identification of adaptation and risk reduction measures. The program considered the on-going decentralization process in Peru. PACC in the design included a directive Board and a Technical Board, and defined clearly the 3 levels of intervention (Macro/National, Meso/Regional and micro/local) establishing coordination and information sharing. Moreover the program from the beginning included a regional information system to be available for the authorities and the public. Output: (a) Generate, collect and analyse CC- related data PACC worked at both the local and national level developing scientific knowledge while revaluing traditional know-how. The project developed a diagnostic of the vulnerability and identified climate adaptation actions with local authorities and local stakeholders. While at national and global level PACC used and applied information on global climate scenarios into national climate information system and mainstreaming CC in public policy. (a) Involve multiple stakeholders in multi-level dialogue on CC This program had a multilevel implementation framework that promoted a multi-level dialogue. It had a National leading committee that included Ministry of Environment and NGOs. At a regional (sub-national) level it had an operational unit were different regional directions were involved (including: socioeconomic, infrastructure, budget, etc.), and a multi-sectorial technical group. Outcome 1(a) increase in knowledge and awareness on CC and related vulnerabilities. Assessment of vulnerability and adaptation conditions to climate variability in Cusco and Apurimac regions, developed with the participation of authorities, institutions and affected population. Promoting local pilot Program on climate change adaptation. PACC developed Baseline studies linked with capacity building through applied courses and seminars. Outcome 2(a) decision-making is based on improved climate risk information. Output: integrate CC into development plans of all key sectors. Outcome1 (a) increased capacity for CC adaptation and risk reduction (to protect people´s livelihoods. The adaptation activities and local adaptation pilots in the prioritized watersheds included integrated risk reduction as part of their

	development process, linking adaptation to climate change with disaster risk reduction. PACC worked together with regional capacities and institutions, in the case of Disaster Risk Reduction, PACC works with the Peruvian Centre for Studies and Disaster Prevention (PREDES). Together they support the Regional Government of Cusco in updating the Regional Plans for Disaster Prevention. Outcome 2(a) increased community resilience to consequences of Climate change. Families in prioritized watersheds had their capabilities strengthened and climate change adaptation measures were implemented, contributing to the sustainability of livelihoods. Moreover, PACC prioritized communal actions on adaptation to climate change, and facilitate the engagement of communities in political dialogue with their local authorities. The program is now starting its new phase. Constructing over the previous work and ensuring its sustainability by including national programs in the implementation so that they start including CC into their interventions. The new Phase of the Program includes the consolidation of the 1st Phase and aims to contribute to consolidate livelihood and reduce the CC vulnerability of population of mid and high poverty rates in highlands of Peru. And the Programme through its Output wants to increase the adaptation capacities of high land communities in Apurimac and Cuzco to address the principal CC adverse effects on their means of living through the action of public and private stakeholders. The second phase is focused in 2 main areas that would be articulating strategies to address Climate Change in the regional Level, and reinforce the adaptation responses in the local level. And includes the involvement of the academia to train professionals regarding CC adaptation. Score 6
General quality of project design (Clarity of explanation, Extent of participation)	**Explanation clarity**. Logical activities starting from the basis of technical vulnerability assessment are explained in the proposal, and continuing by identification of adaptation measures and the validation within the 3 levels of work the program had established. Plus a component of capacity building and activities for mainstreaming adaptation into development plans are presented. (Score 6) **Participatory design**. The program was developed in a participative way from July to October 2008 and was validated by various stakeholders (of the 3 levels) in November 2008. The program involved the local authorities in its design and other key entities were identified for further coordination. Direct coordination with the Ministry of the Environment, which is the Climate Change National Authority, ensured the program's priority for the National Government. Co-financing opportunities were assessed early on, and accessed wherever possible as part of the program's strategy. (Score 6)

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00050.02.01, Green Credit Trust Fund Peru
Documents used	– Assessment of the Green Credit Trust Fund, Dr. Jürg M. Grütter - Grütter Consulting (01/2005) – Case summaries – Registros LCA (document used by Grupo Gea) – PowerPoint presentations made by BCP and Grupo Gea – Funding options for Small and Medium Size Enterprises to finance Cleaner Production projects and Environmentally Sound Technology investments – UNIDO
People interviewed	– Christian Robin (SECO) – Zinnia Ibañez Calle (SECO) – Marcos Alegre Chang (Grupo Gea) – Ana Terrazos (Grupo Gea) – Ing. Carlos Macines Romero (Papelera Panamericana S.A. – Beneficiary) – Juan Laza Manrique (Papelera Panamericana S.A. – Beneficiary) – Ing. Javier Rivera (AID Ingenieros – Beneficiary)
Basic data	– Total budget: 6,941,805.31 – Disbursed (2003 – 2013): 6,750,000 – Start date: 01/04/2003. End date: 31/03/2013 (extended until 2018)
Location	Peru, and Peruvian SMEs nationwide with the following characteristics: – Annual turnover: ≤ USD 8.5 million – Employees: 500 max – Not a subsidiary or branch of a foreign company
Partners	– Interbank, Scotiabank and Banco de Credito Popular (BCP): management of credits from a financial perspective – credit evaluation of applicants, disbursement of credit and reimbursement of the loan aCCording to the achieved environmental goals. BCP managed 16 of the 17 cases, Scotiabank 1, and Interbank 0. – Grupo Gea/Cleaner Production Centre (CPC): ensures that the end use of the loan is in line with the project objectives and criteria, agrees with the company on the environmental goal to be achieved and monitored, monitor the environmental indicator, and approves partial reimbursement of the loan based on degree of achievement of the agreed environmental goal. – Swiss Federal Laboratories for Material Science and Technology (EMPA): provides technical support to CPC
Result chain	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through access to credit for low-carbon technologies in SMEs, and can be measured in terms of percentage of efficiency increase, tCO_2e avoided, and economic competitiveness. **Output**: (a) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient; (b) increased use of EE standards in manufacturing processes. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to greener products. **Validation criteria: Applied technology for mitigation, Capacity building for mitigation (CBM)**.
Purpose	The project was designed to foster sustainable industrial production modes through the promotion of investments in Environmentally Sound Technologies (ESTs) including eco-efficient processes and end-of-pipe technologies. The project increases the attractiveness of ESTs by providing a guarantee fund to cover up to 50% of the required loan, and a partial

	reimbursement of the capital investment (up to USD 200,000) depending on the magnitude of the environmental benefits that are monitored with the help of the CPC. Each grantee agreed with CPC on an environmental goal and related indicator to be measured ex-ante and ex-post to determine the degree of success in achieving that specific environmental goal. The project supported SMEs of many different areas, except SMEs that manufacture ESTs technology.
Pre-review estimates of CC relevance (*Prima facie* CC relevance)	SDC/SECO assessed this project as 50% relevant to CC mitigation, and it was validated by the review team as meeting the criterion **Applied technology for mitigation**.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The project contemplated the ex-ante and ex-post measurement of an agreed environmental goal for each of the credits given to SME's. A 2005 assessment of the project conducted by Grütter Consulting states the significance of the projects in terms of GHG emission reduction (Chart 1) and that the project could be eligible for a CDM scheme. Nevertheless, the report was made in 2005 when only the ex-post studies were available and thus based on empirical environmental impacts expected to be achieved after the completion of said report. The CPC, through Grupo Gea, monitored goals and indicators since then, and according to BCP about 30 SMEs applied for a loan under this scheme, with 17 of them (about 56%) being successful. Only one of these has not reached the expected environmental goal, and 11 had objectives relevant to climate change mitigation. On average they achieved a 74% reduction of their emissions, according to the CPC amounting collectively to around 50,000 tCO_2 reduction per year. Considering the CC relevant investment made (CHF 3,5 million) the ration of investment per tCO2 reduction comes close to CHF 70 per tCO2 reduced. Chart 1: Environmental improvement of core indicators  Source: Green Credit Trust Assessment Report/Grütter Consulting
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Perhaps the most important "side effect" of the project is the knowledge gain at the financial institution level on handling environmental and technology upgrading investments and assessing environmental risks. Also for the participating SMEs that can see an economic benefit out this intervention born to reduce environmental impact. Both of these experiences could trigger further similar initiatives or the interest of SMEs to invest in cleaner production based on the successful experiences of this project.
3. Reasons to expect CC effectiveness of this kind of project based on other	Providing financial support for cleaner production is related to CC mitigation because of the high chances of achieving GHG emission reductions by fostering cleaner production. In the case of the GCTF almost 65% of the projects financed had environmental objectives relevant to CC

knowledge	mitigation. SECO has identified that the lack of access to favourable financing opportunities is a significant barrier towards the substantial implementation of cleaner technologies in SMEs in Peru[66], and therefore, facilitating the access to financial aid is assumed to be an attractive and effective way of addressing the issue within SMEs in Peru.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Based on the evidence, the project is given an overall mitigation effectiveness score of '5' (*strong effectiveness*).
Project design aspects	
CC-relevance of project design (Evidence and reasoning, Integrity of the RC pathway)	**Evidence and reasoning.** It is understood that the project was not designed to tackle CC mitigation although the area addressed by the project (cleaner production) has an impact on CC mitigation as explained in section 3. As the credit proposal is not available, confirmative evidence and reasoning upon which the project was based is not available, and we provide a tentative score of 3**.** **Pathway integrity.** The RC4 definition gathers most, if not all, the activities designed into the project. It is therefore considered that the integrity of the pathway was very much maintained by the design of the project. However, CC as such is not being tackled and we therefore give a score of **4.**
General quality of project design (Clarity of explanation, Extent of participation)	**Explanation clarity.** Only the decision note for Phase II is available, and it presents the material in a generally clear way (score '4'). **Participatory design.** UNIDO, UNEP and SECO are keen to ensure that information, experience and expertise obtained by the different NCPCs is effectively shared and made available to other NCPCs, and foster staff mobility and other forms of knowledge exchange between NCPCs in different countries. This is being achieved through meetings of the NCPC directors, regional cooperation and network promotion. Representatives from CPC Peru had participated in annual NCPC meetings organized by UNIDO, but no evidence could be found as to the usefulness of these meetings. The CPC also participated in the UNIDO CP Latinnet project, aimed at establishing a sustainable network of CP institutions across Latin America. Apart from that, CPC participated in the "Red Convenio Andrés Bello de Producción Limpia", a network supported by GTZ/GIZ and hosted by ITACAB, an institute for the transfer of appropriate technology. **Score:** '5'

[66] Funding options for Small and Medium Size Enterprises to finance Cleaner Production projects and Environmentally Sound Technology investments – UNIDO

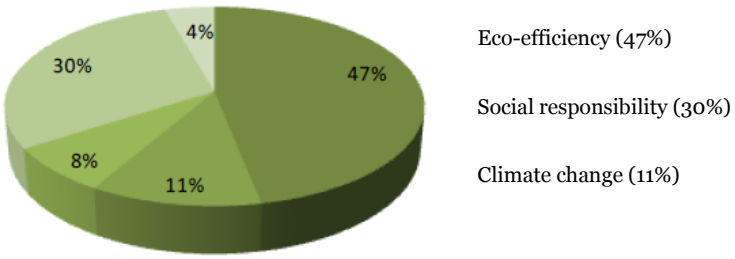
Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO, Peru Biodiverso UR-00276.01.01 Biotrade PE, Phase I, USD UR-00276.02.01 Biotrade PE, Phase II, EUR
Documents used	– Phase I closure report 2007 – 2010 – Midterm Report 2009 – www.perubiodiverso.pe – BioTrade Principles and Criteria
People interviewed	– Christian Robin (Head of SECO Peru) – Zinnia Ibañez Calles (Project officer SECO) – Joan Barrena (Principal advisor to the project GTZ/GIS) – Vanessa Ingar (Biodiversity unit - Ministry of Environment of Peru, MINAM)
Basic data	– Total budget: USD 2,500,000 – Disbursed (2002 - 2006): USD 2,287,327 – Start date: 01/01/2007. End date: 30/06/2010
Location	Peru: Bombón plateau - Junin/Pasco (central), Loreto (northeast), Cajamarca (northwest) and San Martin (north). These are among the most biodiverse areas in the country.
Partners	– Ministry of Foreign Trade and Tourism (MINCETUR) – cofounder and member of the steering committee with responsibility for ecotourism matters. – Ministry of Environment (MINAM) – cofounder and member of the steering committee, with responsibility for the development of relevant policies. – GTZ/GIZ – technical assistance focused in increasing the value chain of selected products. – Commission for the Promotion of Peruvian Products (PROMPERU).
Result chain	**RC5 - Mitigation: Sustainable Standards**. A pathway to reduce GHG emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. Output: (a) establish access to markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification. Outcome 1: (a) greater use of sustainability certification standards in the commodities trade. Outcome 2: (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets. Validation criteria: Regulations & incentives for mitigation.
Purpose	The project aims to contribute to improving the livelihoods of the rural population through sustainable use of biodiversity. Its aim is to validate biotrade as a sustainable business model to boost the competitiveness of enterprises that apply the Principles and Criteria of BioTrade, and, through the value chain approach, to build links between local producers and the local and international markets to achieve a more equitable distribution of benefits. The project is an initiative within the National Programme for the Promotion of Biotrade (PNPB) and focuses on increasing the value of six native species of Peru (maca *Lepidium meyenii*, camu camu *Myrciaria dubia*, tara *Caesalpinia spinosa*, yacón *Smallanthus sonchifolius*, copaiba *Copaifera paupera*, and sacha inchi *Plukenetia volubilis*), as well as ecotourism. The work was to be carried out at all stages of the chain

	from primary production to promotion and marketing of these products with emphasis on external markets, alongside the legal and political framework at the national and regional levels.
Pre-review estimates of CC relevance	The project was assessed by SDC/SECO as 50% relevant to mitigation and initially validated by the review team according to the criterion **Applied ecology for mitigation**
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	There is no direct evidence of CC mitigation in the available documentation. Joan Barrena (principal advisor for the project working for GIZ) considers that the project has a very small impact in CC mitigation, particularly direct impacts. The project focuses on giving increased value to native species, working at the agricultural and market levels. Some of the species supported by the project promote the conservation of forests (such as cacao and copaiba) while others (such as sacha inchi) need to grow in the open sun, with no forest cover. The project also supported the development of improved/more energy efficient kettle to obtain *algarrobina* syrup extracted from the carob tree (*Prosopis nigra*). These improved kettles use LPG to run instead of firewood. Unfortunately, no quantification of the reduction in firewood is available and Mr Barrena explained that the additional cost of running the kettles with LPG is jeopardising the continuation of their use. A student/intern conducted a study of the impact of climate change over some of the species addressed by the project but did not estimate the impact on climate change from the project itself.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project significantly influenced the creation of the REDD+ roundtable in Peru, and its representatives chaired one of the thematic groups. The project is being implemented following the Bio Trade Principles and Criteria[67] (which do not mention climate change as a priority).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	A similar project was reviewed by the team in South Africa showing the same dilemma and lack of tangible information to make reasonable and defensible estimations on CC mitigation. The project reviewed in South Africa was rated as irrelevant to CC mitigation (with an effectiveness score of '1').
Overall conclusion on effectiveness based on the evidence (1+2+3)	The evidence suggests that the project was only weakly effective, if at all, in relation to CC mitigation (**overall mitigation effectiveness score: '2'**).
Project design aspects	
CC-relevance of project design	**Evidence and reasoning.** The available documentation does not mention a CC challenge, and therefore also no approach to address it. The score given is "1" **Pathway integrity**. Looking at the RC5 - Mitigation: Sustainable Standards it can be seen that the project has activities related to (a) establishing access to markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification; and Outcome 1: (a) greater use of sustainability certification standards in the commodities trade. Outcome 2: (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets. The score given is "5"

[67] http://unctad.org/en/docs/ditcted20074_en.pdf

General quality of project design	**Explanation clarity**. The funding request document 2007 – 2009 is available in German only. Efforts were made to translate the document into English with internet tools that have some limitations. The translated document showed an understandable and logical project design. The score given is "5". **Participatory design**. This project was designed in close cooperation with the members of the Commission for the Promotion of Trade in Biodiversity Products - under the direction of PROMPERU. It focused on the value chain of products working closely with producers and exporters. The implementation strategy followed a demand-driven approach where the services are defined according to the needs of companies and their suppliers and delivered with the help of relevant experts. **Score: '5'**

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO, Cleaner Production Centre UZ-00988.01.01 CPC: Peru Phase I (EMPA) UZ-00988.01.03 CPC PE II
Documents used	– Completion Note : Knowledge Management Network CPCs LA – Completion Note: Cleaner Production Center Peru – Progress Report – April 2012 (Daniel Ott) – Impact of the cleaner production in the Latin American region – Resource Efficient and Cleaner Production (RECP Net) – Independent Evaluation and Strategic Review of the UNIDO/UNEP Cleaner Production Programme and Related Initiatives – November 2007 (Johannes Dobinger and Maria del Pilar Pinto De La Sota) – Decision note (Entscheidnotiz) Phase II – Credit Proposal Phase II
People interviewed	– Christian Robin (SECO) – Zinnia Ibañez Calles (SECO) – Marcos Alegre Chang (Grupo Gea) – Ana Terrazos (Grupo Gea)
Basic data	– Total budget: 1,836,300 – Disbursed (2002 - 2006): 1,836,300 – Start date (Phase I): March 2002. End date: June 2006 – Start date (Phase II): June 2007. End Date: 2010
Location	– Peru, Nationwide
Partners	– Consejo Nacional del Ambiente (CONAM): Created in 1994, acts as the national environmental authority and as the national coordinator between sectorial environmental authorities, regional governments, and local governments, in environmental matters. As the National Environmental Authority, CONAM promotes the implementation of the Cleaner Production (CP) concept as one of the strategies that guarantees the sustainable development, fostering competitiveness and efficiency, as well as environmental management. CONAM was the national coordinator of the project during Phase I. In 2008 a new institution replaced CONAM: the Ministry of the environment (MINAM). – USAID: The US Agency for International Development co-financed with SECO Phase I of the project – Grupo Gea: joined the project in Phase II to be in charge of its implementation. – UNIDO: was the initiator of the Cleaner Production Programme at a Regional level but did not have role in the project. – Swiss Federal Laboratories for Material Science and Technology (EMPA), the University of Applied Sciences of Basel (FHBB), and two consulting firms (one from Switzerland and the other from the USA) provided technical support during Phase I of the project.
Result chain	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency (EE) through access to credit for low-carbon technologies in SMEs, and can be measured in terms of percentage of efficiency increase, tCO_2e avoided, and economic competitiveness. **Output**: (a) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient; (b) increased use of EE standards in manufacturing processes. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic

	competitiveness due to greener products. **Validation criteria: Applied technology for mitigation, Capacity building for mitigation, Education & training for mitigation**
Purpose	To support the development of the Peru National Cleaner Production Centre
Pre-review estimates of CC relevance (*Prima facie* CC relevance)	SDC/SECO assessed this project as 50% relevant to CC mitigation, and it was validated by the review team as meeting validation criterion **Applied technology for mitigation**.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The only piece of information found with quantifiable data on GHG mitigation is the "Impact of the cleaner production in the Latin American region – Resource Efficient and Cleaner Production (RECP Net)" report which indicates that the CPC in Peru managed to reduce, in the period 2002 – 2012, a total of 354,250 tCO2 (35,425 tCO_2 /year), from the interventions/improvement made by the audited companies – reduce in energy and water consumption, reduction in waste, etc. This represents a net cost of CHF 5.18/tCO_2 which is below the estimated average offset cost of CHF 7/tCO_2. The action areas of current intervention of CPC are: eco-efficiency, financial assistance related to the environment, climate change, social responsibility and special projects. The distribution of projects among these action areas is shown in Chart 1, where it can be seen that climate change comes up as third with 11% or about 25 projects executed in relation to this matter. Chart 1: project executed per action area.  Source: Impact of the cleaner production in the Latin American region – Resource Efficient and Cleaner Production (RECP Net)
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The CPC has been very active in awareness raising and capacity building. The "Impact of the cleaner production in the Latin American region – Resource Efficient and Cleaner Production (RECP Net)" shows that between 2002 and 2012, CPC organised an annual average of: - 4.5 seminars - 6 awareness-raising talks - 4 fairs and events - 8 courses (with a total of 281 participants and 648 days of courses) These awareness raising and capacity building activities can indirectly bring CC benefits.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	There is clear linkage between energy use, water and chemicals in the industrial sector. Examples: (a) the use of 150 m^3/t in making paper, rather than the 5-10 m^3/t that is now standard best practice, feeds into the energy costs of pumping and heating surplus water, and treating or dumping waste water; (b) done properly, recycling is always going to reduce energy consumption as preparing raw materials is very energy intensive (e.g. recycled aluminium saves 90-95% energy); (c) changing

	energy mixes can make a big difference (e.g. methane vs coal). Thus cleaner production improvements tend to have multiplier and leverage effects. There is evidence from UNIDO that national CPCs (NCPCs) are associated with reducing GHG emissions: (a) NCPCs and other institutions in nine Asian countries collaborated in a three-year project that demonstrated the application of CP methods for achieving energy savings and GHG reductions in the pulp and paper, cement, iron and steel, chemicals and ceramic sectors, with GHG emission reductions being verified for 38 demonstration plants as just over 1 million tCO_2e per year; (b) the implementation at a small lead foundry of several CP options in Peru, suggested by the NCPC, reduced the lead content in waste by 19%, enabled the recovery of nearly 350 tonnes of lead per year and reduced water and energy consumption, with total GHG emissions reduced by 270 tonnes annually, and investment costs being recovered within several months; and (c) with the assistance of the NCPC in Sri Lanka, a desiccated coconut mill reduced its waste output by 18 tonnes per year, which achieving considerable reductions in water and energy use, and reducing total GHG emissions by almost 1,000 tCO2e per year, all due to an investment of less that US$ 17,000 that yielded annual cost savings of more than US$ 315,000. Thus there are good reasons to expect NCPCs to contribute to mitigation, but as the reviewed cases for South Africa and Vietnam elsewhere show, as in Peru, data are scarce upon which to base an estimate of effectiveness.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Based on the evidence, it can be seen that the CPC project had some effect in directly reducing GHG emissions, as well as no doubt numerous collateral environmental and other benefits, also from the awareness raising and capacity building components. However, follow up on the implementation of identified savings potential as well as monitoring of CO_2 savings seems to not have been a priority of the project. We are therefore inclined to recognise moderate effectiveness with a mitigation score of '4'.
Project design aspects	
CC-relevance of project design (Evidence and reasoning, Integrity of the RC pathway)	**Evidence and reasoning.** Climate Change is not mentioned in the Phase II Credit Note, but the objective of promoting cleaner production inherently includes CC mitigation. **Score '4'** **Pathway integrity.** Outcome 1 "(a) production processes & energy systems are more efficient; (b) increased use of EE standards in manufacturing processes", and Outcome 2 "(a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to greener products" are addressed by the project design. **Score '4'**
General quality of project design (Clarity of explanation, Extent of participation)	**Explanation clarity.** The project design in the Phase II Credit Note is clearly explained. **Score: '5'** **Participatory design.** At a programme level, the UNIDO Regional Cleaner Production Programme for Latin America established a Knowledge Management System (KMS) that created a common Internet based platform that enabled all the participating countries to enhance information and experience sharing and coordinate regional initiatives. The establishment of the KMS was accompanied by the development of anorganisational structure to establish and foster the mechanisms of coordination among the members of the programme. Furthermore, CPC in Peru was established through a memorandum of understanding (MOU) signed by CONAM, USAID and SDC/SECO in July 2000. After a bidding process to select the most suitable counterpartorganisations, CPC Peru was officially launched in March 2002. In 2005, CONAM approved the Environmental National Agenda

	(2005-2007) giving priority to actions oriented to implement Cleaner Production programmes and policies at the national, regional and local level. In this frame, the National Strategy for the Promotion of Cleaner and more Efficient Production was released with the aim of promoting efficient productivity, competitiveness and socio-environmental responsibility. This evidence shows that the project followed a participatory approach with the local regulatory framework as well as regionally through the network of CPC in Latin America and the rest of the world. **Score '4'**.

E.3. Field mission and people consulted

The Peru field mission took place in December 2013, with meetings concentrated between 13 - 19.12.2013, covering stakeholder meetings in the capital Lima as well as in Arequipa, Cusco and Andean communities in the Cusco department. The mission team consisted of Mr Juan Gollan (team leader) and Ms Vanessa Vereau (national consultant). Both a kick-off (13.12.2013) and debriefing (19.12.2013) meetings were conducted with SDC and SECO representatives in Lima. A presentation was made with the objectives and agenda of the mission, while the key preliminary findings were presented at the debriefing session. The list of people interviewed during the mission is presented in Table 5.

Table. List of people consulted

Name	Organisation
Mr Christian Robin	SECO/Swiss Embassy
Ms. Zinnia Ibañez	SECO/Swiss Embassy
Mr Jean-Gabriel Duss	SDC/Swiss Embassy
Ms. Jocelyn Ostolaza	SDC/Swiss Embassy
Ms. Laura Moreno	SECO/Swiss Embassy
Mr Juan Narcizo	Environmental Quality Unit, Ministry of Environment - MINAM
Mr Joan Barrena	GIZ
Mr Marcos Alegre Chang	Grupo GEA
Ms. Ana Terrazos	Grupo GEA
Mr Roberto Kometter	Helvettas
Dr. Zacarias Madariaga Coaquira	National Health Unit
Mr Carlos Macines Romero	Papelera Panamericana S.A.
Mr Javier Rivera	AID Ingenieros EIRL
Ms. Ninoska Rosas Palma	Natural Resources Regional Coordination - Cusco
Ms. Lenkiza Angulo	Helvettas
Ms. Patricia Camacho	Helvettas
Mr Rene Bonern	Cusco Regional Government
Mr Lino Orccohuarancca	Cusco Regional Government
Mr Flavio Valer Barazorda	PACC
Ms. Ricardina (beneficiary)	PACC
Mr Elio (beneficiary)	PACC
Ms. Elizabeth (beneficiary)	PACC
Mr Eduardo Talavera	National Council for the Environment (CONAM)
Mr Luis Zapata	Swisscontact
Mr Ismael Sutta	Provincial Municipality
Mr Eduardo Durand	Ministry of Environment
Ms. Vanessa Ingar	Biodiversity unit - Ministry of Environment

F. In- depth review of selected projects in Nepal

F.1 Projects reviewed

Within the effectiveness assessment six projects were chosen for more detailed review in Nepal, in line with criteria presented in the final Inception Report (dated 20.9.2013). All projects were funded by SDC.

- 7F-03093 Hill Maize Research Project in Nepal (HMRP)
- 7F-07309 Multi Stakeholders Forestry Programme (MSFP) (Nepal National Forestry Programme)
- 7F-03128 Nepal Swiss Community Forestry Project (NSCFP)
- 7F-08073 Power Plant Extension SCECO
- 7F-03149 Sustainable Soil Management Program (SSMP)
- 7F-01898 Vertical Shaft Brick Kiln Project / Clean Building Technologies for Nepal (VSBK)

A priori, according to SDC, three of these projects were classified as climate adaptation and mitigation relevant projects (30/30%, 50/50% and 75/25%), two projects partly relevant to adaptation (10% and 25%) and one project 100% relevant to mitigation. Three of the projects have been termed principal in their climate orientation and thee as significant as elucidated in the Handbook on the OECD-DAC Climate Markers.

The review results are presented in the assessment templates below (section F.2). The field mission team and people consulted during the field mission are presented in section F.3.

F.2 Review results

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-03093, Hill Maize Research Project in Nepal (HMRP)
Documents used	End of phase report 2011 Assessment of Local Adaptation Measures to Climate Change, MSFP 2013 Credit proposal for phase III Credit proposal for phase IV Mid-Term Review of Phase II of the Hill Maize Research Programme in Nepal (Draft 2004) Review of seed projects in Nepal, Final report (2009)
People interviewed	Yamuna Ghale, Senior Programme Officer, SDC Kathmandu G. Ortiz-Ferrara, Leader-HMRP and Principal Scientist, CIMMYT Dilli Bahadur KC, Agriculture Economist, CIMMYT District Agriculture Development Office at Manthali, Ramechhap: • Raj Dev Yadav, Junior Technician • Krishna Bahadur Bhujel, Junior Technician • Bishnu Chaulagain, Planning Section
Basic data	Start of project: 01.01.1999 (start of first phase) End of the project: 30.07.2014 (end of IV phase) SDC Budget (until the end of the 3rd phase): CHF 10,0 million. According to the master Excel, the project budget 2000-2012 was CHF 7,7 million.
Location	Nepal. The second and third phases of the project engaged with 31 districts (Arghakhanchi, Baglung, Bhojpur, Dadeldhura, Dailekh, Dang, Darchula, Dhankuta, Dolakha, Doti, Gorkha, Gulmi, Ilam Kavrepalanchowk, Khotang, Lalitpur, Makawanpur, Myagdi, Nuwakot, Okhaldhunga, Palpa, Parbat, Pyuthan, Ramechhap, Sagarmatha, Salyan, Sinddhupalchowk, Sindhuli, Surkhet, Syangja, Tanhun, and Terhathum). The fourth phase engaged with 20 districts Okhaldhunga, Khotang, Ramechhap, Dolakha, Sindupalchowk, Kavre, Dhading, Syangja, Palpa, Baglung, Gulmi, Jajarkot, Surkhet, Dailekh, Kalikot, Achham, Doti, Dadeldhura, Bajhang, and Baitadi). In Nepal farming, especially of maize (an exotic crop of Mesoamerican origin), is now the main source of subsistence in remote hilly areas. In such locations, however, limited access to improved seeds, fertilizers, extension services and market opportunities severely constrain livelihoods. Thus poverty and food insecurity are chronic challenges, and in recent years they have been aggravated by delayed rainfall and floods during summer, and prolonged droughts in winter, which are all attributed to climate change.
Partners	Main implementing partner: Centro Internacional de Mejoramiento de Maíz y Trigo (International Maize and Wheat Improvement Centre, CIMMYT) Main National Partners: • Nepal Agriculture Research Council (NARC) - varietal and technology development (list of research institutes available on request) • Department of Agriculture (DoA)

	○ National Seed Board (NSB) ○ Seed Quality Control Centre (SQCC) ○ Crop Development Directorate (CDD) ○ Agriculture Information and Communication Centre (AICC) • Non-Governmental Organisations (NGOs) (full list available on request) • At the region and district levels, Regional Agricultural Research Centres RARSs and District Agricultural Development Offices (DADOs) are the focal institutions for the overall implementation and monitoring of the project • Private seed entrepreneurs
Result chain	**RC7: Adaptation Capacity.** A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectorial and cross-sectorial adaptation planning and to deliver resources to support local adaptation efforts. **Output:** integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).
Purpose	To improve food security among hill farmers in Nepal by commissioning CIMMYT to continue developing, distributing and encouraging the uptake of higher-yielding maize varieties. HMRP targets to increase the maize supply of Nepal through conducting research on maize varieties, dissemination of chosen varieties to the hill farmers, establishing participatory variety selection, validation and certification methodologies, certification of nine improved varieties and production of millions of tons of improved maize seeds, and linking farmer's feedback to policy decisions through farmer's assessment tests over released varieties. HMRP has also contributed to establishing a national research system and strengthening farmers' groups to produce maize seeds and deal with markets for better and assured prices. The overall goal of HMRP is: "Farm households in the hills of Nepal, especially of poor and disadvantaged groups, have improved food security and incomes." The expected outcomes for the fourth phase of the project were Outcome 1 (phases III and IV): Hill maize farmers, especially from poor and disadvantaged groups, adopt new and profitable maize varieties and improved technologies to enhance productivity and marketing opportunities Outcome 2 (phase III): NARC and National Seed Board (NSB) have enhanced institutional capacity to promote source seed production and facilitate certification procedure Outcome 2 (phase IV): National Seed Board (NSB), the National Agricultural Research Council (NARC) and the Department of Agriculture (DoA) enforce quality control through both public and private institutions.
Pre-review estimates of CC relevance	SDC assessed the project as 10% relevant to CC adaptation. The review team were unable to validate the project by any criterion. This was mainly due to lack of sufficient project documentation available.
Evidence for climate change mitigation and/or adaptation effectiveness	

1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	None.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project has conducted research on maize varieties, disseminated chosen varieties to hill farmers (amounting to 62% of national seed supply), established participatory variety selection, validation and certification methodologies, certification of nine improved varieties and production of millions of tons of improved maize seeds, and linking farmer's feedback to policy decisions through farmer's assessment tests over released varieties. It has strengthened the capacity of National Seed Board (NSB), the National Agricultural Research Council (NARC) and the Department of Agriculture (DoA) to undertake all these activities. It has also contributed to establishing a national research system and strengthening farmers' groups to produce maize seeds and deal with markets for better and assured prices. Thus the project has been successful in developing and disseminating new maize varieties that are adapted to environmental conditions in mountainous areas, in certifying the new varieties, and linking farmers' feedback to policy decisions (Credit proposal for phase IV). The first phase focused on research, while the second and third phases put more emphasis on the dissemination of new varieties to hill farmers. The on-going fourth phase targets the strengthening of seed dissemination channels and developing market links. The earlier phases focused on seed production volume, followed by more attention to nutritional issues, and lately the focus has switched towards climate change resilience (interview with Yamuna Ghale). The result has been the development of varieties with better drought and heat resistance, reduced need for nitrogen, and improved productivity (interview with CIMMYT representatives). According to the 2009 joint review of two seed projects in Nepal, HMRP has contributed to increasing household incomes through higher productivity (estimated by the project at about 20%) and intensification of farming practices. More than 50,000 households have been included in project activities to date. The project has also contributed to an understanding of the importance of agricultural research at the national level, and has increased research capacity among national agricultural institutions. Both effects are likely to contribute to sustainability and a national capacity to adapt to climate change. Although intercropping practices introduced through the project may increase soil carbon, mitigation effects are likely to be very minor.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	-
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project has built up arrangements for studying farming systems, developing new cultivars and delivering them to farmers, and these arrangements are appropriate to and have recently been deliberately applied to CC adaptation needs at the village and district level. We are inclined to recognise the increased focus on adaptation with an assessment of moderate effectiveness (score '4').
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. Climate change was not mentioned in any of the project design documents, so they must be considered to be seriously deficient from this point of view (score '1'). **Integrity of the RC pathway**. The function of increasing national

	capacity for agricultural research and development, and the development of cultivars better adapted to changing and/or harsh environmental conditions, are central contributions to the relevant adaptation pathway (score '5').
General quality of project design	**Clarity of explanation**. The credit proposals for project phases III and IV provide clear reasoning for the project and elaborate well the expected key outputs and outcomes, and although a logframe was only available for phase IV, the activities mentioned there were clearly connected to the expected outputs and outcomes, so we are inclined to recognise the clarity of explanation as very good (score '6'). **Extent of participation**. In a 15-year engagement with scores of districts and tens of thousands of farming households, and with arrangements in place to promote beneficiary participation and to obtain feedback from beneficiaries and link this both to policy and research direction, the extent of participation in project design must be considered to be excellent (score '7').

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	7F-07309 – Multi Stakeholder Forestry Programme (Nepal National Forestry Programme)
Documents used	Credit proposal for phase I Review and Analysis of Community Adaptation Plan of Action and Local Adaptation Plan of Action, MSFP 2013 Multi Stakeholder Forestry Programme Nepal, Annual Progress Report (16 July 2012–15 July 2013) MSFP information leaflet Two decades of community forestry in Nepal, Nepal Swiss Community Forestry Project 2011
People interviewed	Bimala Rai Paudyal, Senior Programme Officer, SDC Nepal Reshma Bahadur Dangi, Chief REDD Cell and Chief Community Forestry Division, Ministry of Forest and Soil Conservation Ram Prasad Lamsal, Project Coordinator of MSFP, Ministry of Forest and Soil Conservation, Kathmandu Bharat Pokharel, DCD, Helvetas Nepal, Kathmandu Ramu Subedi, Team leader, MSFP, Kathmandu Pekka Seppala, Embassy of Finland, Kathmandu Chudamani Joshi, Embassy of Finland, Kathmandu Sabita Thapa, Climate Change Advisor, DFID Nepal Netra Prasad Timsina, Civil Society Leader, involved with Forest Action Nepal and other forestry NGOs, Kathmandu Ram Sundar Shah,Assistant DFO, Ramechhap Shiva Bahadur KC, Ranger, District Forest Office, Ramechhap Rabindra Maharjan , DFO, Dolakha • Federation of Community Forest Users of Nepal (FECOFUN), District Committee, RamechhapNarayan Karki, President • Bina Don Tamang, TFO • Ramkrishna Nepali,FO • Durga Shrestha, FP • Bodh Bahadur Khadka, Office Staff Mohan Bahadur Karki, Chairperson, Piple CFUG, Ramechhap Badri Dhungel, Piple CFUG Member, Ramechhap Sangeeta Lama, ECARDS Nepal/MSFP, Ramechhap Chhatra Mishra, ECARDS Nepal/MSFP, Ramechhap Lokmanai Sapkota, ECARDS Nepal/MSFP, Ramechhap
Basic data	Start date: 16.07.2011, end date: 15.07.2015 (First phase). The programme agreement was signed in January 2012, and the programme was officially launched on 12 December 2012. **Total project budget from grants: USD 150 million (over two phases)** **Budget per donor:** **SDC: CHF 14 million (first phase), CHF 40 million (tot. for two phases)** **DFID**: GBP 20 million (first phase), GBP 40 million (tot. for two phases)

	Finland: EUR 10.2 million (first phase), EUR 34 million (tot. for two phases) The programme start-up was delayed due to lengthy negotiations between the Government of Nepal and the donors. Therefore the MSFP has only been on-going for one year at the time of this review, and therefore there is not yet evidence of direct effectiveness on CC mitigation or adaptation. The first annual report of the programme, dated for August 2013, states the following: "The Multi Stakeholder Forestry Programme (MSFP) started its operation in January 2012. Last year was spent mainly on setting the implementation systems, plans, procedures and arranging the delivery mechanisms. The programme delivery at field level was mainly carried out after March 2013 after Non-Governmentalorganisation (NGO) implementing agencies were contracted and District Forest Office (DFO) annual programmes were approved by the Government of Nepal (GoN)".
Location	**Fully supported districts (35) :** Sankhuwashabha, Terathum, Dhankuta, Bhojpur Baglung, Parvat, Myagdi, Rukum, Rolpa, Salyan, Pyuthan, Dang, Lumbini terai: Kapilvastu, Rupandevi, Nawalparasi ,Ramechap, Okhaldunga, Khotang ,Kalikot, Accham, Dailekh, Jajarkot , Bajang, Bujura, Doti, Jumla, Surkhet, Jhapa, Morang, Sunsari, Sinduli, Udayapur, Solukhumbu, Mugu , Argakhachi **Partially Supported :** 26 **Total:** 61 Nepal has 25% population living below absolute poverty. The country is very vulnerable to the effects of climate change and political instability has undermined country's ability to address these issues. Forests, covering 40% of Nepal's land, provide goods and services to communities and reduce their vulnerability to climate change. At the same time weak forest governance contributes to deforestation (with 1.7% annual rates), and impunity and corruption do not allow the forestry sector to maximise these potentials. Currently 23% of forests in Nepal are under effective management through community forestry (CF). Records show that forests managed by communities have lower deforestation state, experience accelerated reforestation and have visible impact on livelihood improvement and poverty reduction through forest based employment.
Partners	**Funding partners**: SDC, DFID and Government of Finland **Implementing partners**: Ministry of Forests and Soil Conservation (leading the Multi Stakeholder Steering Committee and home to the Programme Coordinator's Office. Services Support Unit (SSU), established and managed by SDC (manages the programme during the initial phase) **Other partners**: Min. of Environment, NGOs, Private organisations, NRM Parliamentary committee, Federations and associations of users, Civil Society Groups, Academia
Result chain assigned by SDC/SECO	**RC7-Adaptation Capacity:** to build national capacity (possibly via a regional or international institutional intervention) to undertake sectorial and cross-sectorial adaptation planning and to deliver resources to support local adaptation efforts. **Output: integrate CC adaptation into development plans of all key sectors (e.g agriculture, forestry, water, health, land use, urban planning)** : Outcomes 1: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods)

	Outcomes 2 increased community resilience to the consequences of climate change. **Expected validation criteria:** Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation(RFA)
Purpose	MSFP aims to improve the livelihoods and resilience of poor and disadvantaged people in Nepal and develop the contribution of Nepal's forestry sector to inclusive economic growth, poverty reduction and tackling climate change (CC). The expected outcomes of the programme are 1. The government and non-state actors jointly and effectively implementing inclusive forest sector strategies, policies and plans 2. The private sector (farmers, entrepreneurs, and financial institutions) increase investment and jobs in the forestry sector 3. Rural communities – especially poor, disadvantaged and climate vulnerable people and households - benefit from local forest management and other investments 4. Forest and trees are sustainably managed and monitored by government, communities and private sector and climate resilient
Pre-review estimates of CC relevance	According to the SDC/SECO, the project is 25 % relevant to CC mitigation and 75% relevance in climate adaptation. The initial assessment by the review team identified the project to fall under Cluster 3 Ecosystem management. Initially the project was identified to fulfil the validation criteria for Applied Ecology for mitigation (Applied ecology for mitigation (AEM); Mainstreaming of mitigation (MOM).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	No information available on direct CC effectiveness yet.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The whole programme targets improvements in the livelihoods of the poor through sustainable forest management in order to help local people to build their resilience to climate change. The programme is targeting to reduce the climate vulnerability of 560,000 households and to increase the area of forests managed by local forestry groups by 100,000 hectares. Basically all the planned project activities contribute to CC adaptation by improving the livelihoods and the capacity of the poor and disadvantaged to make better living from sustainable forest management. In addition to the increase in income, the poor are expected to benefit from soil conservation and improved flood control, both results of sustainable forest management. Sustainable forest practises also contribute to improved watershed management and therefore reduce the communities' vulnerability to drought. The most CC relevant activities implemented during the first project year include the following: Climate change adaptation options have been explored, climate change vulnerable households received adaptation specific services and started practicing activities that reduce their vulnerability, 2,921 households received services (financial and technical) in activities on developing climate resilience of the local communities, a total of 1.8 million seedlings are planted in

	government, community and private land, a PES mechanism is being piloted in five different sites including 10 village development committees and forest-fire management capacity has been enhanced (Annual progress report 2012-2013). In interviews with the Federation of Community Forestry User groups (FECOFUN), Piple CFUG members and ECARDS Nepal (implementing partner for MSFP in the district) in Manthali, Ramechhap district it was noted that the programme has already supported sustainable forest harvesting, domestication and sustainable harvesting of non-timber products, goat farming, forestry related entrepreneurship, distribution and adoption of energy efficient wood cook stoves in the district, as well as developing Local Action Plans for Adaptation (LAPA) and implementation of LAPAs. The interviewed stakeholders expected the programme to contribute also to soil erosion, water resource protection by plantation and CC awareness raising through eco-clubs to be organised for school kids in the future. Also an assessment on how best to provide special support to highly vulnerable households was to be made. In an interview with Dr. Sabita Thapa, the Climate Change and Environment Advisor to DFID which is one of the programme donors, the key adaptation impacts of the programme were expected to be reached through any activities related to food security, water security and watershed management, as well as through promoting alternative energy sources. MSFP contributes to CC adaptation also through cooperation with agriculture and local government sectors. The cross sectoral activities include land rehabilitation, promoting agricultural best activities, agroforestry especially within hill farming and integration of forestry issues to local planning through local government (interview with Ramu Subedi, Team leader of MSFP and Ram Prasad Lamsal, National Programme Coordinator). The main CC mitigation effectiveness is expected to be reached through deforestation reduction, increased carbon capture in forests and introduction of improved cook stoves and alternative energy sources. The project is also planned to contribute to the REDD+ programme development in Nepal. According to the stakeholder interviews there have been serious challenges in directing the project funds to the REDD+ process and to the implementing agency of REDD+ (REDD - Forestry and Climate Change Cell (REDD Cell)) of the Nepalese government. However, currently it seems that there is a good chance to have MSFP funds to contribute to REDD strategy development in Nepal. MSFP is about to support the strategy development by EUR 40,000 (interview with Resham Bahadur Dangi, Joint Secretary and Chief of REDD Cell and Community Forestry Division). According to the representatives of the Finnish Embassy, one of the programme donors, it can be expected that the plan for how to support REDD Cell through the programme should be ready by summer 2015.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	According to the Community Action Plans for Adaptation (CAPA) and Local Action Plans for Adaptation (LAPA), the key climate induced threats to Nepal include floods, river bank erosion, forest fires, drought, cold waves, storms, spreading of diseases, decline in agricultural poverty and spreading of invasive species (Review and Analysis of Community Adaptation Plan of Action and Local Adaptation Plan of Action, MSFP 2013). Improved forest management practices, especially those implemented though Community Forest User Groups (CFUGs), are recorded to have positive contributions to the ability of the rural population to adapt to changing climate and environment, including many of the phenomena mentioned above (e.g. Two decades of community forestry in Nepal, 2011). Interviews with

	the stakeholders of a previous community forestry programme confirm that improved forest management practices have increased the income levels of households providing them more tools to combat the challenges brought to them by the changing climate.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Due to the early phase of the programme actual effectiveness on CC cannot be evaluated. However, based on the results achieved this far as well as the goals and plans set for the programme, it seems that should the programme be successful in reaching it goals, its effectiveness to CC is remarkable especially through its contributions CC adaptation. Also mitigation effectiveness can be expected to be notable but it seems not to be as remarkable as that of adaptation. It is also worth noting that the programme goals are ambitious, and given the challenges the programme has already faced related to its initial start-up and its contributions to the REDD+ process, it is very possible that not all the goals will be met. However, it can be expected that most of the programme components and activities will have positive effect on CC adaptation and also mitigation. **Score: 6 very strong (expected) (adaptation: 6, mitigation: 4)**
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. This project is highly relevant to supporting poor communities to adapt to climate change and also to controlling deforestation and increasing the forest cover through effective forest management practices. Livelihood improvement can be expected to be reached also through forest based employment. In Nepal, 4.6 million of people living in rural communities' including 2.7 million poor and disadvantaged groups that are most vulnerable to climate change. This project protects their livelihoods from extreme climatic conditions due to the climate change. The reduction of deforestation is an important contribution to the regions' resilience to climate change. Therefore the reasoning for the project design and upgrading can be seen as very good. **Score: 6 very good.** **Integrity of the RC pathway**. The linkage between outcomes and outputs are presented clearly in the logical framework. The activities are logical and contribute to the targeted outcomes clearly. The outcomes are also clear connected to the expected outcomes. However, the details of the activities cannot be analysed with the information available. **Score: 5 good.**
General quality of project design	**Clarity of explanation**. The objectives of projects were elaborated clearly and activities were relevant for achieving project activities. **Score: 7 excellent** **Extent of participation**. The project design is based on the previous projects related to sustainable forest management including projects like NSCFP (funded by SDC), LFP (funded by DFID) and projects funded by the Government of Finland. However, from the project documents it is not clear to which extent participatory methods were utilised in project design phase. **Score: 4 adequate.**

Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-03128, Nepal Swiss Community Forestry Project.
Documents used	Credit proposal phase IV Addendum to Project Document Phase VI for Khotang district and Supplementary credit proposal for phase IV (2009) External review (2007) End of Phase Report - Nepal Swiss Community Forestry Project 1991-2011 Project Document for Phase VI (2008) Two decades of community forestry in Nepal – What have we learned? (2011) Mission report (2011) Development Assistance in Action: Lessons from Swiss and UK funded forestry programmes in Nepal (DFID/MSFP 2012) Helvetas Swiss Cooperation Nepal (2011). Does tenure matter? Assessment of change in forest cover in Nepal. Environment and climate series 2011/2. NSCFP (2011). Forest Cover Change Analysis in Dolakha District. Nepal Swiss Community Forestry Project, SDC, Intercooperation Nepal, 2011.
People interviewed	Bimala Rai Paudyal, Senior Programme Officer, Swiss Embassy, Kathmandu Netra Prasad Timsina, Civil Society Leader, involved with Forest Action Nepal and other forestry NGOs Bharat Pokharel, Deputy Director of Helvetas (former team leader of NSCFP) Reshma Dangi, Chief of REDD Cell, GoN and Deputy Director General, Community Forestry Division, Ministry of Forests and Soil Conservation Harka Bahadur Jirel, Chairperson, Thulonangi CFU, Jiri, Dolakha Bhim Prasad Sharma, Former Staff SDC, Jiri, Dolakha Machchhe Bahadur Khadka, Local Resident, Jiri, Dolakha Chandra Prasad Jirel, Manager Everest Gateway Company, Jiri Mirta Jirel, Assistant Forest Officer, Jiri, Dolakha Rabindra Maharjan, District Forest Officer, Charikot, Dolakha Chandra Bahadur Thapa, Assistant District Forest Officer, Charikot, Dolakha Rajendra Subedi, Administration Staff, District Forest Office, Charikot, Dolakha Govinda Dahal, Assistant District Forest Officer, Charikot, Dolakha Federation of Community Forest Users of Nepal (FECOFUN) , District Committee, Ramechhap • Narayan Karki, President • Bina Don Tamang, TFO • Ramkrishna Nepali,FO • Durga Shrestha, FP • Bodh Bahadur Khadka, Office Staff Mohan Bahadur Karki, Chairperson, Piple CFUG, Ramechhap Badri Dhungel, Piple CFUG Member, Ramechhap Ram Sundar Shah, Assistant DFO, Ramechhap Shiva Bahadur KC, Ranger, District Forest Office, Ramechhap
Basic data	Start date: January 1990, end date: 15.07.2011 Total disbursements: CHF 33,9 million.

Location	Dolakha, Ramechhap, Okhaldhunga and Khotang districts in Nepal. Nepal is a land locked country with 28 million inhabitants and versatile landscape. Approximately half of the land area of the country lies in tropical lowlands while the other half is characterised by highlands and mountains which form part of the southern Himalayas. Nepal is one of the poorest countries in Asia with GDP per person at USD 742. The political situation of the country has been unstable during the past decades with Maoist insurgency from 1996 to 2006... In 2013, the second constitutional election held in November with the results of majority to democratic parties. During the past decades Nepal has become a global showcase for successful community forestry. Some 25.4 % of the country is currently covered by forests and about 39.6% of total land area is declared as forest land by GoN but the status of forest coverage has changed over the decades. Deforestation was especially fast in the 1960s-70s, since when the government of Nepal has paid special focus on forests. In 1961 an amendment was made in the forest act which made a provision to hand over the forest to the village council. The council based mode of community forestry was tried for about a decade until experience showed, and widespread realisation followed, that it is the real users (citizens) who need to be the locus of the handover and not the council (representatives of citizens). That concept was finally incorporated in forestry sector master plan 1989, and put into practise by the government established by the people's movement 1990. The Forest Act 1993 was the real landmark legislation in the history of Nepal's forestry sector that empowered local communities to govern the resources by themselves. This legislation recognises Community Forestry Users Groups (CFUGs) as autonomous, independent corporate bodies. (Project Document for Phase VI). The Nepal Swiss Community Forestry Project (NSCFP) supported the forest sector development in Nepal since 1991, started from Dolakha, for ensuring the sustainable management of the forests and to the strengthening of decentralised, inclusive and equitable forest governance, especially in the mid-hills. Until the end of 2008 (till IV phase), NSCFP programme was directly working in the cluster of Dolakha, Ramechhap and Okhaldhunga districts. In phase V it was gradually phase out from Dolakha and started to work in Khotang district from 2009 onwards.
Partners	Implementing partner: Helvetas Swiss Intercooperation Other partners (and their main roles): • Ministry of Forests and Soil Conservation (Lead the steering mechanism and policy) • Department of Forests under the Ministry of Forests and Soil Conservation (Address project management issues, policy and process) • Natural Resource Management Parliamentary Committee (Legal reform) • District Development Committee (Lead district level steering mechanism , planning and coordination) • Federation of Community Forest User Groups in Nepal (Community Forestry advocacy, Service providing in social mobilization) • Himalayan Grassroots Women's Natural Resource Management Association (Women empowerment, Advocacy for women's rights in the natural resources sector, Service providing)

	• Entrepreneurs (Partnership with CFUG in timber and non-timber forest products based enterprise) • Consultants and Experts (Technical support, Consultancy services)
Result chain assigned by SDC/SECO	**RC7: Adaptation Capacity.** A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectorial and cross-sectorial adaptation planning and to deliver resources to support local adaptation efforts. **Output:** integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1:** (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2:** (a) increased community resilience to the consequences of climate change. **Expected validation criteria:** Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).
Purpose	The Nepal-Swiss forestry project aimed to achieve sustainable improvements in the living conditions of forest users and disadvantaged families in four of Nepal's poorest districts. The goal of the programme was to contribute to the national goal of 'reducing poverty through the promotion of community forestry programme'. The targeted outcomes of the fourth phase (2008-2011) were: Outcome 1: CFUGs will become institutionally and financially strong and adopt sustainable forest management through inclusive governance that ensures equity and increased income for disadvantaged households (DAHs). Outcome 2: Legislators adapt the legislation and regulatory framework in favour of pro-poor forestry, commercialisation of community forest resources, democratisation and decentralisation of the sector. Outcome 3: Local state (VDCs) adopted inclusive good governance practices generated from community forestry (from the additional credit proposal)
Pre-review estimates of CC relevance	The project was assessed by SDC as 30% mitigation and 30% adaptation relevant. The initial assessment conducted by the review team identified the project to fall under cluster 3: Ecosystem management. The project was also identified to meet the validation criteria for Applied ecology for mitigation (AEM) and Resilience for adaptation (RFA).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Climate change mitigation or adaptation have not been included in the objectives of the programme. Therefore there is no baseline for calculating mitigation effectiveness or targets for adaptation activities.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Despite the lack of evidence on direct CC effectiveness, improved sustainability of forest management practices and successful poverty reduction tell a story about incurred CC effectiveness. Community forestry practices were introduced in Nepal decades before SDC started funding programmes around the theme. Nevertheless, the Swiss contribution has had great impact on improving the practices of community forestry management in Nepal. The NSCFP has been especially successful in poverty reduction through promoting forestry related employment and entrepreneurship and extending the benefits of community forestry to the poorest households. The programme has

	also been praised for "challenging the conventional wisdoms of what is possible" (External review 2007). For example the village governance work within the programme has created a model where the best practices from community forestry are introduced more widely to local democratic processes. Also the multi stakeholder approach of the programme has been thanked. Thanks to the programme, the private sector is more strongly connected to forest management at community level creating new jobs and income from sustainable forest management. According to studies on forest cover changes produced within the NSCFP, it is clear that community forestry has more positive effect on reforestation and forest quality than other management models. Results from the Forest Cover Analysis in Dolakha District show that the conversion rate of non-forest areas into forests is higher in the community managed forests than that in the forests managed by government or private partners (NSCFP 2011). The same study also concluded that community based forestry management contributes to less dependency on forest resources, decline in slash and burn practices and in forest fire incidences as well as reclamation of landslide areas and river banks. Another study by Helvetas Swiss Intercooperation (2011) shows that community forestry practices have managed to increase the new forest area by nearly 33% and to improve existing forest quality by 20% while the corresponding shares for government managed forests are 17% and 15%. According to the Two decades of community forestry publication (2011), at the end of the IV phase in July 2011, 1,111 CFUGs had been formed with constitutions and operation plan, about 100,397 hectares of forest area (58% percent of total forest area) had been handed over to the communities covering about 109,239 households. The livelihood improvements reached through the project activities have increased and diversified the incomes of the people. This has especially increased the resilience of the poor and vulnerable to climate change them being the most vulnerable to climate change impacts. Also the improved sustainability of forest management has increased watershed values, reduced soil erosion, reduced carbon emissions and retained the ecosystems capacities to adjust to changing climate variables. (Lessons from Swiss and UK funded forestry programmes in Nepal, 2012). The community forestry groups in Ramechap emphasised the importance of local governance and decision making in reaching the good results in the programme. The funds could be directed to the most feasible activities because the decisions could be made at the same level with the real needs. The people interviewed at the Dolkha District Forestry Office noted that the sufficient human resources provided by the project made efficient management development possible. The programme activities promoting alternative energy solutions including improved wood fuel stoves and biogas plants have reduced GHG emissions from carbon dioxide (CO_2), methane and black carbon. The programme also supported the establishment of a REDD Forestry and Climate Change Cell (REDD Cell) and also participated in the process of developing REDD Readiness Preparation Proposal (RPP) and National Adaptation Programme of Action (NAPA) (Lessons from Swiss and UK funded forestry programmes in Nepal, 2012). It can also be expected, although it has not been studied in the case of this programme, that increased forest cover and reforestation activities have contributed to CC mitigation positively.
3. Reasons to expect CC effectiveness of this	The DFID funded Livelihoods and forestry programme also targeted community forests in Nepal. It has been estimated that the 440,000 ha

kind of project based on other knowledge	of forests under improved community forestry management within the programme contributed to an estimated 700,000 tons of CO_2 sequestration equal to 1,59 t CO_2/ha (Lessons from Swiss and UK funded forestry programmes in Nepal, 2012). The NSCFP covered 134,595 ha of forests under improved community forestry management. If the same ratio for carbon emission sequestration was used, the NSCFP would have contributed to sequestration with some 214,000 tons of CO_2. However, due to differences in programme activities, the length of the programmes and the regions they covered, the estimations should be considered indicative at best.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The NSCFP was originally assessed by SDC as 30% mitigation and 30% adaptation relevant. After the project evaluation the CC relevance proposed by SDC seems feasible. Regarding the CC effectiveness of the programme, the review team suggest a score 5 (strong) for the adaptation effectiveness. Also moderate mitigation effectiveness can be expected to be gained through the project. **Effectiveness score**: 5 strong. (Adaptation 5 strong, mitigation 4 moderate)
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The potential CC effectiveness of the programme was truly recognised only towards the end of the programme. The programme objectives were set to target improved governance and poverty alleviation, thus the CC effectiveness, however significant, was more like a side effect of the programme. In the programme evaluations and credit proposals climate change is not mentioned until 2009, two years before the programme reached its end. In the supplementary credit proposal for Phase VI from year 2009 "CFUG Participatory Action Research and training of CFUG member in activities related to adaptation to climate change (tree planting, landslide control, response to floods, etc)" is mentioned. In the same document it is also noted that "Supporting the Government of Nepal (GON) and Community Forest User Groups (CFUGs) for sustainable and active forest management is key element of the project that contributes mitigation of adverse effects of climate change, which is a national as well as global priority theme for SDC". It can be understood that climate change was noted as a relevant issue to the programme only once SDC took it as one of its priority themes in 2006. According to the report Two decades of community forestry in Nepal (2011), the importance of the climate change adaptation and mitigation mechanisms the programme provided was also recognised by NSCFP staff towards to end of the programme, "but [it was] perceived to fit poorly with the emphasis on governance and poverty alleviation". **Score: 3 (weak)** **Integrity of the RC pathway**. Although the programme was clearly relevant to CC adaptation, the result chain pathway cannot be recognised from the programme design until the last project design document, a supplementary credit proposal written only two years before the project ended (and 19 years after project start up). **Score: 2** (very weak)
General quality of project design	**Clarity of explanation**. The general project design is good, it takes note of the lessons learned during the previous phases of the programme, and it shows clear linkages between programme objectives, outcomes and activities. **Score: 6**

	Extent of participation. The integrity of the lessons learned and programme design show certain level of stakeholder participation. While it is not clear from the credit proposals available if actual stakeholder meetings or other participation opportunities for relevant stakeholders have been organised as part of the programme design progress, the multiple and successful project phases show that lessons learned from the previous phases have been considered in the design of following phases. Therefore participation can be scored high. **Score: 6 (Very good)**

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	7F-08073 Power Plant Extension SCECO (PPE SCECO) in Nepal – Single Phase
Documents used	Credit Proposal SELUP, Final Report (approx. 1992)
People interviewed	Jun Hada, Senior Programme Officer, SDC Sher Singh Bhat, Spokesperson, Nepal Electricity Authority (NEA) Vijaya Singh, ACD, UNDP Nepal Surya Singh, Climate Change Officer, ADB Nepal Ranjan Prakash Shrestha, Senior Programme Manager, The EU Delegation to Nepal
Basic data	Started from 01.09.2011, expected to end in 2014 or 2015. The Project of which this is an extension was established in 1984 in cooperation with the Salleri-Chialsa Electricity Company (SCECO). The objective of the current phase is to increase production capacity from 400 kW to 600 kW. Budget: CHF 0,25 million from SCECO's own capital resources and CHF 0,5 million (SDC Funds).
Location	Salleri and Garma Villages (Village Development Committee areas) in Solukhumbu District of Nepal. Nepal has nearly 40,000 MW economically feasible hydropower potentiality but less than 1% has been brought on line so far. The major sources of energy supply are fuel wood (68%), farm waste (15%), and imported fossil fuel (8%). This situation contributes to deforestation, soil erosion and depletion. Salleri and Garma VDCs are remote and poor, and have only recently been connected to the regional grid.
Partners	Implementing partner: ITECO Switzerland Other partners: Salleri Chialsa Electricity Company (SCECO) Nepal Electricity Authority (NEA)
Result chain assigned by SDC/SECO	**RC3 – Mitigation: Renewable Energy**: To promote renewable energy through reform of policies and incentives, and access to low carbon technologies, and can be measured in terms of power substituted (Mwh) and tCO2 conserved. Output (a) remove regulatory obstacles to RE and create incentives for RE; (b) facilitate access to finance and technology for investment in RE Outcomes 1: (a) increased production of RE;(b) increased access to RE in rural areas. Outcomes 2 (a) increased use of RE reduces GHG emissions; (b) people have better access to affordable energy ; (c) reduced depends on energy imports. Expected validation criteria: Applied technology for mitigation (ATM); Regulations and incentives for mitigation (RIM)
Purpose	To reduce high-altitude deforestation and soil erosion by increasing the availability of hydroelectricity as an alternative to the use of wood fuels (and coincidentally to enhance the position of women who traditionally bear much of the wood harvesting burden, and to contribute economic opportunites that depend on a more reliable electricity supply).

	The project provides permanent power supply of 200 kWh by increasing hydropower production capacity from 400KW to 600KW.
Pre-review estimates of CC relevance	According to the SDC/SECO, the project is 75% relevant to CC mitigation and 25% relevant to adaptation. It was validated by the review team according to the criteria Applied technology for mitigation (ATM) and Resilience for Adaptation (RFA).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	None, since the project has been delayed and the power plant extension is not yet in place. No data have been collected as a basis for calculating expected GHG emission reductions from the project.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	None, although the project back in the 1980s no doubt helped provide rural communities with improved access to electricity from renewable sources. Indeed, according to impact monitoring in 1992 (SELUP final report), electricity from SCECO replaced kerosene for lighting completely, and partially replaced fire wood in cooking. At the time of the impact report "forest quality and accessibility [were] not yet bad enough to force people to shift from firewood to electricity". According to estimates made during the SELUP project, the SCECO plant of 400 kW produced 950,000 kW.h/year, of which about 5% would have been allocated to cooking. It is further estimated that fire wood used would have been equivalent to 10% energy efficiency, and that 1 kg of fire wood is equivalent to 4 kWh. Using these figures, it can be calculated that a 200 kW increase in power production would save about 60 tonnes in fire wood per year. Using a ratio of 2:1 from fire wood to CO_2, the CO_2 emission reductions through savings in fire wood would be 30 CO_2t/year. So, it is reasonable to assume that an increase in local hydropower generation is likely to be beneficial in various ways.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	There are good reasons to expect CC effectiveness of a local hydropower project, but the extent will depend on the nature of the installation, etc.
Overall conclusion on effectiveness based on the evidence (1+2+3)	In principle, renewable electricity is positive from the CC perspective. While the true effectiveness of the power plant extension cannot be evaluated due to delay in project implementation, the project can be given an expected effectiveness score 5 (strong).
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. According to the credit proposal, this power project is highly relevant from the perspective of sustainable use of regions abundant hydro power potential and the generation of clean and continuous energy, The reduction in the use of wood as fuel for cooking and heating is particularly relevant in this area which lies between 2,400-3,000 m altitude, and where forest regeneration is naturally slow. The reduction of deforestation is an important contribution to the regions' resilience to climate change. Therefore the reasoning for the project design and upgrading can be seen as very good (score: 6) **Integrity of the RC pathway**. The linkage between outcomes and outputs are presented clearly in the logical framework. The activities are logical and contribution to the targeted outcomes clearly. The outcomes are also clearly connected to the expected outcomes (score: '5' good).
General quality of project	**Clarity of explanation**. The objectives of projects were elaborated clearly and activities were relevant for achieving project activities.

design	Very clear and targeted (score: '7' excellent). **Extent of participation**. This project was designed through a highly participatory approach. A cooperative is responsible for operation of the power plant. In the plant, preference share is divided 50% between NEA (a government electricity agency) and SDC and through its ordinary share holding the local public has 49% share and remaining share is divided between SDC and NEA. (score: '6' very good).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-03149 Sustainable Soil Management Programme
Documents used	Evaluation of First Phase of Sustainable Soil Management Programme (SSMP) Credit proposal for phase II (2002) Final External Review of Phase II (2007) End of Phase Report for Phase III External Review of Phase III (2009) Kishor Atreya and RM Bajracharya (2006). Carbon sequestration in Nepalese Upland Agriculture: SSMP contribution to farmer benefits. A Consultancy Report. B.K. Bishwakarma and R. Allen (undated). Climate Smart Management Options for Improving the Soil Fertility and Farm Productivity in the Middle Hills of Nepal. SSMP. Ngamindra Dahal and R. M. Bajracharya (2010). Prospects of Soil Organic Carbon Sequestration in mountain Agriculture Land in Nepal: Analysis of data and policy. Ngamindra Dahal and R. M. Bajracharya (2011). Prospects of Soil Organic Carbon Sequestration: Implications for Nepal's Mountain Agriculture. Journal of Forest and Livelihood 9(1) February, 2011. Ngamindra Raj Dahal (2012). Prospects of Enhancing Soil Organic Carbon in Sloping Farm Terraces of Mid Hills Nepal Through Sustainable Soil Management Practices. A Dissertation, Kathmandu University. E. M. Biggs, E. L. Tompkins, J. Allen, C. Moon, & R. Allen (2013). Agricultural adaptation to climate change: observations from the Mid-Hills of Nepal. Climate and Development, DOI:10.1080/17565529.2013.789791. B.K. Bishwakarma, N.R. Dahal, R. Allen, N .P. Rajbhandari, B .K. Dhital, D. B Gurung, R.M. Bajracharya and I.C.Baillie (undated). Effects of land management and improved quality of farmyard manure on soil carbon storage and sequestration in the Middle Hills of Nepal. Branca, Giacomo, Lipper, Leslie, Mccarthy, Nancy & Jolejole, Maria Christina (2013). Food security, climate change, and sustainable land management. A review. Agron. Sustain. Dev. (2013) 33:635 – 650 DOI 10.1007/s13593-013-0133-1.
People interviewed	Yamuna Ghale, Senior Programme Officer, Swiss Embassy, Kathmandu Rudriksha Rai Parajuli, Team Leader, SSMP/ Helvetas, Kathmandu Richard Allen, SSMP/Helvetas Swiss Intercooperation Roshan Subedi, District Programme Officer, SSMP/Helvetas, Ramechhap Alok Shrestha, District Coordinator, SSMP/Helvetas, RamechhapBhuban Shrestha, Chetan Yuwa Samuh (CYS)/SSMP, Ramechhap Basanta Karmacharya, Staff, Chetan Yuwa Samuh (CYS)/SSMP, Ramechhap Bhim Prasad Sharma, Former Staff SDC, Jiri Machchhe Bahadur Khadka, Local Resident, Jiri District Agriculture Development Office (DADO) at Manthali, Ramechhap: • Raj Dev Yadav, Junior Technician • Krishna Bahadur Bhujel, Junior Technician • Bishnu Chaulagain, Planning Section Farmer Group, Gaikhura Samudaiyik Santha, Gaikhura, Chisapani, Ramechhap

	• Sandesh Majhi, Local farmer • Jamuna Majhi, Local Farmer • Gyan Bahadur Majhi, Chairperson of the group • Sete Majhi, Local Farmer • Surya Majhi, Local Farmer
Basic data	Start date: 1.1.1999, end date: 31.12.2014 Total budget covered by SDC: CHF 15,0 million.
Location	The mid-hills of Nepal, which "lie between altitudes of 800 and 2,400 masl. The climate is warm temperate, with monthly mean temperatures ranging from 12°C to 26°C. Three quarters of the average annual precipitation of about 2,000 mm falls during the summer monsoon in the June to September period, although pre- and early monsoon rainfalls can be intense and erosive. The topography is rugged, with local relief of up to 1,000 m, and most slopes are steeper than 30%. Combined with the intense rainfall, the steep gradients make slopes vulnerable to surface erosion and mass movements, particularly on the schists" (B.K. Bishwakarma and R. Allen). "Agriculture is the mainstay of livelihoods for majority of poor and Disadvantaged Groups living in remote hills of Nepal. Since the 1950s, the Government of Nepal (GoN) has considered agriculture as one of the priority sectors in combating poverty and food insecurity. However, the agricultural sector could not perform to its target due to many reasons. In the fiscal year 2009/2010, agriculture growth remained at a meagre rate of 3.3% against the target of 5.5%. One of the reasons of low productivity of the agriculture sector is the low soil fertility, particularly in the mid-hills and inadequate knowledge of improved farming practices such as sustainable soil management (SSM). Along with low soil fertility, the extension service provision from the government is weak. In general, agricultural extension services are beyond the reach of farmers especially in the hills. Some of the major reasons that constrain the farmers in accessing the agricultural inputs and services are: i) inadequate number of trained human resources at the District Agricultural Development Office to provide extension services in difficult terrains, ii) low investment by the GoN in technological innovations including SSM practices, iii) inadequate priority and resource allocation to agriculture sector development by local governments." (master Excel). In this context, the project engaged with the following districts during its four phases of operatiomn: • First Phase (1.1999 to 12.2002): 10 districts (Baitadi, Doti, Achham, Dailekh, Surkhet, Parbat, Syangja, Baglung, Kavre and Sindhupalchok). • Second Phase (1.2003 to 12.2007): 12 districts (Baitadi, Doti, Dadeldhura, Surkhet, Syangja, Baglung, Myagdi, Dhading, Sindhupalchowk, Kavre, Dolakha, Okhaldhunga). • Third Phase (1.2008 to12.2010): 12 districts (Baitadi, Doti, Dadeldhura, Surkhet, Syangja, Baglung, Myagdi, Dhading, Sindhupalchowk, Kavre, Dolakha, Okhaldhunga). • Fourth Phase (1.2011 to 12.2014): 7 districts (Khotang, Okhaldhunga and Ramechhap of SDC cluster, and Kalikot, Jajarkot, Dailekh and Achham).
Partners	Main implementing partner: Helvetas Swiss Intercooperation (Swiss NGO) Primary partners: • Department of Agriculture under the Ministry of Agriculture and Cooperatives (MoAC) • Soil Management Directorate, Ministry of Agriculture and Cooperatives (MoAC)

	• Nepal Agricultural Research Council (NARC) • Agricultural Research Stations of NARC • Ministry of Federal Affairs and Local Government • District Agriculture Development Offices (DADO) • NGOs • Agriculture Forest and Environment Committees (AFEC) of Village Development Committees (VDC) • Ministry of Finance (MoF) • National Planning Commission (NPC) • TUKI Association
Result chain assigned by SDC/SECO	**RC7: Adaptation Capacity.** A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectorial and cross-sectorial adaptation planning and to deliver resources to support local adaptation efforts. **Output:** integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1:** (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2:** (a) increased community resilience to the consequences of climate change. **Expected validation criteria:** Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).
Purpose	To test and scale up training on soil management techniques that are proven to increase soil nutrient content (by 17%) and farm productivity (by 30-50%) to farmers in steep areas with poor soils. The programme contributes to improve soil fertility and productivity in bari (upland) dominated farming systems in the mid-hills of Nepal by building technical and methodological capacity of women and men farmers for sustainable management of soil through the support to enabling Collaboration Institutions.
Pre-review estimates of CC relevance	SDC assessed the project as 25% relevant to adaptation. It was validated by the review team according to the criterion Resilience for Adaption (RFA).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Research on Soil Organic Carbon (SOC) concentration in agricultural and forest soils was conducted as part of the project. One of the studies showed that usage of improved farmyard manure (FYM) on agricultural soils contributed to an estimated average annual increment of 0.36-0.56% in SOC concentration, summing up to an increase of 29-47 tons of SOC per hectare over six years. The same study concluded that the SSMP had succeeded in promoting a number of sustainable soil management practices involving the judicious use of chemical fertilizers, improved FYM quality, and improved perception on upland productivity and low land fertility among farmers (Kishor Atreya and RM Bajracharya 2006; Final Review of Phase II). Another SSMP study compared SOC concentrations in farmland soils with and without the application of SSMP technologies, and in soils under forest, finding that SSMP technologies were associated with higher SOC, at 1.7% rather than 1.2-1.3% in the other samples (Ngamindra Raj Dahal 2012). Neither of these studies, however, estimated the total increase in SOC that could be attributed to the SSMP.
2. Evidence of indirect effectiveness of the project (side effects,	In addition to declining soil fertility and land degradation driven by unimproved farming practices applied in fragile environments by a rapidly-growing population, Nepal's agricultural sector is highly

other consequences)	sensitive to climate change. Climate-related threats include crop failures resulting from changes in the pattern of rainfall and temperature, increased crop damage from pests and diseases, and changes in the vertical and horizontal locations that are suitable for various crops (B.K. Bishwakarma and R. Allen). Ngamindra Dahal and R. M. Bajracharya (2011) note that "Soils serve as both source and sink of CO_2. Therefore, they have a great potential to reduce emissions and enhance carbon sequestration through better soil management". They also note that "Soils store twice as much carbon than vegetation and two thirds more than the atmosphere, and thus can store a significant quantity of CO_2. Unsustainable farming leads to land degradation and the release of soil organic carbon (SOC). SOC may return directly to the atmosphere from the soil when organic material decays through decomposition or burning. SOC is important not only to maintain and enrich soil nutrients, but also in preventing the release of carbon in the forms of CO_2 and Methane (CH_4) into the atmosphere." Improved sustainability of soil management improves CC adaptation capacity through increasing household income and savings, and improved food security as well as greater resistance to heavy rains, soil erosion and landslides, preventing land degradation, restoring degraded lands, and reducing the need for further conversion of natural forests to farmland. Promotion of sustainable soil management technologies in the mid-hills of Nepal is a key objective of the SSMP. Most of the technologies promoted through the programme clearly contribute to CC adaptation, although the original focus was on poverty reduction. The CC adaptation relevant technologies promoted through the programme include the following: • improving farmyard manure quality and retaining the fertilizer value of cattle urine • improved cattle sheds • composting and crop residue management • inclusion of legumes in the cropping system • agroforestry • growing fodder and forage plants • integrated plant nutrient systems • preparation and use of farm-made botanical pesticides for managing crop pests The findings of a recent study from Bishwakarma et al. (undated) show that "about two thirds of farmers [participating in the study] reported that adoption of SSM practices resulted in easier tillage, increased moisture availability, better soil aggregation, and decreased crusting and clodding. Some particularly mentioned improved crop yields in dry years". According to the project evaluations and interviews, the SSMP has been successful in promoting improved agricultural technologies at village and district levels. More than 100,000 farmers have been trained through the programme, and 40-60% of them have adopted the technologies for long-term use (interview with Richard Allen). Some of the trained Leader Farmers also sell their training services to other farmers in other districts (interview with Roshan Subedi and Alok Shrestha). Sample studies conducted in Ramechap region indicate that the farmers participating in the SSMP have improved their income status and food availability. An interview with a farmers' group at Gaikhura Majhi Settlement in Ramechap shed light on the practical benefits that adoption of new technologies has brought to them. In the village all 45 households have adopted SSMP practices on cattle houses and manure and urine

	management. The improved practices have increased their vegetable yields remarkably. According to their own words, they earlier went to the market to buy vegetables and spent the rest of their money on liquor. Now they are able to sell vegetables themselves, and they come home straight after the sales with more money in the pockets. Thanks to the increasing yields and vegetable sales they now understand the value of money. The increase in income has directly contributed to their livelihoods and well-being as all households have built individual toilets with the surplus money. The improved hygiene and food security also contribute to their resilience towards a changing climate. The SSMP is probably in its final phase, but the Government of Nepal is planning to replicate and up-scale its approach, first to some 10 districts and later all over the country (interview with Richard Allen). Also the strong links created to ministries outside the agricultural sector, the Agriculture, Forestry and Environment Committees (AFECs) as well as village-level forestry groups and irrigation groups are all likely to contribute to the sustainability of the project's impact. Although the SSMP has been classified as an adaptation project, it has had mitigation effects as well. Improved sustainability of soil management leads to GHG mitigation through increase in soil organic carbon. Minor mitigation effects can also be expected through agroforestry activities and increased crop yields leading to increase in carbon captured by the crops. Despite of the fact that CC was not integrated in the project design or logframe, Helvetas as the main implementing organisation was very keen to ensure that the SSMP would contribute to the CC response. The programme made a link with Kathmandu university and was therefore able to facilitate a number of studies on the relevance of sustainable soil management practices to CC. Thanks to these studies, the influence of the SSMP on CC is expected to continue. The numerous studies conducted through or with support from the project provide a basis for further climate-positive soil management in farming in Nepal and elsewhere.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Research by Branca et al. (2013) confirms the findings presented above. As they put it: "the adoption of sustainable land management can generally be expected to increase soil carbon sequestration. Some practices also increase aboveground sequestration (e.g., agroforestry) or reduce emissions (e.g., nutrient management) … the mitigation effects of sustainable land management adoption are higher in areas of higher rainfall."
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project has clearly been effective in improving the adaptation capacity of farmers in the mid-hill districts of Nepal, both directly through the farming and soil management systems themselves and indirectly through household nutrition, sanitation, food security, incomes and savings. Since the project has also contributed to mitigation by promoting soil carbon storage, we are inclined to score it '5' (strongly effective) for adaptation and '4' (moderately effective) for mitigation.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. CC was not mentioned in the project design documents, and therefore the score is '1' (seriously deficient). **Integrity of the RC pathway**. Dispite the lack of CC aspects in the project design documents, it is likely that the soil management activities directly contribute to CC mitigation and adaption Score: 5 good.
General quality of	**Clarity of explanation**. The credit proposal for Phase 2 shows clear

project design	reasoning and concrete plans for project implementation. Score: 7 excellent. **Extent of participation**. The numerous project phases build on earlier experience from the project with tens of thousands of people and tens of institutions involved, thus the stakeholders have had excellent opportunities to participate in project design. Score: 6 very good.

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-01898, Vertical Shaft Brick Kiln Project / Clean Building Technologies for Nepal.
Documents used	Credit proposal no 7F-01898.05 (for 2008-2011) End of phase report (2009) External review of clean building technologies for Nepal - VSBK-CESEF project 2008-2011 (May 2011) The speed of change in the brick industry External review of the VSBK and CESEF projects in Nepal (March 2007)
People interviewed	Jun Hada, Senior Programme Officer, SDC Suyesh Prajapati, MinEnery Nepal Usha Manandhar, MinEnergy Nepal Laxman Maharjan, proprietor, Satya Narayan VSBK Pvt Ltd, Imadol, Lalitpur Vijaya Singh, ACD, UNDP Nepal Ranjan Prakash Shrestha, Senior Programme Manager The EU Delegation to Nepal Yam Malla, Country Representative, IUCN Nepal
Basic data	Start date: 1.11.2001, end date: 31.12.2011 Budget: CHF 8,7 million.
Location	Nepal, Kathmandu Valley, neighbouring districts (Kavre, Dhading, etc.) and selected semi-urban areas in the Terai (Nawalparasi, Chitawan, Dang, Jhapa, Rupandehi, etc.). Air pollution is one of the most visible environmental problems in Kathmandu valley and it is also increasing in other urban areas of Nepal. Brick factories are the second largest source of air pollution after the transportation sector. Brick production requires large amounts of energy which is produced from coal imported from India. Coal burning leads to high amounts of CO_2, black carbon and sulphur dioxide emissions contributing to both climate change and respiratory problems.
Partners	Implementing partner: Swiss Centre for Appropriate Technology (SKAT) Other partners: • Department of Cottage and Small Industries (DCSI) under the Ministry of Industry (MoI) • SDC Nepal (steering committee) • SDC's Natural Resources and Environment Division (financial resources) • Private sectors partners: • Brick factories • Construction companies
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency.** A pathway to promote energy efficiency through reform of policies and incentives, and access to low- carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. **Outputs:** (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1:** (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in

	infrastructure/building, production and goods. **Outcome 2:** (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria:** Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
Purpose	To introduce proven brick manufacture techniques that induce energy savings of 30-40% when using these new techniques in particular vertical shaft brick kilns (VSBKs), in parallel with the promotion through policy dialogue, advocacy and awareness raising of cost-effective, socially- and environmentally-friendly (CESEF) construction techniques, technologies and materials. The project targets GHG and air pollution reduction in the construction sector through promoting use of energy efficient construction materials, supporting creation of cleaner production policies for the brick production sector, and by promoting environmentally and socially friendly building methods within construction enterprises. The overall goal of the project is to contribute to reduced emission of greenhouse gases (GHG) and pollution in the construction sector to mitigate global warming, health, and environmental degradation. Its objectives are (i) to help entrepreneurs adopt environment friendly technology and demonstrate a socially responsible behaviour, (ii) to motivate real estate developers and individuals constructing their own houses in urban and semi-urban areas use energy efficient building materials and technologies, and (iii) to influence GoN to have a favourable policy environment to promote clean production technologies in the brick sector. On the technology side the project targeted two sectors: Vertical Shaft Brick Kilns (VSBK) and Cost-effective Social and Environment-Environment-Friendly Building Materials (CESEF).
Pre-review estimates of CC relevance	According to SDC/SECO, the project was 100% relevant to CC. It was validated by the review team according to the criteria Applied technology for mitigation (ATM) and Capacity Building for Mitigation (CBM).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	**VSBK component**. VSBKs are 30-40% more energy efficient than traditional Bull Trench Kilns and produce 70-80% fewer particulate emissions. They burn faster, taking only a few hours per load compared with several days, and feature a more complete combustion that reduces noxious gases (CO, SOx, NOx) and unburnt substances including black carbon (soot). According to the external review of the project (2007), producing 4.5 million bricks with one VSBK with 4 shafts can save up to 385 tCO_2 compared to a Bull Trench Kiln with a fixed chimney, or up to 582 tCO_2 if the latter has a moveable chimney. According to an interview with the project implementing partner MinEnergy, 26 VSBKs with 58 shafts were built during the project, but about a third are not yet functioning and half are operating at less than their full capacity. Assuming that this is equivalent to about 11 VSBKs operating at full capacity, a total emission saving of at least 2,361 tCO_2/year relative to traditional technology can be expected. **CESEF component**. The project promoted building materials and construction techniques that included 'Rat Trap Bond' (RTB), concrete blocks (with or without round aggregate), 'Micro-Concrete Roofing' (MCR) Tiles, Round Aggregates, and Concrete Door and Window Frames. The 2007 external review observed that, "the combined impact of hollow VSBK bricks, rat trap bond walls, replacing RCC frames with suitable alternatives or the use of cement blocks can bring

	down the cost and energy consumption by two-thirds … if hollow bricks were introduced as the common standard with, say, 40% less mass per volume, the savings would just be linear to the reduction of mass, which means another 40%. If rat trap bond and other advanced building methods are promoted, considerably higher savings will be possible". CESEF technologies were transferred to close to 300 users in various categories and with various adaptation rates.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The higher energy efficiency of VSKBs implies fewer coal imports, fewer truck loads delivered from India, and fewer transport-related GHG emissions. Reduced emissions of noxious gases and particulates have public health benefits, and a major reduction in soot output is relevant to climate change since soot in the air absorbs sunlight to aggravate atmospheric warming, and when deposited on mountain ice it accelerates glacier melt (a factor of major concern in Nepal).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The building sector is a major source of GHG emissions, both directly (through manufacture of construction materials) and indirectly (through design that can increase or reduce the need for heating and cooling systems as a function of insulation). A speciality theme of the Swiss energy efficiency portfolio is a focus on lower-energy brick-making, with projects in Vietnam, Afghanistan, Pakistan and South Africa as well as Nepal. Results have been mixed, due to varied investment contexts (sectoral attitudes, policies, incentives, etc.), but the environmental benefits of VSBK technology are proven, and the Swiss approach of combining new technologies of manufacture and construction with construction-sector training, awareness-raising, policy dialogue and energy-efficiency standards has great mitigation potential.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Uptake of VSBKs was inhibited by their lower return on investment than traditional kilns (40% vs 80-140%, due to higher operating costs for the former and lower fixed costs for the latter), and also by the additional skills and higher-quality raw materials needed by VSBK systems. Efforts to redress these disincentives through policy reform were not successful. Similarly, uptake of CESEF technologies was very slow. Thus the full potential of the project was not realised, and actual emission reductions were disappointing. We are therefore inclined to recognise the project as only moderately effective in the area of mitigation (score '4').
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. According to the credit proposal, the building and construction sector is a key source of CO_2 emissions, contributing 30-40% of energy use and associated GHG emissions worldwide. In Nepal, it is the largest consumer of natural resources and is also responsible for a significant share of energy consumption. Brick production is also a major polluter especially in the Kathmandu Valley. All in all, the construction sector and especially brick production cause major GHG emissions that could be fairly easily reduced by introducing energy efficient production and construction methods and by creating a policy framework that encourages improved energy efficiency in within the sector. Therefore the reasoning for the project design can be seen as very good (score '6'). **Integrity of the RC pathway**. The linkages between outcomes, outputs and activities are presented clearly in the logical framework; the activities listed are logical and contribute to the targeted outputs clearly; and the outputs are also clearly connected to the expected outcomes. Thus the integrity of the relevant RC in the project design is very good (score '6').

General quality of project design	**Explanation clarity**. The objectives of the project are explained reasonably well and the planned activities seem to match with the set objectives. Considering that the project phase evaluated is the fifth phase of the project, the reasons for why the set objectives were selected for this particular phase could have been more thoroughly elaborated. **Score: 5 good** **Participatory design**. The project design is based on the experiences and lessons learned from the previous phases of the programme. However, it is not clear from the credit proposal to which extent stakeholders have been involved in the planning of the project. **Score: 1 (problematic)**

F.3. Field mission and people consulted

The Nepal field mission took place in January 2014, with meetings concentrated between 8.-16.1.2014, covering stakeholder meetings in the capital Kathmandu as well as in Dolakha, Jiri and Ramechhap village development committee (VDC) areas. The mission team consisted of Ms Paula Tommila (team leader) and Mr Arjun Dhakal (national consultant). A presentation of key preliminary findings was provide to SDC offices during the debriefing session at the end of the mission on 16.1.2014 in Kathmandu.

Table List of people consulted

Name	Organisation
Dr. Urs Herren	SDC / Swiss Embassy
Dr. Bimala Rai Paudyal	SDC / Swiss Embassy
Ms. Jun Hada	SDC / Swiss Embassy
Ms. Yamuna Ghale	SDC / Swiss Embassy
Mr Balram Shrestha	SDC / Swiss Embassy
Mr Reshma Dangi	REDD Cell, GoN
Mr Sher Singh Bhat	NEA
Mr Ram Prasad Lamsal	MSFP
Mr Mirta Jirel	Jiri, Dolkha
Mr Ram Sundar Shah	DFO, Ramechhap
Mr Shiva Bahadur KC	Ranger, Ramechhap
Mr Raj Dev Yadav	DADO, Ramechhap
Mr Krishna Bahadur Bhujel	DADO, Ramechhap
Mr Bishnu Chaulagain	DADO, Ramechhap
Mr Rabindra Maharjan	DFO, Dolkha
Mr Chandra Bahadur Thapa	ADFO, Dolkha
Mr Rajendra Subedi	DFO, Dolkha
Mr Govinda Dahal	ADFO, Dolkha
Mr Vijaya Singh	ACD, UNDP
Mr Kenichi Yokoyama	ADB Nepal
Mr Govinda Gewali	ADB Nepal
Ms. Shreejana Rajbhandari	ADB Nepal
Mr Surya Singh	ADB Nepal
Dr. Ekalabya Sharma	ICIMOD
Dr. Farid Ahmad	ICIMOD
Mr Pekka Seppala	Embassy of Finland, Kathmandu
Dr. Chudamani Joshi	Embassy of Finland, Kathmandu
Dr. Sabita Thapa	DFID
Mr Ranjan Prakash Shrestha	European Union

Dr. Yam Malla	IUCN Nepal
Dr. Netra Timilsina	Civil Society Leader
Dr. G. Ortiz-Ferrara	CIMMYT International
Dr. Dilli Bahadur KC	CIMMYT International
Mr Bhuban Shrestha	CYS
Mr Basanta Karmacharya	CYS
Mr Harka Bahadur Jirel	Thulonangi CFU
Mr Bhim Prasad Sharma	SDC
Mr Machchhe Bahadur	Khadka
Mr Sandesh Majhi	Local farmer at Gaikhura, Chisapani, Ramechhap
Ms. Jamuna Majhi	Local Farmer at Gaikhura, Chisapani, Ramechhap
Mr Gyan Bahadur Majhi	Chair- Gaikhura Samudaiyik Santha, at Gaikhura, Chisapani, Ramechhap
Mr Sete Majhi	Local Farmer at Gaikhura, Chisapani, Ramechhap
Mr Surya Majhi	Local Farmer, at Gaikhura, Chisapani, Ramechhap
Mr Narayan Karki	FECOFUN Ramechaap
Ms. Bina Don Tamang	FECOFUN Ramechaap
Mr Ramkrishna Nepali	FECOFUN Ramechaap
Mr Durga Shrestha	FECOFUN Ramechaap
Mr Bodh Bahadur Khadka	FECOFUN Ramechaap
Mr Mohan Bahadur Karki	Ramechhap
Mr Badri Dhungel	Ramechhap
Mr Suyesh Prajapati	Minergy
Ms. Usha Manandhar	Minergy
Mr Laxman Maharjan	Satya Narayan VSBK Pvt Ltd, Lalitpur
Mr Chadra Prasad Jirel	Everest gateway Company, Jiri
Dr. Bharat Pokharel	DCD, Helvetas Nepal
Mr Ramu Subedi	MSFP
Mrs. Rudriksha Rai Parajuli	SSMP
Mr Richard Allen	SSMP, HELVETAS Swiss Intercooperation
Mr Roshan Subedi	SSMP
Mr Alok Shrestha	SSMP, Helvetas
Ms. Sangeeta Lama-	ECARDS Nepal/MSFP
Mr Chhatra Mishra	ECARDS Nepal/MSFP
Mr Lokmanai Sapkota	ECARDS Nepal/MSFP
Ms. Mausham Mainali	LILI, Helvetas, Ramechhap

Annex 6: Project oriented reviews – in-depth review for selected Vietnam projects

During the execution of the CC effectiveness assessment, an additional assignment (in addition to the original TOR) was given to the team to also review 6 selected projects in Vietnam, following the same methodology and approach as used for other project oriented reviews. This annex describes the analysis and summarises the key findings from this task. The results and findings are integrated into the consolidated analysis in this technical report and respective annexes.

Contents

1. Introduction

East Asia's GHG emissions have more than tripled over the past 20 years and are expected to double in the next 20 years. Vietnam's own emissions have almost doubled since 2000, and in 2010 were 306 $MtCO_2e$ (or 0.6% of the global total), whilst the 'business as usual' projection for 2020 is 520 $MtCO_2e$[68]. Rapid economic growth has not been matched by attention paid to environmental issues in Vietnam, where there are increasing public and collective complaints against corporations for environmental violations, mismanagement of natural resources, mishandling of industrial waste and mistreatment of workers. Partly in reaction, the government has approved the Vietnam Green Growth Strategy[69] and in the National Strategy on Climate Change[70], and has also set a separate 20% GHG reduction target in the agriculture and rural development sector to be achieved by 2020[71].

The Vietnam Green Growth Strategy includes targets for economic restructuring and improvement of living standards as well as environmental targets for 2011-2020. The latter include reducing GHG emissions by 8-10%, reducing energy consumption per unit of GDP by 1-1.5 % annually, and cutting GHG emissions in the energy sector by 10-20%[72]. It also highlights the importance of strengthening state management, increasing public awareness, and a number of other aspects including education, financing and developing information databases necessary to attain the targets set in the strategy.

Vietnam is an important partner country of Swiss development cooperation. Of the whole portfolio of projects undertaken there in recent years by SDC and SECO, a sample of six were examined in detail as part of the *Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions*. Methods comprised reviewing project documents and interviewing knowledge holders remotely. The evidence for overall climate change effectiveness of each project was used as a basis for scoring it according to the protocol in Table 1.

Effectiveness	Numeric
Extremely strong	7
Very strong	6
Strong	5
Moderate	4
Weak	3
Very weak	2
None	1

Table 1: Scoring protocol for overall climate change mitigation/adaptation effectiveness.

Also assessed in each case were certain indicators of the quality of project design. Scores for CC-relevance (including Evidence and reasoning, Pathway integrity) and general quality of project design (including Explanation clarity, Participatory design) were given for projects examined in depth (n = 61), but here a score of 7 was defined as 'excellent', 6 as 'very good', 5 as 'good', 4 as 'adequate', 3 as 'problematic', 2 as 'poor', and 1 as 'seriously deficient'.

The six focal projects fell naturally into two groups: a coherent package of measures concerned with the greening of businesses (Section 2, Vietnam Annexes 1-3); and a more diverse group addressing air quality and sustainable timber and bamboo (Section 3, Vietnam Annexes 4-6).

[68] Ministry of natural resources and environment Vietnam (2010), Viet Nam's second national communication to the United Nations framework convention on climate change.

[69] Ministry of Planning and Investment Viet Nam (2012), The Vietnam Green Growth Strategy - Decision No.1393/QD-TTg.

[70] The Prime Minister (2011), Decision on approval of the National Climate Change Strategy. Decision No. 2139/QD-TTg.

[71] Ministry of agriculture and rural development Vietnam (2011), Decision on approving programme of Green House Gas (GHG) emissions reduction in the Agriculture and Rural Development sector up to 2020, Decision No. 3119 /QD-BNN-KHCN.

[72] 10% voluntarily and 10% depending on international support.

2. *Greening businesses*

Three interlinked initiatives are involved here:

- supporting (with and through the United Nations Industrial Development Organisation, UNIDO) the establishment and development of the Vietnam National Cleaner Production Centre (VNCPC);
- making available a Green Credit Trust Fund (GCTF); and
- financing (with and through the International Finance Corporation, IFC) the development of environmental and social risk management (ESRM) guidelines for financial institutions.

2.1 National Cleaner Production Centre

The VNCPC is part of a global network of CPCs that have been established in many countries (in eight cases with Swiss support) since the United Nations Conference on Environment and Development (UNCED) in 1992 (where the three 'Rio treaties' on biodiversity, climate change and combatting desertification were signed). The founding principles and purposes of this network include seeking direct and indirect GHG emission reductions in the context of a broader Sustainable Consumption and Production (SCP) agenda (sometimes also described as a Cleaner Production or Green Economy agenda). Sustainable consumption relates ultimately to resource consumption, taking into account the complete product lifecycle and reducing consumption of depletable resources via a more efficient use or substitution with renewable resources. Sustainable production embraces the need for regulation and compliance mechanisms as well as market-based and other efforts to ensure technical innovation in the design and improvement of products and/or production processes, as in the promotion of industrial ecology and the 'cradle to cradle' approach by producers. Various instruments for change are available to promote SCP, including: ecological fiscal reform; clean and eco-effective production; corporate responsibility and accountability; education for SCP; and information and public participation for SCP.

The basic idea of establishing an NCPC in a country, whether as a stand-alone institution or a network of institutions and experts, is to provide a place where companies and other actors and investors (including government departments) can go to find ideas, guidelines, skills and standards with which to improve the SCP profile of their activities. Organising such a facility is relatively straightforward, if it is paid for by the donor community, but achieving sustainability requires that clients are prepared to pay adequately for the services that the NCPC offers in the longer term. Reasons why they may wish to do so are diverse, but resolve into:

- **cost saving** (i.e. by taking the NCPC's advice, a company may make significant savings in energy or raw materials costs, alongside benefits such as having happier and healthier employees and a better relationship with the surrounding community);
- **regulatory compulsion** (i.e. the passing and enforcement of laws that require environmental and other standards to be met, with the NCPC being available to advise on how to meet them and/or to certify compliance with them); and
- **investment incentives** (i.e. a public underwriting of the cost of CPC-oriented investments, either through a dedicated government grant system, independent trust fund or a fiscal mechanism such as targeted tax relief).

A frequent challenge in developing countries is that such a large proportion of economic activity is carried out through small and medium-sized enterprises (SMEs), which in Vietnam are the main form of business, generate most jobs, and play a critical role in economic growth. Unlike large businesses, many SMEs do not have resources to invest in solutions to achieve SCP or minimise environmental and social risks, and may have little collateral or creditworthiness to use in mobilising external investment finance. Moreover, again unlike large businesses, many SMEs are too small to attract the attention of regulators, and may pay little tax thus weakening the effect of fiscal incentives. They are often, in short, struggling to survive day to day, and as individual entities (as opposed to 'the SME sector') are almost invisible to the banks and authorities. And yet, with SMEs so dominant economically, socially, and in terms of environmental impact, ways must be found to engage them effectively in the SCP agenda. This is a central issue that has not yet been resolved for all the donor and government programmes that try to target SMEs in Vietnam, including the Green Growth Strategy of the Ministry of Planning and Investment, the priority given to SMEs by the Ministry of Industry and Trade, and various financing activities by IFC, AsDB, Belgium, AFD, etc.

The VNCPC process is no exception, but as Annex 1 makes clear, substantial progress has nevertheless been made. Thus it has been shown that cleaner production (CP) options proposed between 1999 and 2011 by the VNCPC to 227 companies in six sectors (metal working, food processing, textiles, handicrafts, pulp & paper, and construction materials) were accepted by most companies and implemented by many of them, resulting in tangible resource savings and financial benefits for companies and a positive impact on the environment. On average, implementation of these options led to savings of 7% in electricity, 9% in coal, 7% in fuel oil (diesel oil), 20% in liquefied petroleum gas (LPG), 18% in water and 25% in chemical consumption, and as a result there was a generally high degree of satisfaction among VNCPC's clients.

The 2012 *Independent Evaluation Report on UNIDO activities in Vietnam* (reference f in Annex 2) rated the VNCPC 'high' according to the OECD/DAC criteria of relevance, design, effectiveness, efficiency, ownership and sustainability, and 'acceptable' for impact. The direct evidence for small but significant reductions in the use of fossil fuels and electricity (and larger ones for water and chemicals) at a number of enterprises as a result of VNCPC advice suggests that a mitigation effectiveness score of at least '4' (*moderate effectiveness*) would be appropriate (equivalent to the UNIDO evaluation's rating for impact). This may not fully reflect the growth and leverage potential of the VNCPC, however, and its longer-term synergy with the GCTF (see below). In any case, the combination of proven cost savings as a result of implemented recommendations, the continued availability of skilled advisors, and the implementation of Vietnamese law on environmental protection, adds up to a high probability of financial sustainability and effectiveness for the VNCPC.

2.2 Green Credit Trust Fund

The GCTF concept is to encourage and enable investment in CP by guaranteeing a share of applicable bank loans, and reimbursing a share of the investment costs if certain environmental indicators can be shown to have been met as a result of the investment. The environmental improvements to be achieved, and the indicators to be used to verify them, are determined and checked by the NCPC, so the GCTF and NCPC mechanisms are deeply linked. The loans themselves, however, are provided by local banks, which are responsible for handling the credits and the possible reimbursement of investment costs. Thus the performance of the banking sector is critical for the GCTF mechanism to work, hence the interest in promoting environmental and social risk management (ESRM) systems (see below).

The whole GCTF-NCPC approach was pioneered by SECO from 2003 in Colombia and Perú, where evaluations confirmed the soundness and effectiveness of the instrument (see Annex 2). On this basis, a GCTF for Vietnam was designed for implementation in 2007-2017. One difference with the earlier interventions was that although all guaranteed 50% of applicable bank loans, reimbursement against demonstrated environmental improvement was limited to 25% in Vietnam but 40% in Colombia (but also in Colombia, taking into account lessons learned from the review in 2010 max . reimbursement has been reduced and to 25%).. This reduced incentive package in Vietnam presumably amplified the dominant effect of very high interest rates (around 25%) and stringent collateral requirements imposed by the banks in Vietnam during the global financial crisis of 2007-2011. Since banks did not offer a discounted interest rate for GCTF-backed credits, as in principle they might have done given that risk is an important factor in setting interest rates, uptake of such credits was inhibited during this period. This led a 2012 UNIDO evaluation of the NCPC (reference d in Annex 2) to conclude that the GCTF was of marginal influence in facilitating CP investments. Reduction of interest rates to around 12% in 2011-2013, however, has been accompanied by a sharp increase in company applications for GCTF-backed credits. Even so, involving SMEs remains a challenge, as it does for the other instruments deployed to encourage CP investment by all donors and the government.

Nevertheless, a total of 15 GCTF-backed projects were underway by August 2013, including investments in new and much more efficient equipment in the plastics, paper-making and steel recycling sectors, where major savings in the use of energy and water, and in GHG emissions, have been demonstrated. The GCTF criteria/operational guidelines include global environmental indicators (emission of GHGs, ozone-depleting substances, and persistent organic pollutants/persistent toxic substances) and local ones (particulate matter PM10, biological oxygen demand, chemical oxygen demand, volatile organic compounds, available organic halides and heavy metals). The use of GCTF-backed credits often contributes to multiple improvements; for example new arrangements for recycling scrap steel have major effects on reducing electricity consumption as well as on the emission of toxic materials such as dioxins. This suggests that a mitigation

effectiveness score of at least '4' (*moderate effectiveness*) would be appropriate for the GCTF in Vietnam, although this may not fully reflect its growth and leverage potential (especially if prevailing interest rates are low and stable, or can be discounted by the banks to reflect GCTF guarantees).

2.3 Environmental and Social Risk Management

Vietnam's banking sector has significantly contributed to fuelling national economic growth by providing credit to enterprises. In 2012 the total credit balance was US$135 billion for consumer and corporate lending. However, local banks have remained muted on ESRM. Although some have relationships with international lenders and realize they need to take ESRM issues into account to satisfy non-financial covenants in loan agreements, most are unfamiliar with ESRM systems and how to put them into effect.

The project therefore aims to support the State Bank of Vietnam (SBV) in developing ESRM Guidelines and a number of implementation tools and training products to help banks set up and implement their ESRM systems so they can make better credit decisions and influence local companies on managing risks and exploring sustainable business opportunities. By working with the SBV, the project is expected to create baseline standards for the sector and move the banking sector towards sustainable lending practices in the long run.

The evidence currently available concerns processes rather than outcomes, but it does support a reasonable expectation that the programme will have a powerful strategic influence in favour of CC mitigation in Vietnam, especially in synergy with the NCPC and GCTF initiatives based on the complementarity of *opportunities to invest* in CP and *needs to avoid risk*. It is too early to provide an estimated mitigation effectiveness score, but there is the sense that the ESRM, NCPC and GCTF initiatives are all moving forward together, and will become increasingly effective together over time.

It should also be noted that the context of the ESRM initiative is an interesting one, since IFC is managing a regional programme which greatly enhances the leverage of expertise and the exchange of knowledge between countries. Vietnam also belongs to an informal knowledge-sharing group known as the Sustainable Banking Network which was formed in September 2012 and in Asia also includes banking regulators or industry associations from China, Mongolia, Indonesia, Lao PDR, Thailand, Bangladesh and the Philippines (with Nigeria, Brazil, Colombia and Perú joining from elsewhere). Through their deliberations (facilitated by IFC) a model for emerging market banking based on the active participation of regulators and bankers, and adequate and actively-sought knowledge, is already starting to be picked up in other regions.

3. *Biocommodities and air quality*

Three rather disparate initiatives are reviewed here, the aims of which were:

- to promote market linkages between production forests in Vietnam and companies with responsible purchasing policies in Europe, while also contributing to forest sector policies and laws in Vietnam and Lao PDR;
- to improve conditions for investing in high value, sustainably-sourced bamboo in Vietnam and Lao PDR; and
- to develop an air quality management system for use in and around Hanoi.

3.1 Forest market linkages

The project aimed to facilitate export-driven compliance with credible international standards of forest management managed by the Forest Stewardship Council (FSC), focusing on *Acacia* tree plantations, and in the process increase revenues and benefits flowing to rural people by exploiting price premiums and market-access opportunities offered by timber certification. A contribution to the development of policy and law relevant to the forestry sectors of Vietnam, Laos and Cambodia was also envisioned. Although no direct climate change mitigation objectives were set for the project, some CC effectiveness was assumed to be possible through the more sustainable use of forests (and their protection against fire - a serious risk factor in tropical plantation forestry - through more active

management). Four target areas of the project had the potential to be judged effective in climate change mitigation, due to the following achievements:

- **Networking and lobbying**. Nine new members from wood processing and trading industries joined the Vietnam Forest and Trade Network (VFTN), with additional smallholder forestry groups expected to join later. A strengthened VFTN was judged likely to be better able to lobby for policy reforms to support responsible international trade and sustainable forest management.
- **Enabling conditions**. State forest companies in Vietnam obtained greater security of resource tenure through 50-year land leases, and forest inventories were completed. Although the management practices of state forest companies were not streamlined as planned, tenure and inventories are preconditions for sustainable forest management and necessary steps in obtaining FSC certification.
- **Forest certification**. The first forest smallholder groups in Vietnam received FSC certification, covering 312 ha of *Acacia* plantations, and the first batches of FSC-certified *Acacia* wood were sold at a 43% price premium. By December 2013, the area of FSC-certified smallholdings had expanded to 2,000 ha.
- **Activities in Lao PDR**. The Lao Forest and Trade Platform was established, the first two Lao companies received FSC Chain of Custody certification and the land area of FSC certified forests in Laos increased from 50,000 ha to 81,600 ha.

These features would all be expected to contribute to allowing more durable and equitable management of forest plantations, as would a fifth target area based on sustainable harvesting of mangrove wood associated with organic shrimp farming. A forest carbon accounting exercise in Vietnam by several FSC partners concluded that significant net carbon sequestration was feasible and expected within FSC-certified forests over three harvesting cycles (36 years). These calculations suggest that an overall mitigation effectiveness score of '4' (*moderate effectiveness*) would be appropriate for now, but much will depend on replication effects and the extent to which forest stakeholders comply with FSC principles in the long term.

3.2 Bamboo investment conditions

The goals of the Mekong Market Development Portfolio project were to demonstrate the potential of bamboo sector development to impact poverty at a regional scale, and to replicate the approaches used in the bamboo sector into a portfolio of other poverty-reducing activities in the Mekong region, based on collaboration with government, the private sector and the development community. Targetting large-scale poverty reduction, the project was designed to operate over a multi-phase ten year period. The first phase of two years was for establishment, to make a first mark on the bamboo sector, to identify other sectors with pro-poor potential, and to build a working relationship with the NGO Prosperity Initiative as a vehicle to develop the intervention further.

According to the credit proposal (reference a in Annex 5), sustainable natural resources management (NRM) was a core dimension of the project's work, but the project logframe lists no activities that would have contributed to the quality of NRM. An environmental impact assessment of bamboo cultivation was to be done and market development activities promoted to increase income opportunities from bamboo production, but it is unclear if GHG emission reductions were obtained through NRM activities during the project or not.

The programme review (reference b in Annex 5) credited the project with developing high-quality investment support mechanisms for bamboo processors, including 'sustainable supply services' by which the sustainability of bamboo supplies was to be secured. A business partnership was established with Tien Dong company with 2,750 ha of bamboo plantations, but the project and the lead partner (the Prosperity Initiative Community Interest Company) responsible for the investment support mechanisms, were run down before the services became widely available. Other general market development activities of the project may have contributed to CC mitigation and adaptation by promoting sustainable NRM (e.g. through a net increase in woody biomass while stabilising slopes and regenerating soils). No information is available, however, on the NRM consequences of the project, so it would highly speculative to score the project overall higher than 2 (*very weak effectiveness*).

3.3 Urban air quality management

The project aimed to mitigate further degradation of air quality in and around Hanoi, by developing an air quality management system through capacity building and institutional strengthening in the areas of policy reform, awareness raising, pilot projects and managing air pollution and emission data. A baseline survey on awareness of pollution-related issues was carried out at the beginning of the project, but this was not used as a basis for monitoring the effects of awareness-raising activities.

There are no baseline data against which to measure GHG emission reductions, but there is reason to think that some CC-relevant effects may have been achieved through the activities that primarily targeted particulate emission reduction. Four target areas of the project had the potential to be judged effective in climate change mitigation, due to the following achievements:

- **Policy development**. The project contributed to a draft Motorcycle Emissions Control in Major Cities Program, a pilot emission inspection station for in-use motorcycles in Hanoi, a final draft of clean air legislation, and a draft Air Quality Management Plan for Hanoi. Work on national and regional policies may have helped build a solid basis for future projects and programmes targeting emission reduction and prevention in Vietnam and especially Hanoi.
- **Awareness raising**. Public awareness on air pollution was assumed to be improved by awareness raising campaigns that included photo contests, TV appearances and journalist seminars that reached wide audiences. While the focus of awareness raising was on local air pollution and its effects on health, improved awareness on emissions generally may have influenced attitudes to GHG emissions. Cooperation with the media was described as successful in project documents, but the lack of monitoring makes effectiveness hard to judge.
- **Pilot projects**. The CC mitigation effects of the four pilot projects were judged to be limited, partly because of insufficient resources in project implementation. One of the most tangible results included fuel saving of 15-25% in the truck and taxi company fleets participating in 'eco-driving' training within a pilot project. There was also improved energy efficiency at a food processing plant. The greatest effect of the pilot projects on CC mitigation was probably gained through knowledge transfer and raised awareness of the benefits of energy efficiency, but the extent of such effects cannot be assessed with available documents.
- **Database**. Documents claim that the capacity of the Hanoi Department of Natural Resources, Environment and Housing staff to undertake emission inventories was enhanced, and that the management and operation practices of air quality monitoring stations were improved. We note that such improvements in emission monitoring capacity and practices can be useful in later projects or within government activities.

A general observation is that the emission of pollutants can be achieved either by using improved cleaning or filtering technologies (i.e. 'pollution control') or by increasing the efficiency of a process so that fewer pollutants are emitted per unit of production at source (i.e. 'pollution prevention'). Many air pollutants share common sources with GHGs, so pollution prevention especially can also reduce GHG emissions. Such clear interlinkages exist, for example, in the transport and power generation sectors where improved energy efficiency reduces both air pollutants (such as particulate matter and NOx) and carbon dioxide (CO_2) and other GHGs. The external mid-term review and the phase end report both claim that the project was reasonably effective in reducing particulate emissions through policy development, experience and awareness raising both gained through pilot projects, and through campaigns and by developing an emission database for Hanoi. The project probably also contributed to GHG emission reductions through improved energy efficiency and strengthened emission policies.

In conclusion, the project targeted a comprehensive set of issues contributing to emission reduction in traffic and industry and the policy framework around them, but resources were too scarce relative to the diversity of operational targets, and greater focus would have been repaid by greater effectiveness. A two-year delay in start up and the cancellation of a proposed second phase further limited effectiveness, although we recognise that some mitigation gains were plausibly achieved and we suggest an overall mitigation effectiveness score of '4' (*moderate effectiveness*).

4. Conclusions

4.1 Scoring the projects

Table 3 summarises various scores and estimates related to climate change relevance and effectiveness for the six projects in Vietnam. Four of the projects were validated by the team during

the preliminary portfolio assessment and three received '4' scores while the fourth (UR-00593.01.03) was considered too early to score but likely to synergise with the two other projects in the 'greening businesses' cluster (UZ-00987.03.01 and UR-00050.03.01), and in due course likely to be scored similarly to them - with the added note that all three projects are likely to become more effective over time. It is important to distinguish the steps in the review process, with the pre-review assessment referring to what the evaluation team *expected* (taking note of the relevance consideration and preliminary valiudation), and what the team found, based on the analytical effectiveness assessment (see Table 3, Colums 2 and 3).

The '4' score of the fourth validated project (UR-00015.02.01) was based on forest carbon models and a rather optimistic anticipation of several decades of consistent FSC-certified plantation forest management, without interruption by calamitous events such as serious storms or fires (an assumption eroded by climate change itself). Of the two projects that were not validated in the preliminary portfolio assessment, more detailed examination failed to find much effectiveness merit for one (7F-05697), which therefore scored '2', but did so for the other (7F-03833), which therefore scored '4'. This was due to a more thoughtful consideration of the likely incidental implications for GHG emissions of a programme aimed at urban air quality.

Project identifier	**Pre-review assessment**	**Post-review effectiveness score**
UZ-00987.03.01, CPC VN II, USD	Assessed by SDC/SECO as 75% relevant to CC mitigation (the parallel projects were classified as 50% relevant). Validated by the review team according to the criterion *Capacity building for mitigation*.	Mitigation '4' (*moderate effectiveness,* but likely to improve)
UR-00050.03.01, Green Credit Trust Fund VN, USD	Assessed by SDC/SECO as 100% relevant to CC mitigation. Validated by the review team according to the criterion *Regulations & incentives for mitigation*.	Mitigation '4' (*moderate effectiveness,* but likely to improve)
UR-00593.01.03, IFC: E&S Risk Management, VN, USD	Assessed by SDC/SECO as 50% relevant to CC mitigation. Classified by the review team as a validated earmarked contribution to the IFC and considered most relevant to *Regulations & incentives for mitigation*.	Mitigation '4' (*moderate effectiveness* but likely to synergise with UZ-00987.03.01 and UR-00050.03.01).
SECO UR-00015.02.01, Commodities Cert Tropical Timber VN (phase II)	Assessed by SDC/SECO as 75% relevant to mitigation. Validated by the review team according to the criteria *Applied ecology for mitigation* and *Regulations & incentives for mitigation*.	Mitigation '4' (*moderate effectiveness,* potentially)
SDC 7F-05697 Mekong Market Development Portfolio Project	Assessed by SDC/SECO as 25% relevant to CC mitigation. Not validated by the review	Mitigation/adaptation '2' (*very weak effectiveness*)

	team.	
SDC 7F-03833 Swiss-Vietnamese Clean Air Program (SVCAP)	Assessed by SDC/SECO as 50% relevant to mitigation. Not validated by the review team.	Mitigation '4' (*moderate effectiveness*)

Table 3: Pre- and post-review assessments of six projects in Vietnam.

Table 4 presents the design scores for the six projects. The three validated 'greening businesses' projects all scored '7' (excellent) to '5' (good) both for CC-relevance and for general quality of design. On close inspection the fourth validated project (and one of the not validated projects) scored '5' for its presentation of evidence and reasoning on CC relevance, but both were otherwise rather problematic, and the remaining not validated project scored poorly for all aspects of design.

Design score	**CC-relevance of project design**		**General quality of project design**	
Project identifier	**Evidence and reasoning**	**Pathway integrity**	**Explanation clarity**	**Participatory design**
UZ-00987.03.01, CPC VN II, USD	*Good*	*Good*	*Good*	*Good*
UR-00050.03.01, Green Credit Trust Fund VN, USD	*Good*	*Excellent*	*Excellent*	*Very good*
UR-00593.01.03, IFC: E&S Risk Management, VN, USD	*Excellent*	*Good*	*Excellent*	*Good*
SECO UR-00015.02.01, Commodities Cert Tropical Timber VN (phase II)	*Good*	*Problematic*	*Problematic*	*Problematic*
SDC 7F-05697 Mekong Market Development Portfolio Project	*Poor*	*Seriously deficient*	*Seriously deficient*	-
SDC 7F-03833 Swiss-Vietnamese Clean Air Program (SVCAP)	*Good*	*Poor*	*Poor*	*Poor*

Table 4: Design scores for six projects in Vietnam.

Looking at Tables 3 and 4 together, we conclude:

- that the preliminary portfolio review (a very brief review of project summaries and credit proposals at the start of the investigation), against the validation criteria explained in the Inception Report, fairly reliably (and fairly cost-effectively for SDC/SECO) identified both good projects and poor ones from an effectiveness point of view; but
- that there is no true substitute for an in-depth study to test whether subtle but potentially powerful mitigation effects might have been missed (in this case, the linkage between particulate and GHG emission control through shared sources and technologies).

4.2 Strategic significance of the projects

We estimate the strategic significance of the three 'greening businesses' projects was and remains very high. Collectively they are advertising opportunities and incentivising companies to invest in CP, while supplying them with the technical means to do so, promoting awareness and routine use of risk screening to prevent the stranding of assets and other forms of value destruction, and working with regulators to provide leadership. We believe that this group of projects exemplifies the way forward for truly influential and effective national and regional aid portfolios that seek to promote the systematic decarbonisation of the world's economy, even though some of the high-level logic (e.g. on the need for a high and stable price for conserved carbon to reward investment, and on the need for a more disciplined banking sector that is better able to discount interest rates where appropriate to reflect public underwriting in favour of particular policy objectives) remains unarticulated. The other three projects lack a common purpose with regard to addressing climate change, and in each case had problematic aspects from which lessons can be learned.

Annex 1: The Vietnam National Cleaner Production Centre

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	UZ-00987.03.01, CPC VN II, USD
Documents used	(a) *Credit Proposal, VNCPC 1* (1999); (b) *Credit Proposal, Promotion of Cleaner Production Services in Vietnam through the VNCPC (Second Phase)* (2004); (c) c) *Independent Ex-post Evaluation: UNIDO support to the Vietnam Cleaner Production Center*, UNIDO (2012); (d) d) *Independent Impact Evaluation: UNIDO's Support to the Vietnam Cleaner Production Center (1998 - 2010) funded by the Swiss State Secretariat for Economic Affairs (SECO)*, UNIDO (2012); (e) e) *Report of the Mid-term Review of the ILO/SWISS Interregional Project on Addressing Labour Issues Through National Cleaner Production Centres (INT/02/M42/SW)*, M. Meyer & D. Lamotte (2005); (f) *Independent Evaluation Report: UNIDO activities in the Socialist Republic of Viet Nam*, UNIDO (2012)
People interviewed	a) Mr Patrick J. Gilabert, UNIDO Representative Vietnam (19 Dec 2013, 0700-0800) b) Dr Heinz Leuenberger, Director, Environmental Management Branch, UNIDO (20 Dec 2013, 0800-0900)
Basic data	5 Aug 1999 to 31 Dec 2002 (the start and end dates of 1999 and 2002 in the SDC/SECO spread sheet do not match the date of the Second Phase Credit Proposal of 2004), budget = 3.978 m, mitigation disbursements = 2.273 m.
Location	Vietnam (for details see reviews of UR-00593.01.03, IFC: E&S Risk Management, VN and UR-00050.03.01, Green Credit Trust Fund VN).
Partners	(a) UNIDO (strategic leader via projects US/VIE/96/063 in 1998-2003, US/VIE/04/063 in 2004, and US/VIE/04/064 in 2005-2011 in Vietnam, and a long-term partner in NCPC development with SECO in eight countries); (b) Center for Environmental Science and Technology, Hanoi University of Technology (implementing agency); (c) The Ministry of Education and Training (host ministry).
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. Outputs: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. Outcome 1: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. Outcome 2: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
Purpose	To support the development of the Vietnam National Cleaner Production Centre, in the context of similar projects UZ-00987.01.01 (4 Aug 1999-31 Dec 2002) and UZ-00987.99.99 (10 Sep 1999-21 Dec 2001).
Pre-review estimates of CC relevance	The project was assessed by SDC/SECO as 75% relevant to CC mitigation (the parallel projects were classified as 50% relevant). It was validated by the review team according to the criterion Capacity

	building for mitigation (CBM).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	"On average, implementation of CP options proposed by VNCPC resulted in considerable resource savings (7% in electricity, 9% in coal, 7% in fuel, 7% in diesel oil, 20% in Liquefied Petroleum Gas (LPG), 18% in water and 25% in chemical consumption). On average, CP projects achieved cost savings of USD 75,000/year. Companies invested on average USD 110,000 for the implementation of CP options resulting in an average pay-back period of 1.5 years (excluding cost of capital)." (reference c, page xii). "The implementation of CP options resulted in tangible resource savings and financial benefits for companies and a positive impact on the environment. Generally, companies applied a high percentage of recommended CP options. The enterprise survey and internal data of VNCPC indicates that 17% of the companies implemented all, 30% most, 35% several, and only 13% none of the options. On average, implementation of CP options proposed by VNCPC's led to savings of 7% in electricity, 9% in coal, 7% in fuel, 7% in diesel oil, 20% in LPG, 18% in water and 25% in chemical consumption. Key benefits of CP for companies are energy saving, reduction of water consumption, improvement of working conditions and meeting environmental regulation of government. This might be the reason for the generally high degree of satisfaction among VNCPC's clients." (reference d, page ix).
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	"**Company outreach**. VNCPC implemented a total of 340 consultancy projects in the form of CP [Cleaner Production] Assessments (CPAs), Technology Gap Assessments (GAP), Clean Technology Assessments (CTA), Cleaner Technology Implementation (CTI), Financial Engineering Proposals (FEP) and Product Innovations (SPIN) with financial support from 10 different donors. However, statistics show that the penetration of CP in industrial manufacturing is still low." (reference c, page xi). "**Sector outreach**. The monitoring data on the sectoral outreach of the VNCPC to companies is patchy. The majority of the 227 companies supported between 1999 and 2011 operated in six sectors: metal and steel (18.9%), food processing (17.6%), textile (13.7%), handicraft (11.0%), pulp & paper (11.0%), and construction material (10.6%). This distribution shows a moderate match with the qualitative needs assessment of the panel, who estimated the sectoral needs for CP on a scale of 1 (very high need) to 6 (low need) as follows: food processing industry (1.8), chemical industry (1.8), paper & pulp (2.7), dying industry (3.5), natural resources exploitation (4), cement (4.2), footwear & leather industry (4.8) and textile industry (5.7)." (reference c, page xi). "**Outcomes at company level**. Users were 'very satisfied' (47%) or 'satisfied' (53%) with VNCPC services. A similar reply was obtained on the usefulness of the services. Some companies expressed the wish for more specialized, industry-specific advice and support. The survey and internal VNCPC data indicate that 17% of the companies implemented all recommended CP options, 30% most, 35% several, and 13% none. Key enterprise benefits recorded are energy saving, reduction of water consumption, improvement of working conditions and meeting environmental regulations of the government. VNCPC was particularly successful in convincing companies about 'low cost options'" (reference c, page xi).
3. Reasons to expect CC effectiveness of this kind of project based on	There is clear linkage between energy use, water and chemicals in the industrial sector. Examples: (a) the use of 150 m^3/t in making paper, rather than the 5-10 m^3/t that is now standard best practice, feeds into

other knowledge	the energy costs of pumping and heating surplus water, and treating or dumping waste water; (b) done properly, recycling is always going to reduce energy consumption as preparing raw materials is very energy intensive (e.g. recycled aluminium saves 90-95% energy); (c) changing energy mixes can make a big difference (e.g. methane vs coal). Thus cleaner production improvements tend to have multiplier and leverage effects. There is evidence from UNIDO that national CPCs (NCPCs) are associated with reducing GHG emissions: (a) NCPCs and other institutions in nine Asian countries collaborated in a three-year project that demonstrated the application of CP methods for achieving energy savings and GHG reductions in the pulp and paper, cement, iron and steel, chemicals and ceramic sectors, with GHG emission reductions being verified for 38 demonstration plants as just over 1 million tCO2e per year; (b) the implementation at a small lead foundry of several CP options in Perú, suggested by the NCPC, reduced the lead content in waste by 19%, enabled the recovery of nearly 350 tonnes of lead per year and reduced water and energy consumption, with total GHG emissions reduced by 270 tonnes annually, and investment costs being recovered within several months; and (c) with the assistance of the NCPC in Sri Lanka, a desiccated coconut mill reduced its waste output by 18 tonnes per year, which achieving considerable reductions in water and energy use, and reducing total GHG emissions by almost 1,000 tCO_2e per year, all due to an investment of less that USD 17,000 that yielded annual cost savings of more than USD 315,000.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The VNCPC was given a CC relevance estimate by SDC/SECO of 75%, and assigned to the energy efficiency result chain, but given that cleaner production is not just about GHG emissions (the evidence gives just as much weight to water conservation and pollution abatement), we feel that 50% CC relevance would be a maximum estimate in Rio Marker terms. There is direct evidence for small but significant reductions in the use of fossil fuels and electricity at a number of enterprises as a result of VNCPC advice. We suggest a mitigation effectiveness score of '4', while recognising that this may not fully reflect the growth and leverage potential of the NCPC and its longer-term synergy with the GCTF. As noted by UNIDO in 2012, "Although over 1,000 companies in Vietnam have applied CP, the potential of CP has by far not yet been exploited." (Reference d, page 33).
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The Phase II credit proposal provides a good summary of the opportunities and synergies available through continuation of support to the VNCPC, with an emphasis on the likelihood of it being able to follow a pathway to financial sustainability, but with no explicit mention of climate change relevant matters aside from the promotion of 'eco-efficiency'; the annexed 'success stories' are about activities to promote competitiveness in the textile and paper sectors, training, and public policy (score '5'). **Pathway integrity**. Demonstrated fossil fuel savings presumably indicate integrity of the pathway in relation to energy efficiency (score '5').
General quality of project design	**Explanation clarity**. The credit proposal is clearly written (score '5'). **Participatory design**. "The project has been designed on the basis of two in-depth evaluations that were performed during the first phase of the VNCPC's operation, one at the mid-term and one at the end." (reference b, page 8). The credit proposal also notes "a steady growth of demand from Vietnamese enterprises for CP services, and the

	willingness of enterprises and other partners to pay for CP services" (reference b, page 2), and that delivery of training courses tailored to the needs of specific clients was "much higher than predicted because demand was very high" (*ibid.*). These items, alongside UNIDO's long-term and well-respected presence in Vietnam in particular suggest that design is indeed rooted in extensive stakeholder consultation (score '5').

Annex 2: The Vietnam Green Credit Trust Fund

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	UR-00050.03.01, Green Credit Trust Fund VN, USD
Documents used	a) Credit proposal GCTF Vietnam b) *SECO Green Credit Trust Fund: Status Report GCTF Vietnam 2012* (CSD Engineers, 2012) c) Credit proposal GCTF Colombia (UR-00050.01.01) d) *Independent Impact Evaluation: UNIDO's Support to the Vietnam Cleaner Production Center (1998 - 2010) funded by the Swiss State Secretariat for Economic Affairs (SECO)*, UNIDO (2012).
People interviewed	a) Mr Jürg Walder, Head of Business Unit Energy & Resource Efficiency, CSD Ingenieure AG (20 Dec 2013, 0900-1000). b) Dr Heinz Leuenberger, Director, Environmental Management Branch, UNIDO (20 Dec 2013, 0800-0900). c) Mr Patrick J. Gilabert, UNIDO Representative Vietnam (19 Dec 2013, 0700-0800).
Basic data	1 Jan 2007 to 31 Dec 2017, budget = 6.250 m, disbursements = 6.250 m. **Interview update (a)**: there is a US$3 million ceiling on credits, and the rest is for guarantees ("the small amount of funding means that a leveraging strategy is vital").
Location	Vietnam. "In 1986 Vietnam embarked on an economic reform program 'Doi Moi' and has been growing steadily ever since, on average 7.5% per year over the past decade … However, a consequence of the rapid economic growth has been mounting environmental challenges, such high industrial pollution and decreasing air quality, insufficient sewage control/treatment and water pollution etc. The Vietnamese government has recognized these problems and addresses the issue including the potential of cleaner production technology in its Socio Economic Development Plan 2005-2010. Moreover, In 2006 it enacted the amended Law on Environmental Protection and launched the National Environmental Protection Strategy." (reference a, pages 1-2).
Partners	a) VNCPC. b) GEF. c) three Vietnamese partner banks (Asia Commercial Bank, Techcombank, VIBank). d) the Royal Bank of Canada as trust fund administrator. e) CSD Engineers replacing the *Fachhochschule Nordwestschweiz* in 2008. The target group for green credits are Vietnamese SMEs that seek capital for investments with a positive impact on the environment in the range of US$10,000 to US$1 m, although credits below US$25,000 are exceptional because of the relatively high transaction costs involved.
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. Outputs: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. Outcome 1: (a) production processes & energy

	systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. Outcome 2: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Validation criteria**: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
Purpose	To finance investment in cleaner production technologies by guaranteeing 50% of applicable bank loans and reimbursing up to 25% of the investment costs depending on previously-defined emission indicators. The environmental improvements to be achieved as well as the indicator are determined and subsequently verified by the National Cleaner Production Centre. The green credits are provided by local banks, which are responsible for handling the credits and the possible reimbursement of the investment costs.
Pre-review estimates of CC relevance	The project was assessed by SDC/SECO as 100% relevant to CC mitigation. It was validated by the review team according to the criterion Regulations & incentives for mitigation (RIM), since this was clearly appropriate from the purpose.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	**GCTF implementation via VNCPC**. "Out of the 47 companies [engaged with the VNCPC] a total of 9 projects could successfully be finalized by the end of 2012 with technology installations and 6 ex-post measurements by VNCPC. Three additional projects are underway to be finalized. All completed projects achieved the envisaged improvement target of >30% emission reduction for the selected environmental indicator." (reference b, section 1.1). Of the remaining 38 companies, "28 started projects are on hold, most of them after the initial screening phase. Reasons for this situation are mainly high interest rates of the bank credits or insufficient collateral despite GCTF guarantee support. These projects are still overseen by VNCPC and considered to be continued later on. It is expected that a significant share of these companies will restart negotiation with the GCTF in mid-term. [Another] 10 project applications were cancelled in different phases due to commercial bank rejects, insufficient willingness to cooperate with GCTF after initial screening step or withdrawal by company due to alternative finance opportunities." (reference b, section 1.1). **Interview update (a)**. A total of 15 projects were underway by August 2013. **GCTF monitoring of implemented projects**. *Thermoplastics*: Replacement of old injection moulding technology with state-of-the-art machinery (reference b, section 1.4.1). Findings: (a) reduction of electricity consumption by 62% and GHG emissions by 83% (savings of 882,621 kWh/year equivalent to 508.7 tCO_2/year); (b) reprocessing of plastic waste and waste reduction. *Non-woven plastic tissue*. Replacement of obsolete production line with conventional round thermistor by an advanced technology with heat induction loop (reference b, section 1.4.2). Findings: (a) reduction of electricity consumption by 51%; (b) overall electricity reduction exceeds 790,000 kWh/year equivalent to 456 tCO_2/year. *Paper production steam*. Replacement of three out-dated moving-grate coal-fired boilers with a combustion efficiency of 60-65% with a new [locally-designed and built] fluidized-bed biomass co-fired boiler using up to 70% of biomass fuel (locally-sourced rice husk and sawdust, loose or as briquettes) together with coal, with a combustion efficiency of 97-98% (reference b, section 1.4.3). Findings: expected reduction in energy costs of ca 30%.

	Paper production waste. Installation of Dissolved Air Flotation (DAF) systems to replace sedimentation tanks and discharge to the environment at two factories, to enable the recovery and reuse of process water and fibre (reference b, sections 1.4.3 & 1.4.4). Findings: (a) reduction of water consumption expected to exceed 60% at factory 1, confirmed at 65% at factory 2; (b) the DAF system allows for reuse of approximately 80% of the fibres in the waste water (no GCTF indicator). *Plastic thread for fishing nets*. Replacement of an obsolete production line with a semi-automated modern processing line (reference b, section 1.4.5). Findings: (a) 99% reduction of water consumption; (b) 30% reduction in electricity consumption. *Quality assurance*. The evaluation of six reports in the plastics, paper and steel sectors "showed no significant deviations of the forecast of environmental impact reduction of the selected core indicators" (reference b, section 2.2). *GCTF conclusions*. "The finalized 9 investment projects fulfilled the requirements of the GCTF and most of them achieved the maximum reduction of environmental impact of the relevant selected indicator. In several cases also additional environmental benefits could be induced as well (e.g. energy and water savings). The GCTF contribution made technology investment possible in a difficult economic period through guarantee and reimbursement but also through sometimes significant cost reductions due to less raw material and energy cost." (reference b, section 3). **Interview update (a)**. The examples given are not fully representative. Two injection moulding devices have been installed (not one), four biomass boilers have been installed (not three, with an expected total saving of 12,000 tCO_2/year). GCTF-financed arrangements for recycling of scrap steel have major effects on reducing electricity consumption (and on safety issues such as dioxin emissions); likewise textile dying and brick making. The GCTF criteria/operational guidelines include both global environmental indicators (GHG emission, ozone-depleting substances, persistent organic pollutants/persistent toxic substances) and local ones (particulate matter PM10, biological oxygen demand, chemical oxygen demand, volatile organic compounds, available organic halides, heavy metals.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	**GCTF implementation via GEF Eco-industrial zone initiative of UNIDO**. "The initiative focuses on the three focal areas climate change, water and chemicals and involves technology improvement and replacement of obsolete technology. For that reason a substantial amount of co- financing for the initiative is necessary. Several national funds have already committed their contribution. The GCTF with its focus on private sector promotion and technology investments is also predestined for this GEF initiative. There is a clear value added for the promotion of the GCTF through supporting technology investments in industrial zones as the successful demonstration projects will be disseminated widely. The contribution to the GEF initiative is therefore regarded as additional marketing channel for the GCTF." (reference b, section 1.2). **Interview update (a)**. The GEF/UNIDO initiative is not yet approved but is expected to become active in 2014. There are some 200 eco-industrial zones in Vietnam, and replication effects are likely to be substantial, with the GEF/UNIDO initiative leading the way.
3. Reasons to expect CC effectiveness of this kind of project based on	"In January 2005 an assessment of the GCTF Colombia and Peru was conducted. It confirms that the GCTF is a very successful instrument to promote investments in [environmentally sound technologies] and

other knowledge	that the investments are normally win-win solution with significant positive environmental and economic impacts." (reference c, page 3). Examples from Colombia: (a) "The change of the production process [at Aceros Industriales] has led to a total elimination of effluents and more than 60 tons of sludge of the company, reduced CO_2 emission and water consumption and no more usage of hazardous chemicals." (reference c, page 7). "The contamination of the sewage water [at Transportes M&S] could be reduced by 70 to 90%. Before the sewage water had flowed untreated in to the Rio Medellín." (reference c, page 7).
Overall conclusion on effectiveness based on the evidence (1+2+3)	The GCTF in Vietnam was given a CC relevance estimate by SDC/SECO of 100%, and assigned to the energy efficiency result chain, but given that cleaner production is not just about GHG emissions (the evidence gives just as much weight to water conservation and pollution abatement), we feel that 50% CC relevance would be a maximum estimate in Rio Marker terms. It is hard to argue, however, with the direct evidence for GHG emission reductions at a number of companies. The 2012 UNIDO evaluation of the NCPC concluded that "The importance of GCTF (funded by SECO) as an external factor facilitating the investments into 'cleaner' technology is marginal. In its current form, the GCTF is unable to compete with similar initiatives, which offer more immediate benefits to banks and companies without the burden of complex procedures. Furthermore, high interest rate, stringent conditions on collateral for loans make borrowing in general challenging." (reference d, page vii). Interviewee (a) took strong exception to this judgement, observing that: (a) banks in Vietnam applied very high interest rates and very stringent collateral requirements in 2007-2011 in response to the global financial crisis, and since rates have declined from 25% to 12% in 2011-2013, GCTF is receiving several company applications per month; (b) GCTF procedures are much clearer and less complex than those of the Vietnam Environmental Protection Fund and other financing mechanisms offered by Japan, Denmark and the Ministry of Industry and Trade; and (c) the GCTF is very actively engaged in marketing (e.g. through associations of SMEs, web-based and social media, conferences) in order to maximise synergies. Interviewee (b) added that GCTF requirements for baseline measurements and technological feasibility assessments can deter SMEs, and that banks do not understand and therefore neglect the SME and environment sectors. Interviewee (c) added that "GCTF *could have been* a good opportunity for SMEs", but as with all the other funds that try to target SMEs only larger companies can access them and high interest rates inhibit uptake. We note that allowing banks to set interest rates, regardless of GCTF guarantees, merely allows banks to maximise profit, minimise risk, and ignore environmental issues. Mitigation '4' (*moderate effectiveness* but likely to synergise with UZ-00987.03.01 and UR-00050.03.01).while recognising that this may not fully reflect the growth and leverage potential of the GCTF and its longer-term synergy with the NCPC.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal makes a good case for the intervention, based on a summary of prior experience in Colombia and Perú and a short analysis of the context and needs in Vietnam (score '5') **Integrity of the RC pathway**. There is full integrity of the pathway in relation to energy efficiency (score '7').

General quality of project design	**Clarity of explanation**. The credit proposal is clearly written (score '7'). **Extent of participation**. A Vietnamese market research company was commissioned to undertake a survey of 105 responding SMEs (out of 650 contacted) from 10 industrial sectors, and also surveyed several banks, confirming demand for investment support in cleaner production technologies by SMEs and for credit guarantees to support lending outside the major cities by banks; the Bank Training Centre also surveyed seven banks and selected the three partners (score '6').

Annex 3: Vietnam Environmental and Social Risk Management

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	UR-00593.01.03, IFC: E&S Risk Management, VN, USD
Documents used	a) Credit Proposal ; (b) IFC East Asia and Pacific Advisory Services report (2012); (c) *IFC/MCG Final Report on Current Practices in Environmental and Social Risk Management Among Vietnam-based Commercial Banks* (2012); (d) *IFC Environmental & Social Risk Management Fact Sheet* (2012?).
People interviewed	(a) Ms Rong Zhang, Senior Operations Officer, Environmental & Social Standards, Asia, IFC (23 Dec 2013, 13.30-14.30); (b) b) Ms Nguyen Thien Huong, Project Officer, Sustainable Business Advisory, IFC (23 Dec 2013, 13.30-14.30).
Basic data	31 May 2012 to 30 May 2017, budget = 0 m, disbursements = 0.292 m.
Location	Vietnam, in the context of similar activities managed by IFC in Vietnam, Indonesia, China and Thailand (UR-00593.01.01, UR-00593.01.02, UR-00593.01.03), all aiming to promote environmental and social risk management (ESRM) guidelines applicable to financial institutions. "Vietnam has been one of the fastest-growing economies in Asia in recent years, with GDP growth averaging 7 percent annually between 2007 and 2011. The Communist Party of Vietnam remains committed to market-oriented reforms and the one party system is generally conducive to short-term political stability. As of Quarter 1-2012, the financial sector in Vietnam consisted of more than 1,100 financial institutions regulated by the State Bank of Vietnam (SBV). This sector includes banks, and non-bank financial institutions which are comprised of financial cooperatives, post offices' saving, stock market, insurance market, and People's Credit Funds." (reference c, page 16). "SMEs [Small and medium-sized enterprises] in Vietnam are the main form of business, generate most jobs, and play a critical role in economic growth. Unlike large businesses, many SMEs do not have resources to invest in technology solutions to minimise E&S impacts or implement relevant E&S management procedures. To date, SMEs' access to finance in Vietnam is limited, as is their ability to attract equity capital. Thus, financing this client segment is a high priority and most of banks have developed a specific set of products for their SME portfolio. Indeed, survey results indicate SMEs are regarded as the banks' portfolio bearing the greatest E&S risks …. This indicates that banks may face a significant challenge in assessing the E&S risks associated with their SME portfolio because of their large number, diversity and their limited E&S management practices." (reference c, page 9). "Vietnam is one of the most vulnerable countries to the effects of climate change, in particular to floods, storms, and a rise in sea-level. The country has a National Climate Change Strategy (NCCS) and updated Climate change and Sea level change scenarios. The NCCS emphasizes the inter-linkages between climate change and sustainable development, and acknowledges that climate change is an over-arching challenge that requires broad societal involvement, including government, the private sector, civil society and local communities. The Ministry of Planning and Investment had led the development of the Green Growth Strategy for 2011-2020 and vision to 2050. Besides these strategies, the Law on Environmental Protection (1993, revised 2005) has been the most important national legislative framework on environmental protection. The law aims at preserving a healthy, clean

	and beautiful environment, improving the environment, ensuring ecological balance, preventing and overcoming adverse impacts of human activity and nature on the environment, and sustainably and economically exploiting and utilizing natural resources. It holds investors responsible for the prevention of environmental degradation and pollution when implementing their investment projects in any sector and of any size." (reference c, page 5). "…banks agree on the need to preserve and protect the environment, but most have not observed the clear link between clients' E&S performance, their financial performance, and the banks' financial performance. … As is typical, in most developing countries and in many developed countries, banks in Vietnam seem to rely on whether or not the client has the necessary environmental approval and do not perform their own appraisal to ensure that the client is complying with the specific conditions of that approval." (reference c, pages 6-7). "**Energy use**: Along with the economic advancement, energy consumption in Vietnam also ballooned almost five-fold in 2005 relative to 1990. More than one-third of energy in Vietnam comes from biomass. This source of energy is especially important for households and small industry in rural areas. Biomass energy sources like wood, agricultural residues (rice straw and husks, maize stalks, etc.) and charcoal are used mainly for household cooking, and small-scale industries consisting of food processing, agro-processing and production of construction materials (brick, roof tile…). However, in many cases, biomass energy sources are used inefficiently. It is estimated that about 80% of households still use traditional, low efficiency cook stoves cooking." (reference c, page 21). "The country's remaining domestic energy consumption relies on oil, followed by hydropower, coal, and natural gas. About 65 percent of final energy demand comes from mainly coal and petroleum products. Electricity (including accounting of energy used to produce electricity) accounts for about 35 percent. Currently, the consumption of electricity in Vietnam exceeds the production, i.e. 48 billion kWh versus 40.1 billion kWh, and guaranteeing reliable energy supplies has become a major challenge. Planned power cuts have been employed to combat the power shortages during peak demand. Moreover, environmental concerns relating to increasing fuel use in power plants, industry, and vehicles have increased in Vietnam as electricity demand continues to rise." (reference c, page 22).
Partners	Programme management by International Finance Corporation (IFC) Asia, based in Hong Kong, China. Main beneficiaries include the SBV, banking sector regulators, commercial banks wishing to improve their ESRM, banking associations, and independent research and training centres.
Result chain assigned by SDC/SECO	**RC4 - Mitigation: Energy Efficiency**. A pathway to promote energy efficiency through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO_2e conserved, and economic competitiveness. Output: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. Outcome 1: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. Outcome 2: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Validation criteria**: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
Purpose	The ear-marking of this contribution to IFC concerns a programme with three components: (a) on establishing new and reinforcing

	existing market drivers such as regulatory guidelines, minimum standards and policy incentives for sustainable banking; (b) on providing technical assistance in response to demand by banks seeking support through training, knowledge sharing, and the establishment of relevant know-how capacity on ESRM; and (c) on building local E&S consulting and training capacity to meet future demand. The Credit Proposal emphasises that the programme is a "timely and market-driven response to the massive climate change challenge" (page 2), that there are significant synergies available from working across a number of countries that are growing fast economically and investing and trading both internally and with each other, and that in Vietnam in particular the programme synergises with the establishment of the National Cleaner Production Centre (UZ-00987.03.01) and the provision of green credit lines through the Vietnamese Green Credit Trust Fund (UR-00050.03.01). The Credit Proposal envisions that in Vietnam the Programme will result in US$208 billion in large corporate and project finance adhering to E&S risk management standards.
Pre-review estimates of CC relevance	The project was assessed by SDC/SECO as 50% relevant to CC mitigation. It was classified by the review team as a validated earmarked contribution to the IFC and considered most relevant to Regulations & incentives for mitigation (RIM).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	None.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Reference (b) presents the reference (c) baseline study as a foundational activity in aiding the State Bank of Vietnam (SBV) in developing mandatory guidelines for identification and management of E&S risk in both project and corporate financing, which was expected to have been drafted by May 2013, based on workshops convened jointly by SBV and the Ministry of Environment and Natural Resources. **Interview update**. The first draft of the ESRM Circular for the Vietnamese Banking Sector is being reviewed by the SBV, the Ministry of Natural Resources and Environment (MONRE) and the Ministry of Labour, Invalids and Social Affairs (MOLISA). Consultation workshops were organized in June 2013 to present this draft and collect feedback from nearly 150 representatives from the banking sector. To support the banking sector to implement this Circular, the project helped the SBV team to develop a number of sector specific checklists. The first batch including Agriculture, Manufacturing, Chemical, Infrastructure, and Power is now available for comment by the banking industry. In order to meet the requirements of institutional investors like IFC, four of the 12 largest banks in Vietnam (Vietinbank, Vietcombank, Techcombank and Sacombank), as well as the smaller An Binh Bank, are developing and institutionalising their own Environmental and Social Management Systems using international E&S best practices and initiatives, or have already done so (reference c, p 38 for An Binh Bank, p 39 for Techcombank, p 42 for Vietinbank, p 44 for Sacombank, p 51 for Vietcombank), along with substantial training of bank personnel and a greater or lesser commitment to 'green banking'. **Interview update**. An IFC baseline survey attempted unsuccessfully to discover from a number of banks (including those just mentioned) the percentage of loans and value of loans in their portfolios that had been screened through their claimed ESRM systems. It was concluded

	that the systems had not yet been implemented at these banks, so the baseline for the value of loans screened by E&S risks was set to zero. IFC has agreed with SBV that the latter will build an effective system to monitor and evaluate the implementation of ESRM systems by the banks in accordance with the new ESRM circular. Within this project, IFC tries to provide learning opportunities for banking regulators and financial institution leaders in the area of ESRM and sustainable banking. One example was a learning event in Washington DC for senior officials of SBV and two large Vietnamese banks (Agribank and Vietinbank). Another was a learning trip to Tokyo where both SBV and financial institution leaders had the chance to meet with three leading Japanese banks (Mizuho, BTMU and Sumitomo) to understand their experience in setting up the ESRM system and pursuing the Equator Principles. Also on this trip, SBV officials attended the Sustainable Banking Network meeting where members updated on the progress of ESRM policy development and implementation. IFC has also organised training sessions on Sustainability Reporting for the staff of stock exchanges and listed companies, and launched a Sustainability Reporting Award to incentivise voluntary reporting. "After SBV launch the ESRM Guidelines in 2014, [IFC] will work with SBV to select 2-3 banks to provide in-depth technical support to 'Green' the banks' operation in line with SBV Guidelines and international standards, setting demonstration effects for other banks. [IFC] will also pilot the relevant sector guidelines with individual FIs." (reference b, page 40).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	It is clear from IFC documents on the ESRM programme that climate change mitigation is integral to its aims. Thus, for example: "If the banking sector could be enlisted in China's effort to protect the environment and provide social safeguards, it would benefit ecosystems and communities, as well as contribute to climate change efforts, both within China and around the world" (reference b, page 40), and with respect to Vietnam's emerging ESRM guidelines, "These guidelines are to enable large project and corporate financing to be E&S risk screened and therefore stimulate climate-friendly projects" (reference b, page 42). It is also clear that the Government of Vietnam fully appreciates, and has addressed through policies and strategies, the nature of the climate change challenges and its implications for Vietnam both as a recipient of impacts and as an increasing GHG emitter, and is therefore unlikely to neglect the matter in its ESRM guidelines.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The evidence supports a reasonable expectation that the programme will have a powerful strategic influence in favour of CC mitigation in Vietnam, especially in synergy with the NCPC and GCTF initiatives. We suggest a (forecasted) mitigation *moderate effectiveness* score of 4.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The programme is well-founded upon baseline studies that established the principles for the intervention (reference c). For example, surveys showed that banks were motivated to protect their reputation and avoid devaluation of collateral because of environmental non-compliance by clients, and that the most important constraint hindering banks' consideration of E&S risks was the absence of specific guidelines and other guidance material for the financial sector to help banks identify and manage related E&S risks, with other important constraints being the lack of lack of qualified internal staff with relevant E&S expertise and experience, and the absence of qualified and affordable environmental consultants, all of

	which are deliberately targeted by the programme (score '7'). **Integrity of the RC pathway**. RC4 is used here as a proxy for a much more diverse set of investment processes, some to do with energy efficiency, others concerning renewable energy, pollution abatement, etc. There is a lack of explicit linkage between outputs and outcomes in relation to energy efficiency, but it is accepted that the overall pathway to initiating diverse forms of CP and climate-friendly investment is sound and well described - and was further clarified at interview (score '5').
General quality of project design	**Clarity of explanation**. The Credit Proposal is lucid and comprehensive (score '7'). **Extent of participation**. Reference c is based on consultations with 54 banks and indicates a great deal of responsiveness in the project design to stakeholders within the financial sector; it is not known to what extent SME, NGO, governmental and other stakeholders were involved (score '5').

Annex 4: Certification of traded timber in Vietnam and Lao PDR

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00015.02.01, Commodities Cert Tropical Timber VN (phase II)
Documents used	a) Evaluation report 2007; (b) Technical Progress report; (c) Credit Proposal; (d) Project Final Report; (e) Annexes to final report (x9).
People interviewed	(a) Mr Sebastian Schrader, former project manager; (b) Ms Le Thuy Anh, Central Annamites Landscape Manager, WWF-Vietnam (former project officer).
Basic data	Start date 1.12.2007, end date 30.6.2011 Budget: CHF 0,75 million from SECO (+CHF 46,000 from previous phase + CHF 0,3 million in-kind from WWF CH, WWF GMP, GIZ and SNV) Mitigation budget (=total CC budget): CHF 0,94 million (P1), CHF 0,56 million (P2). Total SECO disbursements 2002-2012 CHF 1,1 million (P1) CHF 0,73 million (P2)
Location	**Vietnam**: Hanoi, Quang Tri, Gia Lai, Quy Nhon/Da Nang/Ho Chi Minh (for market links) **Laos**: Vientiane, Savannakhet/Khammouane, Luang Prabang (occasionally for group certification support). In the project plan Cambodia was included too but no activities took place there. Vietnam is one of the fastest growing economies in Asia with strong history in agriculture and fast growing manufacturing sector. In just over 20 years Vietnam has developed from an extremely poor country with sever famine to a relatively well-off middle income country. The fast transition took place after the communist government introduced socialist-oriented market economic reforms as part of the Doi Moi reform program. Vietnam suffered from deforestation until early 1990's but since then the total forest cover has been increasing. Today about 40% of the land area is covered by forest but the share of primary forests is minimal, less than 1% of total land area. The fairly large forest reserves have contributed to the development of major furniture industry in the country. Still, due to lack of good quality timber stocks within the country, 80% of the raw material for furniture industry is imported. Economic development in Laos has been slightly slower than that of Vietnam but Laos still had an average GDP growth rate of 7.9% in 2001-2010. Laos is on its way to stepping out from the group of least developed countries by 2020, largely thanks to its natural resources and sectors related to them, including mining, hydro power, forestry and agriculture. More than a quarter of the population still lives under the national poverty line, but the government is working to meet the poverty reduction targets of the Millennium Development Goals by 2015.
Partners	**Funding partners**: SECO (+ in-kind from WWF CH and WWF GMP) **Executing Agency:** WWF Greater Mekong Programme **Main implementing agency**: Ministry of Agriculture & Rural Development (MARD), **Local /research partners**:

	• Vietnam Forest and Trade Network (VFTN) and its members • Department of Forests (DoF) (Vietnam) • District Agriculture and Rural Development (DARD) (Vietnam) • Department of Forests: Gai Lai Province (Vietnam) • State Forest Enterprises; Hanung & Sopai (Vietnam) • Ministry of Agriculture and Forests (MAF) (Laos) • Department of Forests (Laos) • Ministry of Agriculture, Forestry and Fisheries (MAFF) (Cambodia) • Department of Forests (Cambodia) • State Forest Enterprises, industrial plantations, small-holder plantations, communities **Coordination and synergies with other projects and actors**: SECO programmes and projects: • SIPPO in the wood sector • SECO's cooperation and project work with the International Tropical Timberorganisation (ITTO) • Policy work at national level • Global policy activities, such as. Forest Law Enforcement and Governance (FLEG), an initiative of the World Bank SECO's economic development cooperation i.e. in trade related technical assistance
Result chain assigned by SDC/SECO	**Result chain 5 Sustainable Standards**. A pathway to reduce GHG emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. **Outputs:** (a) establish access to markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification. **Outcome 1:** (a) greater use of sustainability certification standards in the commodities trade. **Outcome 2**: (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets. **Expected validation criteria**: Regulations & incentives for mitigation; Applied ecology for mitigation.
Purpose	To provide market linkages between production forests in Vietnam and companies with responsible purchasing policies in Europe, thus encouraging legal and sustainable forest management. By facilitating export-driven compliance with credible international standards of forest management, the project also aimed to provide policy input to the dynamic regulatory frameworks of the forestry sectors of Vietnam, Laos and Cambodia. The project consisted of five result areas (RA): RA1: Support to the Vietnam Forest and Trade Network (VFTN); RA2: Support to State Forest Enterprise (SFE); RA3: Link small scale producers and the processing sector for export markets; RA4: Regional activities Laos/Cambodia; RA5: Sustainable harvesting of mangrove wood in combination with organic shrimp production
Pre-review estimates of CC relevance	The project was assessed by SDC/SECO as 75% relevant to mitigation. Initially it was classified by the review team as meeting validation criteria **Applied ecology for mitigation (AEM)** and **Regulations & incentives for mitigation (RIM**).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	There is limited baseline data available for calculating direct GHG emission reductions gained through the project. In a Forest Carbon Project feasibility study prepared by Rainforest Alliance, SNV and WWF for Quang Tri Province, it is estimated that by increasing rotation length of acacia plantations from 6 to 10 years and by applying other

	expectations of the scenario, carbon sequestration of 68 t CO_2/ha would be created during a 36 years long project (3 rotations). The small holder activities under the Commodities Cert Tropical Timber project contributed to 2000 ha of small holder forests to be managed according to the FSC standards. According to the carbon modelling schemes presented in the feasibility study, the project would result in GHG emission reductions equal to 136 000 t CO_2, should a 36-year farming period be reached with 10 year rotation cycle on all certified land.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	No direct climate change mitigation objectives were set for the project. Some CC effectiveness is nevertheless assumed to be met through improvements in and promotion of sustainable forest land use. The main project results with potential CC effectiveness are as follows. **Results under RA1**: The Vietnam Forest and Trade Network expanded with 9 new members from wood processing and trading industries. Small holder forestry groups are expected to join the network after the project. **Effectiveness under RA1**: The strengthened VFTN can lobby for policy reforms which increase the ease in which responsible international trade can be conducted eventually leading to improved forest management and CC mitigation. **Results under RA2:** State forest companies received red books (50 year land leases) and forest inventory was completed. The management practices of state forest companies were not streamlined as planned. **Effectiveness under RA2:** Red books and forest inventories enhance state forest companies' ability to manage their forests sustainably which could eventually lead to CC mitigation. The red books are also needed in order to proceed in FSC certification process. However, it is worth noting that forest inventories could also lead to increased forest depletion in case used for making quick cash instead of promoting sustainable forest management. Also lack of improvements in management practices decreases the efficiency of the work of state forest companies. **Results under RA3:** First small holder groups received FSC certification, 312 ha of small holder group forest were certified, FSC certified *Acacia* was purchased at 43% price premium and knowledge transfer on FSC certifications between Vietnamese, Laotian and Chinese stakeholders took place. According to the interviews a total of 2000 ha of small holder group forest have been certified under the FSC scheme as a result of the project activities and additional funding from Ikea by December 2013. **Effectiveness under RA3:** Establishment of FSC certified small holder group forests improves forest management practices in Vietnam potentially leading to CC mitigation in the longer run. Significant price premium reached and increased knowledge transfer have already provided signs of leading to further increase in areas of FSC certified forests managed by small holder groups. **Results under RA4:** The Lao Forest and Trade Platform (LFTP) was established, first two Lao companies received FSC Chain of Custody certification and land area of FSC certified forests in Laos increased from 50,000 ha to 81,600 ha. **Effectiveness under RA4:** The activities promote sustainable forest management in Laos which could potentially lead to CC mitigation.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Growing tropical forests can remove 20-30 tonnes of CO_2 from the atmosphere per hectare per year. Vietnam is creating new forests at a rate of about 0.2 million ha/year, and although these are monoculture plantations and often of non-native species such as *Acacia* (so have few co-benefits in the form of biodiversity conservation), mitigation effects

	are inherent to the reforestation process.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Most of the evidence for climate change effectiveness in this project is qualitative, and based on what we accept (based on direct and indirect evidence) are the valid assumptions that improved forest management practices, market links for certified products, and awareness of sustainably produced forestry products and production methods can all potentially lead to CC mitigation. The project resulted in significant effectiveness in the field of small holder forestry by introducing FSC certifications schemes to small holders. As the first small holder certifications were received, the project worked as an example on how to improve the sustainability of a large share of Vietnamese forest management. Other parts of the project did have moderate effects on CC mitigation. Overall mitigation effectiveness score: 4.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project design builds on the first phase of the project and its independent evaluation of results and lessons learned, so it is based on close familiarity with environmental conditions, relevant institutions, market actors and other stakeholders. The project goal being in strengthening the organisational structure and market within sustainable forestry, the goals contribute to CC challenge through organisational and market improvements rather than direct CC interventions. However, the planned project activities respond to the structural and market challenges that lie in the way of more climate positive forestry. Score: 5. **Integrity of the RC pathway**. The general pathway is for incentivising foresters to manage forests better (and store more carbon) by offering them more lucrative markets if they can comply with FSC certification. However, it can be understood that by working on the particular result areas identified above, sustainable forestry practices can be expected to be promoted. The result areas were likely to support the implementation of each other, but no clear pathway or steps within the pathway can be identified. Score: 3.
General quality of project design	**Clarity of explanation**. The general pathway is for incentivising foresters to manage forests better (and store more carbon) by offering them more lucrative markets if they can comply with FSC certification. However, it can be understood that by working on the particular result areas identified above, sustainable forestry practices can be expected to be promoted. The result areas were likely to support the implementation of each other, but no clear pathway or steps within the pathway can be identified. Score: 3. **Extent of participation**. The project was designed as a continuation of its first phase, so the project partners (mainly the Vietnamese Government and Vietnam Forest and Trade Network established in the first project phase) were involved in the project design through their inputs in the first project phase. The result areas are described as including a group of small-holder producers in the project activities but the group was yet to be identified in the credit proposal. Industrial plantations and communities are also mentioned as project partners, but their role in project implementation is not clear, and nor is it clear if they have participated in project design. It is worth noting that according to the credit proposal, the project mainly targets State Forest Enterprises, thus local communities are not directly involved in project implementation either. However, it is noted in the credit proposal that "The project will benefit the communities working for and living around and within the State Forest Enterprises and small-holder producers. By improving the market access and value of the raw materials derived from these areas, income generation will be stabilized and increased over the long term. The project will also contribute to the

	stable and responsible growth of the furniture processing industry and those working for it". Therefore it would have been important to note if the communities have been able to participate in the project design. Score: 3.

Annex 5: Mekong Market Development Portfolio

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-05697 Mekong Market Development Portfolio Project
Documents used	(a) Credit proposals for phases one and two; (b) Joint SDC – Irish Aid Review of the Mekong Market Development Portfolio Programme (MMDPP) Review Report
People interviewed	None of the people proposed for interview were able or willing to participate.
Basic data	Start date: 1.12.2007, end date: 28.2.2011 (Phase 1) Start date: 1.6.2010, end date 30.6.2011 (Phase 2) Project budget (according to credit proposals) Phase 1: USD 3,1 million from SDC, total budget USD 8,57 million. Phase 2: USD 1,25 million from SDC. According to master excel CHF 5,2 million.
Location	Vietnam (preliminary in Thanh Hoa, Quang Ngai and Cao Bang provinces) and Laos (early points of entry: Houaphan and Vientiane). According to the credit proposal, activities were planned for 16 provinces in the region. The project was planned to be implemented also in Cambodia but according to the Programme Review Report no activities took place there. Vietnam is the leading economy in the Mekong region with a rapidly-growing private sector. Economic growth is concentrated in urban areas while rural areas often remain under developed. In all three Mekong countries rural poverty remains as a key development challenge. The countries lack solutions for linking the rural poor to the national growth process. The Mekong sub region is economically vibrant from a macro perspective, but there remains a need for development projects in Viet Nam and Lao PDR to create economic opportunities for the poor. The nascent bamboo sector has significant pro-poor potential. In the northern uplands of Viet Nam and Lao PDR bamboo forest provides income for over 500,000 rural poor, mostly among ethnic minorities, with bamboo incomes reaching around $50M in 2008. But the industry is undeveloped and not realizing its poverty reduction potential, with 97% of the output ending up as low value paper pulp and construction, suppressing prices for farmers and creating an unsustainable harvesting trap for the poor in need of cash.
Partners	Funding partners: SDC and Irish Aid. Main implementing partner: Prosperity Initiative (PI). PI managed the project and acted as technical advisor and provided support to partners as required. PI was originally a project unit inside Oxfam Hong Kong and then formally established as an independent not-for-profitorganisation for project purposes. Government partners: Vietnam: Ministry of Agric. & Rural Development (MARD) - Institute of Policy and Strategy for Agriculture and Rural Development (IPSARD) Cambodia: Forest Administration - Community Forestry Unit Lao PDR: Ministry of Agriculture & Forestry – Nat. Agriculture & Forestry Research Institute

	Other partners: WWF, GRET, SNV, INBAR, IPSARD, universities and associations. Also a number of private sector partners and associations participated in implementation of the project activities related to market development.
Result chain assigned by SDC/SECO	**RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. Output: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). Outcome 1: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). Outcome 2: (a) increased community resilience to the consequences of climate change. Expected validation criteria: (a) Mainstreaming of adaptation; (b) Adaptation against disasters; and (c) Resilience for adaptation.
Purpose	To reduce poverty in Vietnam and Lao PDR by improving conditions for investing in high value, sustainably-sourced bamboo, reforming policy and the business environment, supporting investors with new technology and sustainable bamboo sourcing, and developing market links for new products. The project targets large scale poverty reduction, and was envisioned over a multi-phase 10 year horizon. Phase 1 (2 years) was an establishment phase to (i) establish initial impact in bamboo, (ii) identify other sectors with pro-poor potential, and (iii) establish Prosperity Initiative (PI) as a vehicle to develop the methods and vision. According to the credit proposal, the goals of the Mekong Market Development Portfolio programme, were: Component 1: To develop a vibrant bamboo sector to demonstrate the potential of sector development to impact economic poverty at a regional scale; Component 2: To support the replication of the approaches demonstrated in the bamboo sector to develop a portfolio of other poverty-targeted sectors in the Mekong region. The goals were targeted through market analysis and sector development for bamboo sector, and policy and strategy development for other business sectors that could target poverty reduction. The objectives for the first 10 years of the planned programme were: 1. To deliver increasingly large scale impacts on rural poverty from the bamboo sector through the roll-out of market development activities in multiple locations around the region through broad-based collaborations spanning government, private sector and the development community. 2. To support the replication of the approaches from the bamboo sector, directly by PI and indirectly through government and other partners, into three key areas: (a) developing collaborative market development initiatives in other regional/nation scale sectors with significant potential for poverty impact where PI can add significant value; (b) developing the capacity of national governments to replicate the project approaches into their own market sector and rural economic development strategies; and (c) developing the capacity of provincial governments to use the project approaches to stimulate growth in poverty targeting sectors most appropriate to their local conditions.
Pre-review estimates of CC relevance	According to SDC/SECO, the project was 25% relevant to CC mitigation and 0% relevant to adaptation. The initial assessment by the review team could not identify validation criteria for the project.
Evidence for climate change mitigation and/or adaptation effectiveness	

1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	None.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project targeted GHG emission reductions through promoting sustainable natural resources management in the bamboo sector. However, from the project documentation it is not possible to define to what extent the project managed to contribute to the sustainability of natural resources management. Business development activities were implemented, but it is unclear how large an area of land has been managed better than before.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Such a project is likely to have some small relevance both to mitigation (through accumulation of woody biomass) and mitigation (through re-vegetation of degraded slopes).
Overall conclusion on effectiveness based on the evidence (1+2+3)	It is noted that SDC/SECO assessed this project as 25% relevant to CC mitigation, despite also placing it within RC7. This is assumed to be an error. According to the credit proposal, sustainable natural resources management was a core dimension of the project's analytical and implementation work. However, according to the project logframe, there were no activities that would have directly contributed to the quality of natural resources management. An environmental impact assessment of bamboo cultivation was to be done and market development activities promoted to increase income opportunities from bamboo production, but it is unclear if GHG emission reductions were obtained through natural resources management activities during the project or not. The programme review credited the project with developing high quality investment support mechanisms for bamboo processors. These mechanisms included Sustainable Supply Services where the sustainability of bamboo supplies was to be secured. Business partner demonstration was established with Tien Dong company with 2750 ha of bamboo plantations. Unfortunately the project and the lead partner Prosperity Initiative Community Interest Company, which was responsible for the investment support mechanisms, were run down before the services became widely available. Other general market development activities of the project may have contributed to CC mitigation through promoting sustainable natural resources management, which might also have contributed to improving CC adaptation capacity in rural areas. These potential impacts cannot be demonstrated, however, due to lack of information on the quality and quantity of actual improvements in natural resources management created through project activities. Overall mitigation/adaptation effectiveness score 2.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. No clear CC related objectives are visible in the project plans. The existing logic of utilising poverty reduction activities to support sustainable natural resources management is viable. In the project poverty reduction is targeted though market development of bamboo cultivation and sales, which can at best also efficiently target increased sustainability in natural resources management and therefore also in CC mitigation. However, from the credit proposal it is not clear how sustainable management of natural resources was targeted in practice. Score: 2. **Integrity of the RC pathway**. It is not possible to identify the steps

	of the logical pathway towards CC mitigation activities from the credit proposal. Score: 1.
General quality of project design	**Clarity of explanation**. Sustainable natural resources management is mentioned as a core dimension of the project's analytical and implementation work. However, from the credit proposal it is not clear how natural resources management was targeted. An environmental impact assessment is mentioned under the project activities in the logframe and several bamboo market development activities are included in Component 1 of the project but it is not explained how these activities would target sustainable natural resources management as one of the sectors of market development. Objectives and activities related to market development were more clearly explained. Score: 1. **Extent of participation**. The credit proposal mentions a bamboo study and on-going sector development activities but further information on these has not been provided. From the credit proposal it is not clear if local stakeholders have participated in the project design. Score: no basis for scoring.

Annex 6: Swiss-Vietnamese Clean Air Program

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-03833 Swiss-Vietnamese Clean Air Program (SVCAP)
Documents used	a) Credit proposal Phase 1 b) Phase End Report c) External review (Draft May/June 2007) d) Final Report: Baseline Study for Awareness of the Ha Noi Population on Air Quality and Yearly report 2007
People interviewed	Ms My Lan Hoang, Senior Programme Officer, Embassy of Switzerland in Hanoi
Basic data	Start date: August 2006, end date June 2008 (The project was originally planned to be started in September 2004). Budget: CHF 3,4 million (according to the credit proposal) (USD 2,9 million, according to the mid-term review).
Location	Hanoi, Vietnam. The reforms introduced in Vietnam in 1986 (Doi Moi) gave rise to profound changes at the economic, social and judicial levels. In the early 1990s, Vietnam reported a particularly high rate of economic growth, which levelled out at 5 to 6% p.a. between 1998 and 2003. This rapid development had a positive impact on poverty which dropped from 58% in 1993 to 29% in 2002. "The Government's Comprehensive Poverty Reduction and Growth Strategy (CPRGS), puts poverty reduction and growth at the heart of the development plans. The CPRGS was developed in broad consultation with ministries, agencies, donors, and community groups, and serves both as an action plan for Government and as a framework for donor assistance to Vietnam. Vietnam has jumped to 109th place on the UNDP's human development scale, surpassing a number of countries with a similar GNP, because of its positive developments in such areas as education and basic health care. The positive socio-economic development, however, together with urbanisation and rapid population growth exerts a high pressure on the environment and natural resources, resulting in: degrading of land, soil and forest areas; over-exploitation of mineral products; depletion of terrestrial and marine biodiversity; pollution of soil, surface and ground water resources and air." (Credit proposal phase 1, page 2).
Partners	The main implementing partner of the project was Swisscontact, a Swiss NGO. The national implementation partners were: • Ministry of Environment and Natural Resources (MONRE) incl. the Department of Environment (DOE) and Vietnam Environmental Protection Agency (VEPA) • Ministry of Transport (MOT): Vietnam Register (VR) • Hanoi People's Committee HPC incl. the Department for Natural Resources, Environment and Housing (DONREH) and Transport and Urban Public Works Services (TUPWS).
Result chain assigned by SDC/SECO	**RC 4 – Mitigation: Energy Efficiency**. A pathway to promote energy efficiency through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percent of efficiency increase, tCO2e conserved, and economic

	competitiveness. **Outputs**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
Purpose	To mitigate further degradation of air quality in and around Hanoi, by developing an air quality management system through capacity building and institutional strengthening in the areas of policy reform, awareness raising, pilot projects and managing air pollution and emission data.
Pre-review estimates of CC relevance	The project was assessed as 50% relevant to mitigation by SDC/SECO. The Gaia team's initial review did not validate the project, on the grounds that CC relevance appeared marginal from the summary documents.
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	There are no baseline data available to assess the real GHG emission reductions gained through the project. A baseline survey for awareness level of pollution-related information was carried out in the beginning of the project but no impact monitoring surveys for assessing the effects of awareness raising activities were conducted.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Despite of the lack of baseline studies, there is reason to think that some CC-relevant effects may have been achieved through the activities that primarily targeted particulate emission reduction. The CC relevant mechanisms of each project component are as follows. Component 1: Policy reform. The project contributed to producing a draft of a Motorcycle Emissions Control in Major Cities Program (MECCP), establishing a pilot emission inspection station for in-use motorcycles in Hanoi, producing a final draft of clean air legislation, and drafting an Air Quality Management Plan for Hanoi. Also the capacity of project stakeholders in developing air quality policies and legislation was enhanced. The work on national and regional policies contributed to building a solid basis for future projects and programmes targeting emission reduction and prevention in Vietnam and especially Hanoi. Component 2: Awareness raising. As part of the project activities, public awareness on air pollution impacts was improved through various awareness raising campaigns, including photo contests, TV appearances and journalist seminars reaching wide audiences. While the focus of awareness raising activities was on local air pollution and its effects on health, it can be assumed that the improved awareness of emissions also contributed to GHG emission reductions through increased awareness on the down sides of polluting transportation and production. The cooperation with media was described as successful in project documentation. However, lack of impact assessment makes it impossible to measure the effectiveness of the improved media coverage. Component 3: Pilot projects. The CC mitigation effects of the four pilot projects were limited, partly because of insufficient resources in project implementation. One of the most tangible results included fuel saving of 15-25 % in the truck and taxi companies fleets participating

	in the eco-driving training of a pilot project. Also improvements in energy efficiency of a food processing plant contributed to CC mitigation. The greatest effect the pilot projects had on CC mitigation was probably gained through knowledge transfer and improved awareness of the benefits of improved energy efficiency. However, the level of these effects is impossible to assess with the material available for this study. Component 4: Database. Through the activities under component 4 the capacity of Hanoi Department of Natural Resources, Environment and Housing (DONREH) staff to undertake emission inventories was enhanced and the management and operation practices of air quality monitoring stations were improved. The improvements in emission monitoring capacity and practices can also be useful in monitoring emissions reductions in later projects or as part of government activities.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Reductions in pollution levels can be achieved through improved cleaning or filtering technologies (often referred to as pollution control) or through increasing the efficiency of a process, and thereby reducing the amount of pollution generated at its source (pollution prevention). Many air pollutants are strongly linked to sources of GHG emissions having similar sources, and therefore especially pollution prevention activities also reduce GHG emissions. The clear interlinkages exist e.g. in the transport and power generation sectors where improved energy efficiency reduces both air pollutants (such as particulate matter and NOx) and carbon dioxide (CO_2) and other GHG emissions.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Based on the external mid-term review and the phase end report, the project was reasonably effective in particulate emission reductions through its contributions to relevant policy development, experience and awareness raising gained through pilot projects and awareness raising campaigns and by developing emission database for Hanoi. The project probably also contributed to GHG emission reductions through improved energy efficiency and strengthened emission policies. The project targeted a comprehensive set of issues contributing to emission reduction in traffic and industry and the policy framework around them. However, within relatively small project size and resources the activities could have been focused on selected relevant issues with more emphasis. There was a two year delay in project start-up which led to the project period being less than half of the time originally planned. This led to fewer impacts on emission reduction than planned, affecting also the project's CC effectiveness. The cancellation of the second project phase had further (decreasing) effects on project impacts. Also some decrease in the interest towards the project within the Vietnamese government has been reported in the interview. This may have affected the level of the efforts the stakeholders put on implementing the planned activities. The lack of clear (economic) incentives for emission reductions may also have contributed to the delay in project start-up and the level of stakeholder commitment over the project period. Despite of the challenges described above, the project seems to have contributed to CC mitigation through a number of activities conducted under different project components. However, it is not possible to calculate the actual emission reductions gained through the project. The assessment of the effectiveness of the project on CC is based on an interview, an external mid-term review report and a phase end report of the project. Lack of external final evaluation leaves the assessment without objective information on the real results of the project. The

	evidence of CC effectiveness is presented for each component separately in section Direct evidence for effectiveness. Overall mitigation effectiveness score: 4.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. Population and economic growth and fast urbanization increase traffic in all cities in Vietnam. Lack of rail transportation in cities leads most of passenger traffic to be handled by motorbikes while goods transportation is mainly conducted by trucks. Increasing traffic causes pressure on air quality. The 2004 credit proposal concluded that resulting ambient air quality concerns were mainly related to: (i) particulate matter (PM) from industrial activities, construction and traffic; (ii) sulphur dioxide (SO2) from [low-quality] power generation and other energy-intensive industries and (iii) increasing levels of carbon monoxide (CO) and nitrogen oxides (NOx) due to growing vehicle density in urban centres. It also noted, however, that air quality monitoring was of doubtful quality, and comprehensive inventories and pollution concentration models were non-existent for most of the worst-polluted areas. The credit proposal further states that although comprehensive national, and to some extent, local environmental strategies had been formulated, implementation of concrete actions was not keeping up with the fast development pace. Air Quality Management (AQM) was not being sufficiently addressed as a crosscutting issue in important decision-making processes. Most of Vietnam's air quality, emission and equipment/vehicle standards were below international levels, and enforcement of those standards was weak. Prevention of air pollution is linked to CC mitigation through general emission reduction and energy efficiency activities. All planned project components affected CC mitigation by contributing to emission reductions. The main objective of the project was to improve air quality through reducing emissions of particulate matter, SO2, CO, and NOX, so GHG emission reduction was mainly an additional benefit from the project, not explicitly foreseen in the credit proposal. Even so, the project design was soundly based on the need to target emission reductions at a time when pollution (and emission) levels were expected to grow rapidly. Score: 5. **Integrity of the RC pathway**. Specific GHG emission objectives or activities to reach such were not set in the project planning phase. However, the activities to reduce particulate emission were explained clearly. These activities were also those that contributed to the GHG emission reduction results of the project. As CC issues were not specifically focused on in the project design, there is no evidence of clear pathway to achieve results related to it. However, there are clear links between project objectives and activities related to the particulate emission reductions and energy efficiency. Still, the path between them would have been clearer if there had been fewer activities focusing on selected themes instead of targeting a number of small activities such as four pilot projects and activities under other project components. Score 2.
General quality of project design	**Clarity of explanation**. The project activities were clearly defined and designed to respond to identified needs. At the same time the number of project components and activities was high, and it was unclear if some of the activities would have been more in the focus than others. Project plans didn't specify the actors within each activity, thus it was not very clear who and how the activities would be brought to practice. Score: 2. **Extent of participation**. According to the credit proposal there seems to have been reasonable understanding on the project objectives

	and needs among project donors, planners and the local stakeholders in Vietnam due to (unspecified) government stakeholder consultations. The credit proposal does not make clear to what extent local experience and knowledge were used in the actual project planning. Score: no basis for scoring (or '2').

Annex 7: Project oriented reviews - complementary desk reviews of 25 projects

As part of the complementary desk review, a further 25 projects were chosen for desk review to ensure full and balanced coverage of the results chains by the analysis.

Institution	Project no.	Result Chain	Project title	Geographical focus
SDC	7F-00382	7	Observatoire du Sahara et du Sahel: Contribution au Programme Environnement	Regional
SDC	7F-02242	7	Economic Development and Income Generation in Nakhchivan Rural Communities through Kahriz Rehabilitation, Azerbaijan	Azerbaijan
SDC	7F-02864	7	Integrated Natural Risk Management in Muminabad	Tajikistan
SDC	7F-03804	7	AFIP-HELVETAS-Intercooperation	Bangladesh
SDC	7F-04054	7	Programme on Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Areas in India	India
SDC	7F-05733	7	Support for farmerorganisations to improve food security in Niger	Niger
SDC	7F-06401	7	Up-scaling of Integrated Water Resources in Central Asia Management	Regional
SDC	7F-06841	6	Disaster Risk Education in Public Schools (Jordania/Lebanon)	Regional
SDC	7F-06983	7	Strengthening Climate Change Adaptation in China and Globally	China
SDC	7F-07733	7	Climate Change Adaptation in China: Monitoring and Early Warning of Glacier Lake Outburst Floods in the area the Yarkant River	China
SDC	7F-07789	3	Project on Biomass in India	India
SDC	7F-07807	6	Weather-index based Crop Insurance in Zimbabwe, Swaziland, Zambia, Malawi	SADC

SDC	7F-07916	6	Contribution to Haitian Catastrophe Micro Insurance Facility – Reducing Disaster Risks by providing catastrophe insurance	Haiti
SDC	7F-07923	7	Coastal Protection of the City of Beira	Mozambique
SDC	7F-08104	7	Reducing vulnerability and adaptation to climate change in Nicaragua	Nicaragua
SDC	7F-08274	7	Multilateral Contribution to the Adaptation Fund	Global
SECO	UR-00152.01.01	5	ITC-Organic Coffee Ethiopia - Clearance	Ethiopia
SECO	UR-00171.04.01	5	Allanblackia, Ghana Phase II	Ghana
SECO	UR-00174.03.01	4	TJ: Khujand Water Supply Project II, EUR	Tajikistan
SECO	UR-00263.13.01	4	IFC: PEP Africa CIPA ZA, USD	South Africa
SECO	UR-00289.02.01	7	Commodity Risk Management (Aufst.),USD	Global
SECO	UR-00366.04.01	5	Pakka: Organic FT, Cocoa in Ghana	Ghana
SECO	UR-00372.01.01	5	FCPF WB Forest Carbon Partners. Fac.	Global
SECO	UR-00397.02.02	7	WB: SEEC CRIF (increase 2010), USD	Southeastern Europe and Caucasus
SECO	UR-00534.01.01	2	Partnership for Market Readiness	

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-00382 Observatoire du Sahara et du Sahel: Contribution au Programme Environnement
Documents used	(a) Credit proposal, 7F-00382.04_Proposition de Crédit_2006-2010.pdf (Phase 4, CHF 2,5 million). (b) SUIVI-ÉVALUATION DES CAPACITÉS D'ADAPTATION AU CHANGEMENT CLIMATIQUE EN AFRIQUE. RAPPORT DE SYNTHÈSE DES ÉTUDES DE CAS, SEPTEMBRE 2011 (Experimenting a capacity development approach and a toolkit for monitoring and evaluation within climate change adaptation initiatives) (c) http://www.oss-online.org/ (accessed 5.2.2014) (d) SUIVI DES PERFORMANCES, ÉVALUATION MI-PARCOURS, Rapport produit par Roland Robin, Août 2007 (e) L'ACDI apprend : Leçons tirées des évaluations 2011-2012 (f) Observatoire du Sahara et du Sahel_report 2010.pdf. RAPPORT SCIENTIFIQUE ET TECHNIQUE, 1er semestre 2010, Programme ENVIRONNEMENT. Convention de financement DDC – OSS (g) Rapport Scientifique et Technique, Année 2011. Programme ENVIRONNEMENT Convention de financement DDC – OSS, Phase IV Direction du Développement et de la Coopération du Département fédéral Suisse des Affaires Étrangères
People interviewed	Desk study based on review of documents shared by SDC/SECO (above). In addition sources b, c, e were accessed and used to complete the review.
Basic data	Start date: 1.3.1995 and end date 31.12.2016 according to SDC/SECO spreadsheet/excel, with total budget in spreadsheet: CHF 4,6 million. The credit proposal for phase 4 refers to a budget of CHF 2,5 million for 2006-2010.
Location	The Sahara and Sahel Observatory is an international, intergovernmentalorganisation operating in Africa's Sahara-Sahel region. OSS was founded in 1992 in Paris and moved its headquarters to Tunis (Tunisia) in 2000. OSS includes 22 African member countries, five non-regional member countries, four sub-regionalorganisations representing West Africa (CILSS), East Africa (IGAD) and North Africa (UMA), and a non-governmentalorganisation (RADDO). OSS works with its member countries according to the principle of subsidiarity. It acts as both an initiator and a facilitator of partnerships to address common environmental challenges. The management of transboundary water resources and the implementation of Multilateral Environmental Agreements, notably those addressing desertification, biodiversity and climate change, constitute key areas in theorganisation's work. (source c)
Partners	**Funding partners**: SDC, CIDA, and several other donors (not specified on OSS website) **Implementing partner:** OSS Secretariat (being also direct beneficiary) **Other parties/beneficiaries:** OSS member countries and organisations in Africa
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity.** A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. Output: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water,

	health, land use, urban planning). Outcome 1: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). Outcome 2: (a) increased community resilience to the consequences of climate change. Expected validation criteria: (a) Mainstreaming of adaptation; (b) Adaptation against disasters; and (c) Resilience for adaptation
Purpose	To overall objectives of the Swiss contribution is to strengthen and build OSS capacity to undertake long-term ecological monitoring of the north-western Sahara aquifer system, and to improve environmental governance and sustainable management of natural resources also on national level (source a).
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 75% relevant to adaptation (and CC principal project, according to OECD/DAC/Rio Marker guidelines), with a preliminary assessment by Gaia review team being cautious to accept the project being principal from CC perspective (i.e. addressing mitigation or adaptation is fundamental to its design, explicit within its aims, and if it would not have been undertaken at all or designed in the same way without this primary objective).The project was initially classified by the review team as meeting validation criteria **Research & Monitoring for Adaption (RMA)**
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	No direct evidence for strengthened capacity to cope with climate change is available in the desk review documentation, taking in particular note of the fact that CC relevant goals and indicators were not available at the time when a decision of the Swiss contribution for phase 4 was made.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	In recent years the CC aspects has increasingly been integrated onto the OSS agenda, as indicated in the additional material reviewed (in particular b and c). In this light e.g. the achievements mentioned in sources f and g, and progress on environmental monitoring in target countries (including Algérie, Maroc, Tunisie, Burkina Faso, Kenya, Mali, Niger and Sénégal) capacity building activities and outreach have undoubtedly contributed to improved understanding and monitoring capacity and awareness of the CC challenges in these countries, and hereby contributing to stepwise mainstreaming of CC into decision making on various societal levels. The additional documentation reviewed, also present activities promoting, training and making use of the CRiSTAL tool (which can be considered an internationally recognized forerunner approach for livelihoods based climate risk management). In addition, many of the NGO partners involved in OSS activities are generally highly aware of CC adaptation issues and can contribute to increasing CC adaptation effectiveness of the program.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	While it is not possible based on available material to assess how the Swiss contribution has helped mainstream CC adaptation in OSS work, it is evident that it has gained a stronger place within the agenda and activities of OSS, and least partly, this can be attributed to Swiss influence, taking note of CC being high on the Swiss development cooperation agenda generally. E.g. the OSS website in February 2014 highlights that OSS provides a platform for North-South-South partnerships aimed at strengthening the capacity of African member countries to address environmental challenges as part of a long-term, sustainable development perspective. Theorganisation operates as a scientific and technical instrument for member countries andorganisations. It devises concepts, approaches, and methodologies for environmental monitoring, natural resource management and climate change adaptation in the Sahara-Sahel region.

	Also the 2020 strategy, adopted in 2012, refers to a **scientific and technical axis** focusing on the joint and sustainable management of natural resources with two horizontal pillars -- « Water » and « Land » -- and two vertical pillars -- « Climate » and « Communities ».
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SECO as 75% relevant to adaptation (and CC principal project, according to OECD/DAC/Rio Marker guidelines). Based on our review it is not justified to classify the program as principal in CC (Rio Markers) terms. However, the program is increasingly mainstreaming CC in a constructive manner into its mandate and activities, and in particular on CC adaptation it can be estimated that the effectiveness is steadily increasing. The Swiss contribution has helped in this process, even if is not possible to quantify and/or attribute specific components to Swiss funding (during various phases) as such. We suggest an overall adaptation effectiveness score of 5 to the Swiss contribution to the Observatoire du Sahara et du Sahel.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning** The aspects of climate change are not at the core of the OSS mandate description and objectives at the time of Swiss credit proposal approval (source a, for phase 4, 2006-2010). However, as desertification and water issues are strongly pointed out as thematic focus areas of the programme, and reference is made to providing input to Multilateral Environmental Agreements (including UNFCCC) , and climate change is included among the two main thematic areas for the 2010 strategy, it can be concluded that CC is broadly part of the mandate and issues to be addressed (score 3). **Pathway integrity** While CC was on the agenda at the time of Swiss contribution to the fourth phase (source a), the available design documents do not provide any detailed or concrete pathways, beyond providing CC related monitoring data and capacity building, to addressing CC adaptation explicitly. (score 3)
General quality of project design	**Explanation clarity** The credit proposal is clearly written. However, it is not possible to asses based on available documentation (no logframe was available for review), how the Swiss contribution in particular would help achieve set objectives, and how progress is going to be monitored. The complexity of the OSS as an organisation, as also noted in the mid-term evaluation (source d) and evaluation b y the Canadian government (source e) even if the credit proposal as such is logic and clear, makes it difficult to judge how the Swiss contribution will contribute to the overall objectives of OSS (score 5). **Participatory design** The program was launched already in early 1990s and build on the long-term participation of multiple partners. It can be assumed that the various parties have had the possibility to indicate their priorities in a participatory manner (score 4).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-02242 - Economic Development and Income Generation in Nakhchivan Rural Communities through Kahriz Rehabilitation, Azerbaijan
Documents used	(a) End of Phase Report_EPR 2011.pdf (b) FINAL REPORT TO THE SWISS AGENCY FOR DEVELOPMENT AND COOPERATION (SDC) - ECONOMIC DEVELOPMENT AND INCOME GENERATION IN NAKHCHIVAN RURAL COMMUNITIES THROUGH KAHRIZ REHABILITATION, PHASE V / FINAL PHASE (reporting period September 01, 2010 to May 31, 2011)
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.5.2002 and end date: 31.10.2010 (SDC/SECO excel/spreadsheet) Budget: CHF 4,4 million (SDC/SECO excel/spreadsheet) NOTE: Source a refers to phase 1.9.2010 – 31.5.2011 with a budget of CHF 0,82 million, and an accumulated budget from previous phases of CHF 3,6 million , which jointly add up to the total CHF 4,4 million (as presented in the SDC/SECO spreadsheet)
Location	Kahrizes were first developed some 3,000 years ago to take underground water to the surface through simple gravity flow. For centuries kahrizes provided a constant year-round water supply through a network of interconnected wells and underground tunnels collecting water from the hills. Kahriz systems have been an important source of drinking and irrigation water for centuries and have played an important role in Azerbaijan. Until the start of this project, however, only a few kahrizes remained in operation and their capacity was greatly reduced. There was an urgent need to renovate those ancient water systems to address chronic water shortages and support the region's water-based socio-economic development. In Azerbaijan, as it is in many parts of the world, water is in short supply. Much of Azerbaijan's land accounts for one of the driest regions on earth – with approximately 100,000 m3 per year of water supply per km2. Compared to other countries in South Caucasus, Azerbaijan's water re-sources are much less; in per capita terms for example, Azerbaijan has 8.3 times less water than Georgia. Isolated from mainland Azerbaijan for the past 20 years due to the inter-state conflict with neighbouring Armenia, and as a result of the collapse of the Soviet Union, the NAR economy with its population of circa 360,000 suffers immensely in regards to lack of communication routes, and economic development opportunities. This in turn, has resulted in deterioration of infrastructure, loss of jobs and intense irregular economic migration to Turkey, Russia and other countries. In rural areas of NAR, where government-maintained water systems have traditionally been almost non ex-istent, the already inadequate hydrological situation has deteriorated due to mismanagement, poor maintenance and natural drought. With approximately 63 percent of NAR's population engaged in agriculture, insufficient water resources have resulted in severe decline of living standards and en-hanced access to water is paramount to long-term improvement of living conditions and economic development in poor rural areas (source b)
Partners	**Funding partners**: SDC (only donor) **Implementing partner:** Internationalorganisation for Migration (IOM)

	Main national partners: Naxcivan Autonomous Republic State Committee for Water and Melioration, Naxcivan State University, Kahriz Resource Centre (local NGO)
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation** ("Supporting the integration of adaptation into national and international policy, plans and programmes, including through the development of adaptation-specific policies, programmes and plans, strengthening the capacity of national institutions (including finance and planning ministries) that are responsible for coordinating and planning adaptation activities and the integration of adaptation into planning and budgeting processes"); (b) **Adaptation against disasters** ("Building capacity for disaster risk reduction, preparation and management at local, national and regional level, by making disaster-relevant information and tools more accessible for adaptation negotiators and managers, by promoting disaster consciousness in adaptation policies, strategies and programmes, and encouraging systematic dialogue, information exchange and joint working between climate change and disaster reduction bodies, focal points and experts, in collaboration with policy makers and development practitioners"); and (c) **Resilience for adaptation** ("Making landscapes, farming systems, and communities more resilient to environmental change, including (as appropriate to changes anticipated in each location) through measures to safeguard or restore the ecological services of water catchments, floodplains, wetlands, mangroves, coral reefs, beach dunes and aquifer recharge areas, conserving water and introducing water-saving irrigation methods, introducing crops that are resistant to heat, drought, submergence and salinity, prophylaxis against vector - born and other diseases, amending fishery management practices in response to new ecological conditions and changing fish populations, promoting diverse forest management practices and species, developing emergency prevention and disaster preparedness measures (including insurance and engineering works to relieve known threats, e.g. from glacial lake outburst floods and sea-borne storms)").
Purpose	To support employment and income generation in the rural areas of the Naxcivan Autonomous Republic by enhancing communities' access to water through rehabilitation of kahrizes and downstream water management, and by supporting livelihoods and business development services related to the rehabilitation and maintenance of kahrizes.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 25% relevant to adaptation (and significant CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Resilience for Adaption (RFA)** The project was grouped by Gaia into Cluster 8: Water resources management
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct	The intervention under review (i.e. the fifth phase) builds directly on

CC effectiveness of the project (GHGs reduced, adaptation)	the results achieved under the previous phases of the Community Owned Sustainable Water Use and Agricultural Initiatives (COSWA) project. Subsequently evidence of CC effectiveness of the fifth phase, implemented by IOM in the Nakhchivan Autonomous Republic (NAR), has to be understood in the overall context of this longer-term intervention. The most direct evidence of CC effectiveness (adaptation) of this intervention links with the DRR awareness raising and concrete measures taking. In particular, as some kahrizes are vulnerable to natural calamities as they can be fully or partly destroyed by floods and heavy rains, the Kahriz Resource Centre, which was established with the support of the project, conducted an assessment of 13 kahrizes which are prone to disasters. Based on this assessment, the project took measures to protect two kahrizes, which were in acute need of such DRR measures. The measures included construction of entrenchment in order to prevent flood water damaging the newly rehabilitated kahrizes. The documentation does not explain whether or not advancing and expected impacts of CC (by reducing/increasing the severity and/or shifting the time periods of expected floods) taken into account in this work.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The intervention has (sources a and b) improved the access of poor communities to drinking and irrigation water. The rehabilitation of 42 kahrizes has been completed, providing drinking and irrigation water to 2,703 families, and allowing more than 200 ha additional lands to be irrigated for agricultural purposes. As employment and livelihoods benefits the reports state that more than 300 unemployed people had opportunities to cultivate their previously unused lands thanks to the provided irrigation water. Also more than 200 kankans (Kankans are people responsible for regular cleaning of kahrizes in order to keep them functioning, usually paid by their community) were trained and employed during the project and are expected to be employed by communities to maintain their kahrizes even after the project phases out. Also selected concrete manufacturers were supported by the project to promote infrastructure rehabilitation and development. This overall strengthening of local livelihoods (also supported by evidence of reduced migration from the autonomous republic), can be considered a no-regrets measures for strengthening the adaptive capacity of the communities in light of advancing CC, too
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	In addition to the above direct and indirect evidence of CC benefits produced by the intervention, the fact the intervention enhanced the role of women in the Water Users Committees (WUCs), can also be considered as a positive aspect from CC adaptation capacity perspective. Based on experiences in other parts of the developing world, empowering women in the overall management of natural resources, and livelihoods decision making is more often than not, also a no-regrets CC adaptation measure.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 25% relevant to adaptation (and significant CC project, according to OECD/DAC/Rio Marker guidelines) In our view the project has been quite relevant from CC adaptation perspective (possibly up to 50%), as many of the project activities have simultaneously contributed to strengthening the DRR as well as CC adaptation capacity of the local communities. We suggest a CC adaptation effectiveness score of 5.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. While no credit proposal is available, the logframe presented in the reports serve to explain the planning and design aspects. Under the overall objective the purpose is described as

	the establishment of kahriz infrastructure as a comprehensive, self-supporting system, guaranteeing long-term water supply of NAR rural communities (source a). The specific objectives and expected results, even if not explicitly referring to CC, do refer to strengthening and diversification of livelihoods, improved role for community-managed water user groups, and increased capacity to cope with disasters and natural hazards. The objectives and expected results are generally measures that contribute to improved capacity to cope also with advancing impacts of CC in South Caucasus (score 4). **Pathway integrity**. The logframe does not provide any explicit pathways to address CC but, as noted above, the objectives and expected results provide multiple no-regrets pathways to strengthen adaptive capacity of the project beneficiaries (score 4).
General quality of project design	**Explanation clarity**. Based on available documents (concerning design referring mainly to logframe in the end of phase and evaluation reports) the objectives and planned activities are clearly explained (score 5). **Participatory design**. Taking note of the previous phases and type of the intervention, it can be assumed that the intervention builds on a solid participatory design process. However, while no direct evidence of this is available in the documentation reviewed, we score (5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-02864 CARITAS: Natural Disaster Risk Management (NDRM) – Muminabad, Tajikistan
Documents used	(a) Credit Proposal, Date 22 April 2008 (b) Final report. Natural Disaster Risk Management II, Tajikistan. Prevention. NORM Phase 2, July 2008- June 2010 (Prepared by Caritas Switzerland, October 2010) (c) Energy efficiency at household level, Experience with four pilot projects in Muminabad 2009-2010.pdf (d) Muminabad Natural Disaster Risk Management Strategic Plan 2010-2015.pdf (e) MR Response_NDRM Prevention.docx (by Caritas 2010)
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.9.2003 and end date: 30.6.2010 (SDC/SECO excel/spreadsheet) Budget: CHF 0,76 million (SDC/SECO excel/spreadsheet) NOTE: budget reported as CHF 0,23 million (source, credit proposal) for phase II, 1.5.2008-31.3.2010). The project Natural Disaster Risk Management (NDRM) Phase II is the consequent follow- up of NDRM phase I
Location	Although has undeniably made progress towards achieving relative stability and an improved security environment, six years after the civil war it continues to face a precarious and complex development situation and remains the poorest country in the region. Around 64% of the population live below the poverty line of USD 2/person/day. Tajikistan is highly prone to natural disasters like earthquakes, land- and mudslides, floods, avalanches, droughts and rock falls affecting livelihoods and hampering sustainable development. Natural disasters caused a total damage of more than USD 300 million between 2000 and 2007. The adequate management of disasters is hampered by poor resources, difficult communication and bad access to remote areas. The Muminabad district with about 72'000 inhabitants is located in the south of Tajikistan close to the Afghan border. The hilly area with elevation levels varying between 700 to over 3'000 meters above sea level (m.a.s.) has a semiarid climate with seasonal rainfalls of high intensity during spring. The town of Muminabad is located at the foot of a mountain range at an altitude of 1'240 m.a.s. and is - like many settlements in the district - partly built on a large debris fan. Geographical factors such as topography, soil conditions and hydrological parameters make the area prone to the risk of natural disasters such as floods and debris flows. Rivers with their source in the mountains above the town erode material in the watersheds and transport large amounts of debris material during times of high water downhill before entering the channels that run through the village. During the time of the Soviet Union the channels were cleaned on a regular basis and the protection of the river banks was maintained. The collapse of the Soviet Union dramatically changed the socio-economic environment in the area and caused the maintenance works to be neglected. That led to the erosion of the channels and they got partly filled with debris and further increase the risk of floods and debris flows. The Muminabad area is a particularly typical location where the natural disaster situation has a strong and complex relation to ecological conditions as well as to local development issues.

	Deforestation - due to lack of alternative energy resources - as well as increasing land use for agriculture and overgrazing in the watersheds above Muminabad town play an important role in the destabilisation of the natural environment. The most vulnerable groups in society depend on the freely available and unregulated resources in the watershed area. Therefore, the management of natural disasters demands a more integrated approach that goes beyond combating occurring hazards and their impacts. Although there seems to be growing awareness among the inhabitants and the responsible local authorities in the risk-prone areas, the weak financial situation of the government makes it difficult to cope with the natural risks in an appropriate and sustainable way. (source a)
Partners	**Funding partners**: SDC **Implementing partner:** Caritas Switzerland **Main national partners:** Local NGO Yoron, Local Development Committee (LDC), Leskhoze, REACT Kulyab, Central Asian Mountain Programme (CAMP) Kuhiston, CCDR, Oxfam, Mission East.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**
Purpose	The overall aim of the project is to reduce the natural hazard risks in inhabited areas through introduction of an integrated disaster risk management in the Muminabad district by increasing the coping capacity of local government, civil society organisations and the population at large and thus leading to an improved and sustainable safety situation. The project strengthens and interlinks the cooperation between public services and civil societyorganisations. It foresees the use of innovatory tools in a systematic and integrated manner (source a) The overall goal of this particular phase (focus in review on 1.5.2008-31.3.2010) is to consolidate the risk reduction measures supported so far by Humanitarian Aid of the Swiss Agency for Development and Cooperation in Muminabad district and to strengthen the base to integrate disaster risk reduction sustainably into the development work in Muminabad district.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 75% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Adaption against Disasters (AAD)** The project was grouped by Gaia into Cluster 10: Disaster risk reduction (DRR)
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	As the intervention under review builds directly on the I phase of Natural Disaster Risk Management (NDRM) project, evidence of CC effectiveness from the first phase will be also included into this analysis (even if mainly focussing on a review of phase II) as much as

	possible. Based on available documentation the project achieved tangible results in introducing integrated disaster risk management in Muminabad district that enables local government and civil society to actively cope with the risk and to reduce the natural hazard risks in inhabited areas. In particular concrete achievements are reported in i) Setting up a disaster risk reduction fund and disaster risk management plan for Muminabad, ii) Capacity building and networks for & between government, civil society, private sector, iii) Integrated watershed management including pilot energy projects; as well as in iv) Risk implementation of an appropriate Risk Assessment Tool. Progress in DRR planning and successful implementation and completion of small-scale mitigation projects (which already proved their effectiveness and protected the target population during severe floods of spring 2010 well – known for their damages in other districts of eastern Khatlon; source b) as well as the adaptation of watershed management approaches can be considered as directly serving also CC adaptation.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Despite the fact the CC as such is not referred to in the project design, several of the activities and achievements contribute indirectly to CC adaptation capacity. E.g. the high project ownership acceptance in prevention activities as well as interest in energy efficiency and renewable energy solutions (including solar cookers, energy efficient stoves, and household energy saving with heat exchangers – see source c) are measures that help reduce deforestation and soil erosion, and which are fully in line with pro- adaptation activities. In addition, the EE and RE measures and pilot projects are fully in line with low-carbon poverty reduction (and CC mitigation more narrowly). Also the Muminabad Natural Disaster Risk Management Strategic Plan 2010-2015 (source d) refers to CC, noting in particular that "The climate has changed over the last few decades making disasters less predictable" and that all activities implemented should take into consideration also CC. This refers to CC mainstreaming, but the issue is not addressed in any further detail, nor any advice given on how to proceed with more systematic CC mainstreaming into decision making on various levels.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The project facilitated establishment and development of district mechanisms such as Emergency Response Fund, Maintenance fund for mitigation structures, CRAT, Geo database, cost efficiency analysis, Systematic Approach in Integrated Natural Disaster Risk Management, DRR sector plan (under name of NDRM Strategic Plan), overall GIS basis of and etc, which can be considered as important tools in addressing DRR but also increasingly the advancing impacts of CC in Muminabad, and more broadly in the country and region.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 75% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) In our view the project has been, in addition to its explicit focus on DRR, also highly relevant from CC adaptation perspective (with the relevance level of 75% supported also by our analysis, where a score of 100% would require an explicit screening of experienced and forecasted CC impacts) and also effective in strengthening the adaptive capacity to CC impacts. We suggest a CC adaptation effectiveness score of 6.
Project design aspects	
CC-relevance of project	**Evidence and reasoning**. The evidence and reasoning in the credit

design	proposal is solid. It does not address climate change as such, with a focus on floods and droughts when addressing DRR. While CC is a process that can change the severity and timing of these events, the mainstreaming of these aspects into the design could have added value to the intervention (at least reduced unknown risks to the intervention), even if the activities would not have changed in any major way in this case (score 4). **Pathway integrity**. The credit proposal logframe does not provide any explicit mentioning of CC, but several logical no regrets pathways to address CC can be recognized (score 4).
General quality of project design	**Explanation clarity**. The credit proposal is clear, and presenting an exceptionally solid description of the context and a clear overall account of project objectives. (score 7) **Participatory design**. Taking note of the previous phases of and type (strong local community based approach) of the intervention, it is highly likely that the intervention builds on a solid participatory design process. However, while no direct evidence of this is available in the documentation reviewed, we score (5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-03804 Agro-Forestry Improvement Partnership (AFIP), Bangladesh
Documents used	(a) Kreditantrag, Agro-Forestry Improvement Partnership (AFIP), Phase 2.pdf (dated 29.5.2008, duration of phase II: 1.8.2008-31.3.2010) (b) Credit proposal, 7F-03804.03 AFIP Credit Proposal Phase 3 (1).pdf (dated 17.5.2010, duration 01.07.2010 to 31.12.2012) (c) Final report, phase I (7F-03804.03_Final Report IC.pdf, dated 17.11.2009) (d) Kreditantgrag phase I, (KA AFIP Main Text and annexes-final.doc) (e) Logframe AFIP phase II (LOGFRAME AFIP.doc, AFIP2-ProDoc-080206-draft) (f) AFIP End of phase report – phase III (no date indicated) (g) AFIP End of phase report – phase II (dated 26.10.2009) (h) An Updated Self-evaluation of AFIP Phase-1, October 2007
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.9.2004 and end date 31.12.2012 (SDC/SECO excel/spreadsheet) Budget: CHF 5,7 million (SDC/SECO excel/spreadsheet) Phase I: Phase budget: CHF 1,9 million, duration 01.09.2004 - 31.08.2007 (source d) Phase II budget: CHF 1,5 million, duration 1.8.2008-31.3.2010 (source a) Phase III budget: CHF 1,5 million, duration 01.07.2010 -31.12.2012 (source b) with this phase being a "Phasing out Phase" with the aim to institutionalize project activities and results with the partner organisations and to strengthen theirorganisational capacities (source f). NOTE: source f states that Swiss accumulated budget for the intervention is actually CHF 3,8 million.
Location	Nearly two third of the labour force in Bangladesh generate their income in the primary sector and more than 50% of the total population of about 160 Mio can be classified as small and marginal farmers. For most of these households the homestead constitutes the main resource base. Agroforestry comprising mixed cultivation practices of a wide variety of trees and crops, such as fruit tress, timber tress, vegetables, spices and medicinal plants becomes an important element within the livelihood strategies of these farmers. Access to good quality planting materials (QPM) and an improved knowledge about technologies for using and managing these technologies is thus crucial. Since 1986, SDC is involved in the agro-forestry sector. Whereas initially focusing on the promotion of commercial nursery production of tree seedlings and saplings, the Agro-Forestry Improvement Partnership (AFIP) project started in 2004 with the aim to support the improvement of the entire system for quality timber and fruit production in Bangladesh; this project is part of SDC's Employment and Income (E&I) Portfolio. AFIP is based on the following impact logic: if poor rural farmers do get access to Quality Planting Material (QPM), they are able to improve their homestead production and livelihood situation (e.g. diversified income opportunities, better nutrition, higher resilience to natural disasters through tree protection) (sources b, f, g)
Partners	**Funding partners**: SDC (information of other donors´contributions not available but source f section 3.3 notes that "….according to the perception of project partners and AFIP itself, the monetary value in kind and service contributions by the project partners would correspond to

	around 80% of the funds provided by SDC"). **Contract partner/implementingorganisation:** Helvetas Swiss Intercooperation **Main national partners**: Bangladesh Agricultural Development Corporation, Bangladesh Agricultural Research Institute, Bangladesh Agricultural University, Bangladesh Forest Research Institute, Department of Agricultural Extension, Institute of Forestry and Environmental Science of Chittagong University, Seed Wing (Ministry of Agriculture) **Private sector partners**: National Nursery Society (NNS), **NGOs:** BRAC and Proshika (NGO)
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: **(a) Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).**
Purpose	To contribute to the sustainable well-being and resilience of poor and extreme poor households of rural Bangladesh through improved access to Quality Planting Material and related income opportunities (source f)
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 40% relevant to adaptation and 40% mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The project was initially classified by the review team as meeting validation criteria **Resilience for Adaption (RFA).** The project was grouped by Gaia into Cluster 5: Farming systems & food security
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Little direct evidence of CC effectiveness (be it on adaptation or mitigation) is available in the documentation. CC is referred to only as one potential risk among many other risks to be addressed. (e.g. in credit proposals (sources a and b, Annex 10) the CC policy marker has not been applied). However, the strengthening of DRR capacity can be considered as direct evidence for also strengthening the adaptive capacity in light of (not only natural climate variability) but also advancing impacts of climate change. E.g. the end of phase reports note that DRR was considered as cross-cutting issue in the project, which focused in particular on i) raising awareness and preparedness among nursery associations in order to increase the responsiveness capacity at nursery level; and on ii) developing the capacity of nursery owners associations in responding to disasters. Taken note of concrete achievement on DRR, including the establishment of a disaster fund, wherein 30 district associations of nursery owners covering 169 sub-district associations contribute to the fund, which is now under the supervision of the national association (source f). Reportedly, the project facilitated the nursery associations to utilise the funds in case of emergencies, and in addition the project provided capacity building support to the leaders of the nursery associations to manage or address DRR interventions through their associations to protect the nursery

	business from disasters
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The available documentation (in particular c, f, g) provide clear and concrete evidence in line with the project objectives with measurable achievements in i) poverty reduction and improved employment and income opportunities. In particular (source f summarises): The project has contributed to the professionalization of 9042 rural nurseries which now employ 13'000 full time employees and 32'000 part time labourers. As profits from the nurseries rose by a third during the project phase (resulting on average in an additional income of 29'000 BDT or CHF 360 per year per nursery), so too have the labour wages, now 32% higher than at the beginning of the phase. It is estimated that these nurseries now sell each year over 800 million quality saplings to 7.2 million people, 45% of which are poor. This translates into an income of CHF 2160 million or CHF 300 per household per year. In practice , concrete outcomes (in line with logframe indicators) can be confirmed related to improved coordination of key Bangladeshi actors (outcome 1), related to development and supply of Quality Planting Material (QPM) (outcome 2) as well as QPM distribution by nursery associations (outcome 3, see source f, section 2.1). All these measures can be considered as outcomes that contribute to more resilient livelihoods, and as indirect evidence for strengthening CC adaptive capacity. Taking note of the major outreach of the intervention (source f referring to working with 9042 nurseries, organized in 367 sub-district association, 25 district associations and one national association, and that the project has in this manner reached 7.2 million farmers, 45% of which are poor, in 60 districts out of 64) these indirect CC benefits can be considered important. On mitigation no direct evidence is available of any potential GHG mitigation impacts. However, the measures can indirectly contribute to increasing and ensuring sustainability of carbon sinks. These benefits could be considerable but are not at the focus in design or project implementation and therefore cannot be assessed in more detail. This does not however mean that the actual CC mitigation benefits would be negligible – in fact they could be considerable taking into account the major role carbon sinks have in the overall GHG balances nationally and globally.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Taking note of the fact that Bangladesh is among the most vulnerable countries to the impacts of CC, well planned and executed interventions in the areas improved livelihoods, which also take into account DRR aspects and hereby contribute to the overall sustainability of the intervention – also in light of advancing CC – and which also actively promote gender (source f, section 2.2) mainstreaming (a common no-regrets measure for strengthened climate resilience in most developing country local communities), give additional reasons to expect good CC adaptation effectiveness for this intervention.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 40% relevant to adaptation and 40% mitigation. Based on our analysis the project has been highly effective in strengthening the adaptive capacity of project beneficiaries and the adaptation relevance score could actually be higher. With regards to mitigation benefits, only limited, indirect evidence of effectiveness is available (and the balance of relevance scores could be clearly amended in favour of adaptation). Overall it is also good to note that Switzerland has been involved in the agroforestry sector since 1986 and some of the effects are a result of these previous investments and cannot be exclusively attributed to Phases I-III. We accord the intervention a CC adaptation effectiveness score of 6 and a mitigation effectiveness score of 3.
Project design aspects	

CC-relevance of project design	**Evidence and reasoning**. The design phases of this long-term intervention do not explicitly address CC (only noted as one of the potential risks in credit proposals, not in adaptation or mitigation aspects). However, the DRR and mainstreaming of DRR are at the core of the intervention, and the reasoning and means to address the DRR issue is in many ways coherent with addressing the CC challenge, in particular the adaptation component. The expected development of disasters, in light of advancing climate change is not addressed (score 4). **Pathway integrity**. The credit proposal and its logframe provide a logical and solid pathway to address the challenges of disasters, and strengthen overall adaptive capacity in Bangladesh (score 4).
General quality of project design	**Explanation clarity**. The credit proposal is clear, explaining the context and objectives in a solid and well structured manner (score 7). **Participatory design**. The project documentation highlights SDC´s pioneering role in Bangladesh's Agroforestry Sector since the late 1980s with a strong presence and people-oriented approach with a focus on the poor and extremely poor households. Building upon this history, even if the design documentation does explicitly describe what kinds of participatory processes have been conducted in the design of phases, the project beneficiaries and partners are well presented and analyzed in the design documents, indicating a thorough analysis and involvement of key project partners and beneficiaries (score 6).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-04054 Programme on Vulnerability Assessment and Enhancing Adaptive Capacity to Climate Change in Semi-Arid Areas in India
Documents used	(a) Programme Document. VULNERABILITY ASSESSMENT AND ENHANCING ADAPTIVE CAPACITY TO CLIMATE CHANGE IN SEMI-ARID AREAS IN INDIA. A New Phase of the Project on Structural Transformation Processes/Capacity Building in Climate Change/India, February 2005–December 2008 (b) VULNERABILITY & ADAPTATION TO CLIMATE CHANGE INDIA, 7F-04054.05.01 Vertrag 8100548, Progress Report 2007 (dated 29.5.2008) (c) BACKSTOPPING SUPPORT. V&A PROGRAMME INDIA, PROGRESS REPORT 2008. Zurich/Bern/Hyderabad, 24 February 2009 (Othmar Schwank, Nicole North, (INFRAS), Annet Witteveen, Rupa Mukerji, (Intercooperation) (d) Credit proposal (no date indicated) (e) Final report, 2005-2009. VULNERABILITY ASSESSMENT AND ENHANCING ADAPTIVE CAPACITY TO CLIMATE CHANGE IN SEMI-ARID AREAS OF ANDHRA PRADESH AND RAJASTHAN IN INDIA. FINAL REPORT (January 2005 – December 2008 & January – September 2009 – Extension Phase), August 2010 (f) Vulnerability & Adaptation Experiences from Rajasthan & Andhra Pradesh: CI Community Based Institutions. Case Study India. SDC V&A Programme, India
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.1.1996 and end date 31.3.2010 (SDC/SECO excel/spreadsheet) Budget: CHF 3,7 million (SDC/SECO excel/spreadsheet) NOTE: this review focuses specifically on the VULNERABILITY ASSESSMENT AND ENHANCING ADAPTIVE CAPACITY TO CLIMATE CHANGE IN SEMI-ARID AREAS IN INDIA (2005-2008), which is based on the outcomes and experiences gained from earlier projects related to mitigation and adaptation to climate change in India and other countries funded by SDC's Global Environment Fund. The project was eventually extended until September 2009 (source e). The indicative budget for 2005-2008 is CHF 2,6 million (source a).
Location	The V&A programme will work in selected semi-arid, rain-fed areas of Rajasthan and Andhra Pradesh where SDC is already active. Thematically the V&A programme will focus on: water, agriculture and rural energy. The livelihoods of the majority of the Indian population are threatened due to the impacts of climate change. Nearly two thirds of the Indian population is rural. And most of the Indian rural population live in harsh climate regions of mountains, deserts and river deltas which make them more susceptible to a changing climate as their dependence on climate-sensitive natural resources is very high. The Indian agriculture sector is monsoon dependent. Over 60 per cent of the crop area is under rain-fed agriculture that is highly vulnerable to climate variability and change. Any adverse impact on water availability due to recession of glaciers, decrease in rainfall and increased flooding in some pockets would threaten food security, cause degradation of ecosystems, affecting species that sustain the

	livelihood of rural households and impact the coastal system due to sea level rise. The severity of droughts and intensity of floods in various parts of India might increase and that the quantity of available run-off may be reduced. Large river basins of Sabarmati and Luni, which occupy about one quarter of the area of Gujarat and 60% of Rajasthan, may experience acute water scarcity conditions. The studies indicate that increased temperatures would increase enhanced crop water demand resulting in increased water-pumping requirements and subsequent decrease in ground water levels. Biodiversity is also likely to be hit. About 70 % of the vegetation in India is likely to find itself less than optimally adapted to its present location, making it more vulnerable to adverse climatic conditions. The impacts on forests will have adverse socio-economic implications for forest dependent communities and the national economy, it adds. Sea level rise would have a significant impact on the coastal population and the total agricultural production of India. Besides coastal zones, the arid and semi-arid areas are considered to be among the most vulnerable regions in India. Arid and semi-arid areas in India experience an annual rainfall between 100 and 400 mm or 400 and 800 mm respectively with a very high coefficient of variation ranging from 40 to 70%. Low and erratic rainfall coupled with extreme temperatures and intense solar radiation results in frequent crop failures and considerably affects the agricultural economy in these regions (source a).
Partners	**Funding partners**: SDC **Main national partners**: The MS Swaminathan Research Foundation in Chennai (lead agency within the national consortium), together with the National Institute of Agriculture Extension Management (MANAGE) and Action for Food Production (AFPRO) **International partners:** Intercooperation (IC), Bern, and INFRAS, Zurich. **Local partners and beneficiaries:** People/communities of the chosen region/districts of Andhra Pradesh and Rajasthan
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: **(a) Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).**
Purpose	The overall goal of the Vulnerability Assessment Programme in India is to secure the livelihoods of rural poor and vulnerable communities by promoting adaptation measures that build and enhance their capacity to better cope with adverse impacts of climate change and by improving their disaster preparedness. The V&A Programme's focus is put on optimising and integrating climate change related knowledge in existing service delivery systems in the water, agriculture and rural energy sector in the two Indian states of Andhra Pradesh and Rajasthan. Another important feature of the V&A Programme is its aim to catalyze and enhance communication and policy dialogue on

	climate change issues within and at different decision levels. (Source a). The project document (source a) also notes that "Within an evolving international climate change context this proposed V&A programme in India will make an important contribution to "adaptation science" and will highlight the role of bilateral development agencies in that respect. The programme's aim to demonstrate and implement adaptation measures and coping mechanisms at the community level and at the same time to translate such action learning results to an international policy level makes this SDC programme absolutely unique".
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The project was initially classified by the review team as meeting validation criteria **Mainstreaming of Adaption (MOA) and Adaption against Disasters (AAD)** The project was grouped by Gaia into Cluster 12: Other verified investments
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	As pointed out above, this review focuses on the "**Vulnerability Assessment and Enhancing the Adaptive Capacity to Climate Change in Semi-Arid India**" ("V&A Programme") 2005-2008. With regards to any signs of effectiveness it is good to note that SDC has been working actively and extensively in India on issues of sustainable development, including climate change since the 1990s. The **three specific objectives** that have been identified for the "V&A Programme", i.e. i) to build community level capacities with regard to best practices and technologies in the agriculture, water and energy sector; ii) to optimise the service delivery system and services at selected sites of Andhra Pradesh and Rajasthan, and iii) to promote policy dialogue and advocacy at different level and to link up with the 2nd National Communication process (source a), are all directly relevant for CC adaptation. The project documentation states that these objectives should be achieved through work on **four different programme components including** research and analysis; natural resource management; capacity building and action learning; and local empowerment (sources b and c). Progress reports 2007 and 2008 (sources b and c) provide little and or only vague direct evidence of progress in line with the objectives and programme components outlined in the project document (source a). However, final report (source e) provides ample direct evidence of project achievements. Based on Phase I Situational Analysis & Benchmarking the focus the focus area was modified to cover (i) energy, (ii) water, (iii) land use, and (iv) livestock and geographical focus was sharpened. The final report presents concrete results achieved as well as studies undertaken (source e, chapter s III and IV) and lessons learned on all these thematic areas. E.g. infrastructures have been established in the project villages as a tool to face the adaptation and location specific adaptation strategies have been developed with the participation of the community especially for water, land use, live stock, sustainable agriculture and energy sectors. Water user and pasture management committees/groups have been established to ensure more sustainable management of resources and share information etc (source f, providing also solid evidence from caser studies). However, concerning the objective on the service delivery mechanism the final report notes lacking success, stating that it was not completed within the time frame of the project.
2. Evidence of indirect	The project activities have contributed to build important basis for

effectiveness of the project (side effects, other consequences)	Community Based Adaptation awareness and capacity in India to better cope with adverse impacts from climate change and also make the community disaster preparedness. A considerable amount of project deliverables (in clouding articles, books, manuals, conference papers, outreach material, website tools) have been also produced, which can be expected to serve other interventions in India but also can be applicable to other countries. However, possibly due to the broad and ambitious project goals, and data gaps in monitoring of project activities and achievements, it is not possible to assess in detail the overall effectiveness of the project and make use of all the possible outcomes and lesson learned.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The fact that the programme builds on extensive stakeholder consultations and that it can take advantage of extensive past experiences and Swiss collaboration in the area of sustainable development and climate change should a priori support good effectiveness. However, possibly due to the broad and ambitious project goals, and data gaps in monitoring of project activities and achievements, it is not possible to assess in detail the overall effectiveness of the project within this desk review.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 100% relevant to adaptation, and based on our review the project objectives and components are at the core of CC adaptation challenges in India. In our view the project has made an important contribution to spearhead and advance community based adaptation approaches in India and we suggest a CC adaptation effectiveness score of 5.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project (design) document is strong in analyzing the climate change context, referring to natural climate variability and the impacts of advancing climate change and the vulnerabilities that need to be addressed. These focus areas of water, agriculture and rural energy have been identified based on the basis of the state of knowledge of climate vulnerability, expressed demands from the stakeholders and experiences of the national and international consortium members. The project document also explicitly outlines monitoring and evaluation tasks and questions related to the challenging issue of measuring progress on strengthening CC adaptation capacity (such as How far has the programme succeeded in enhancing the adaptive capacity at community level?, source a, section 8) (score 6). **Pathway integrity**. The objectives and project components provide a comprehensive but not too concrete a pathway to address the CC challenge. It is based on a solid analysis of the CC context and Indian development priorities. The project document also highlights the complexities related to CC adaptation, and e.g. explicitly notes (as project risk, source a, section 9) that the effects of climate change on the natural resource base cannot be separated from the effects of other causes of stress such as unsustainable agriculture practices, deforestation induced by increased pressure on the natural resource, or population growth etc. , which is taken for sign of a good overall understanding of the CC challenge and adaptation context in developing countries in particular (score 5).
General quality of project design	**Explanation clarity**. The project document is clear, explaining the context, objectives and expected results in a solid and well structured manner. While the objectives are clear, they also seem extremely comprehensive and ambitious (score 6). **Participatory design**. The project documentation highlights SDC´s long-tem extensive work in India on issues of sustainable

	development, including climate change. The project document specifically notes that "…the 4-years programme on "**Vulnerability Assessment and Enhancing the Adaptive Capacity to Climate Change in Semi-Arid India**" is based on the earlier outcomes of the SIT Project, the backstopping mandate and a stakeholder process which was intensified by SDC after COP8 in New Delhi. This proposal is a direct continuation of the experiences gained so far." Also the project document present key findings from planning workshops, which underscored the important role of extension services in enhancing the coping capacity of local livelihood systems against the adverse impacts of climate change, and presents in detail the long stakeholder processes that have contributed to the formulation of this programme. (score 7).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F- 05733.03 – Improvement of food security in Niger through support to Farmers'organisations (Appui aux organisations paysannes (OP) du Niger pour une meilleure sécurité alimentaire)
Documents used	(a) 7F-05733 N65, Credit Proposal (phase 3) (b) Annex 1, 7F-05733.02, *Annexe 1 PV du comité des operations* (c) Annex 2, Logical Framework (*Annexe 2 Cadre logique*) (d) Annex 3, Detailed budget 2011-2014 (*Annexe 3 Budget détaillé*) (e) Annex 4, Justification of choices (*Annexe 4 Justification des Choix*) (f) Annex 5, Institutional arrangements (*Annexe 5 : Montage institutionnel*) (g) Annex 6, Risk analysis (*Annexe 6 Analyse des risqué*) (h) Annex 7, Summary appraisal of phase 2 (*Annexe 7 Synthèse du bilan de la phase 2*) (i) Annex 8, Summary appraisal of phase 3 (*Annexe 8 Synthèse 3ème phase du PA OP*) (j) Annex 9, Financial summary analysis of phases 2 and 3 (*Annexe 9 Synthèse analyse financière phase 2 et 3 PA OP*) (k) Annex 10, DAO internal committee acceptance of project proposal for the Operational committee (*Annexe 10 - DAO comité interne - Org. Paysannes*) (l) Annex 11, Project summary (Annex 11 - Fiche de projet SAP) (m) External evaluation of phase 2, 2008-2011, (*Evaluation 2011 Phase 2, Organisations Paysannes NIGER - phase 2*) (n) Rapport de fin de phase opérationnel (RFO, 7F-05733.3_Rapport fin de phase 3 - OP juin12.pdf)
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Phase 3: 01.12.2011 – 31.12.2014 (phase 3). Budget: CHF 4,6 million (phase 3) This project is the continuation of two other projects, the first one started in 2007. The second phase lasted 2008-2011. The total budget indicated in SDC/SECO excel/spreadsheet is CHF 12,6 million with overall start date 1.8.2007 and end date 31.12.2017. The budgets of phases 1 and 2 were CHF 0,2 million and CHF 3,3 million, respectively (in total CHF 3,5 million).
Location	Niger, East Africa
Partners	**Funding partners**: Swiss Agency for Development and Cooperation (SDC) **Implementing partner:** 7 farmerorganisations: (i) Fédération des unions des groupements paysans du Niger (FUGPN/ MORIBEN) – no English available; (ii) ONG Appui aux Initiatives de Développement (AID Kookari) – no English available, (iii) Fédération des Coopératives Maraîchères du Niger (FCMN/Niyya) – no English available (iv) Association pour la Redynamisation de l'Elevage au Niger (AREN) – no English available (v) Collectif des Associations Pastorales du Niger (CAPAN) – no English available (vi) Plate Forme Paysanne du Niger (PFPN) – no English

	available (vii) Réseau des Chambres Agricultures (RECA) – no English available **Other parties/beneficiaries** Other parties Cooperatives Other ruralorganisations Other technical and financial partners: Several bilateral and multilateral cooperation and international NGOs and research institutions working within the framework of farmers'organisations. SDC wishes to strengthen its presence in existing frameworks for dialogue and approach key partners supporting farmers'organisations, such as: FAO, WFP , DANIDA, CTB , SNV, OXFAM , to allow better coordination of support. Beneficiaries: Direct beneficiaries: 150 000 family farms (family farms members of partnerorganisations secure, who will should be able to increase their production and their marketing capabilities, processing and storage). 7 partner farmerorganisations Main indirect beneficiaries: Communities in which families reside.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity.** A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. Output: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). Outcome 1: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). Outcome 2: (a) increased community resilience to the consequences of climate change. Expected validation criteria: (a) Mainstreaming of adaptation; (b) Adaptation against disasters; and (c) Resilience for adaptation
Purpose	To improve food security through varied activities that include establishing small irrigation systems and rehabilitating wells, restoring grazing areas, promoting the production and marketing of cash crops, creating collective emergency food stores, providing inputs (seeds, fertilizers, pesticides) to family farms, and strengthening community organisations with a particular focus on most vulnerable groups in rural areas (including women, children and poor)
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 25% relevant to adaptation (and CC significant project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Resilience for Adaption (RFA)** The project was grouped by Gaia into Cluster 5: Farming systems & food security
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	No direct evidence for strengthened capacity to cope with climate variability and weather extremes is presented in the documentation, as no explicit targets (or baselines) have been outlined in project design and MRV.

2. Evidence of indirect effectiveness of the project (side effects, other consequences)	As the project is focused on strengthening the livelihoods and well-being of vulnerable rural populations, it is contributing in an important manner also to strengthen the resilience of project beneficiaries to cope with climatic challenges. Despite some challenges in assessing the achievements from the first two phases (source m) the project has contributed to strengthen the capacity of family farms and community organisations, with improvements e.g. in the areas of credit access, agriculture equipment, storage facilities and small scale infrastructure, improved awareness and organisation of producers. Through the collaboration with seven rural organisations, reportedly during phase 2 some 150 000 family farms/exploitations have been reached through the project.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Strengthening and diversification of rural livelihoods, involving particularly vulnerable groups, is generally considered as one of key "no-regrest" measures for also addressing the challenges of climate variability and advancing impacts of climate change in developing countries. The project does not explicitly take account of forecasted impacts of CC (which would be the case of a CC specific project that from the beginning integrates CC considerations) but has already contributed to some extent, and depending on the success of the third phase of the project, can contribute considerably to strengthening the CC adaptive capacity of the project beneficiaries.
Overall conclusion on effectiveness based on the evidence (1+2+3)	Even if this project is not explicitly targeting CC (see analysis of design aspects below) the nature of this project is fully in line with what can be considered climate resilient development. In light of the project achievements from the first two phases, and the on-going phase 3, we suggest an adaptation effectiveness score of 5.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning** The Credit proposal for phase 3 (source a) nor the reporting from previous phases (upon which phase 3 is based) do not exhibit any explicit linkage to CC. No CC specific targets are set, and in the project sheet the following markers are set to zero: Policy Marker Climate Change and Policy Marker Desertification. However, the vulnerability of project beneficiaries to climate variability, weather extremes is recognized as an important project risk (score 4). **Pathway integrity** The project targets and pathways are clear but not addressing CC as such. The Logical Framework Analysis (LFA) considers climate variability and weather extremes a threat but the climate risk is not analyzed in further detail in project design (score 3).
General quality of project design	**Explanation clarity** The project has been clearly designed and planned (with the analysis here referring mainly to phase 3 for which extensive project documentation is available). Overall objectives are defined and measurable objectives (and sub-objectives) are set. Risks have been identified and analyzed, with clear and logical thought-through mitigation efforts. As mentioned, the Logical Framework Analysis (LFA) is rather clear, however, the LFA could have benefitted from also including mile stones per activity as well as proposing party responsible and the indicators set seem more feasible than for previous phases (source n, page 5). The budget is sufficiently itemized, not into unnecessary detail. The project has also visually reconciled the accounts between phases 2 and 3, making the processes more transparent. The Credit proposal could have benefitted from anorganisational diagram. A

	risk analysis is prepared and clear for the purposes of the overall Credit proposal. CC-effectiveness is not really addressed (score 5). **Participatory design** Based on documentation, the project appears to be making well use and integration of local research and consultation processes. Building on previous phases 1 and 2, and the type of intervention, it is evident that local participation has been an integral part of outlining phase 3 (score 6).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-06401.01 Up-scaling of Integrated Water Resources in Central Asia (IWRM) with the World Bank
Documents used	(a) 7F-06401, Credit Proposal (Upscaling Integrated Water Resources Management, Zentralasien/Central Asia), 18.12.2008 (b) 7F-06401, RESP II Project Self Assessment, 26.10.2011 (c) 7F-06401, Mission Report, 09.11.2011 (d) 7F-06401.01, Partial Budget Annulation, 13.09.2012 (e) Welfare Improvement Strategy of Uzbekistan (Full strategy paper for 2008-2010), Tashkent 2007. (This paper is important in understanding that at the time of project launch CC was not so much in focus as during the years that have followed since).
People interviewed	Desk study based on review of documents shared by SDC/SECO (above). Additional document search and review included source document (e) above.
Basic data	Start date: 1.10.2008 and end date: 30.6.2015 (SDC/SECO spread sheet/ excel). Budget: total project budget CHF 6,7 million (grant), of which the Swiss Agency for Development and Cooperation (SDC): CHF 3,3 million (Credit Proposal 7F-06401.01), 18.12.2008 NOTE: Credit Annulation CHF 0,8 million (Nr. 7F-06401.01), 13.09.2012, which reduced credit from SDC: CHF 2,5 million (mainly due to a delay in the implementation of the World Bank funded part)
Location	Central Asia is an arid region, with fertile regions - former deserts were made arable by vast irrigation systems harnessing the water resources from the mountain ranges in Kyrgyzstan and Tajikistan and to a lesser extent Afghanistan. With the collapse of the Soviet Union the water and energy management arrangements suffered setbacks as national interests and opportunities compete with and negatively impact on the previously integrated water resources management balancing demands of different water users. Against the emergence of increasingly diversified cropping patterns, inherited managerial arrangements have converted into unreliable, inadequate/inequitable water distribution with excessive water use, and significant water losses. In many cases, irrigation methods applied at farm level are wasteful, so that many fields suffer from excess irrigation, water logging, and salinization. However, the crisis of water is mainly not of quantity but of management as well as of lack of maintenance of water distribution infrastructure. With the climatic change and the rapid population growth throughout the region, the demand for and competition between the use of water for life, food, industry and environment will further increase. The Central Asian countries are therefore compelled to using existing water resources much more efficiently, especially in irrigation, which consumes over 90% of the water (source a). The intervention is addressing The Ferghana Valley in Uzbekistan and other geographical areas.
Partners	**Funding partners**: SDC, The World Bank (WB) **Project partners and beneficiaries:** Project partners: The Government of Uzbekistan The World Bank (observer in the Project Steering Committee) Rural Restructuring Agency (RRA) under Ministry of Agriculture and Water Resources (MAWR), Government of Uzbekistan (GoU)

	SDC (including the Scientific Information Centre (SIC) of the Interstate Commission for Water Coordination (ICWC)). International Bank for Reconstruction and Development (observer in the Project Steering Committee) Water User Associations organized into a Water Management Consortium <u>Beneficiaries:</u> Direct beneficiaries: The Water User Associations (WUA) that the project proposes to reorganize from 91 administrative into approximately 40 hydro-graphic ones. Main indirect beneficiaries: About 11 000 farmers in a project area of approximately 260 000 ha.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**
Purpose	The overall objective will be to further promote IWRM through scaling up and adaptation of the innovative, participatory and demand oriented institutional arrangements achieved in Ferghana Valley to new geographical areas, and strengthening and streamlining institutions across all levels of the water distribution hierarchy. SDC states that the cooperation with the WB also provides an opportunity not only to scale up IWRM experiences acquired over the last years but also to foster linkages with the Integrated Water Resources Management (IWRM) and the Water Productivity Improvement (WPI) projects (both supported by SDC) . The credit proposal notes that SDC's contribution intends to improve water use efficiency and effectiveness of water management, to contribute to the further development of private farming, more secure livelihoods, increased environmental stability and reduced water related conflicts (source a)
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 50% relevant to adaptation (and significant CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Resilience for adaptation (RFA)** (see 'Result Chain' above). The intervention was grouped by Gaia into cluster 8 Cluster 8: Water resources management
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Climate change is stated (source a) as one of the drivers – parallel to population growth - that will increase the demand for and competition between the use of water. While the project design takes it more or less for granted that the intervention will help to cope also with the impacts of advancing CC no explicit adaptation related targets or indicators have been indentified in Credit proposal (see Annex 1 : Planning Matrix for Swiss Grant Contribution to RESP II (2009 to 2012). No direct evidence of the CC adaptation effectiveness can be extracted from the available project documentation.

2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Even if no explicit reference not CC specific targets have been set for the intervention, it can be concluded that i) generally IWRM is a no-regrets solution to CC adaptation; and more importantly from the perspective of this analysis ii) the objectives set for the Swiss grant contribution and tasks, as defined in the credit proposal (and for which some progress has been reported in sources b and c) represent concrete measures that contribute to more resource efficient, sustainable management of water resources and that simultaneously strengthen the livelihoods and build CC resilience for the WUA and farmers. On the other hand, there seem to be some aspects in project implementation and institutional set-up that may have hampered the overall success and effectiveness of project activities. E.g. iIt appears that the draft Uzbek IWRM vision to extrapolate the Fergana Valley set-up to other regions, may not have been optimal, as the Fergana Valley is a rather special case of its own in Uzbekistan. While the project being linked to the Welfare Improvement Strategy of Uzbekistan is clearly a solid foundation for the project, it did not as such add CC specific "boost" to the intervention (as CC was not addressed in the strategy)
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Even if no assessment (climate modeling, forecasting and downscaling) of CC impacts on water resources in the focus area of the intervention is included in project activities, experiences from other parts of the world highlight several benefits of an IWRM approach also to CC adaptive capacity.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SECO as 50% relevant to adaptation. Based on the review the IWRM approach and several project activities contribute positively to build adaptive capacity and resilience for advancing impacts of CC, and for that reason the classification of this project as 50% can be justified. However, CC has not been strongly and explicitly mainstreamed into the intervention, and it is not possible to estimate in more detail the level of adaptive capacity improvements (technical, awareness, institutional etc), nor to draw any lessons learned for other projects with the aim to specifically improve the CC adaptation aspects of these kinds of interventions. Based on available data we suggest a CC adaptation effectiveness score of '4'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning** Climate change is stated (source a) as one of the drivers – parallel to population growth - that will increase the demand for and competition between the use of water for life, food industry etc in the coming years. While under project goal reference is made to climate change ("Being an integral part of the climate change related integrated water resources management cluster, the RESP II project responds directly to the Welfare Improvement Strategy (WIS) of Uzbekistan) no further reference to CC as such is made in the credit proposal. The Welfare Improvement Strategy (WIS) of Uzbekistan does indeed, as part of its medium term Investment Policy aim to, "[encourge] investment projects targeting the effective utilization of limited resources: energy efficiency, water-efficiency, and projects aimed at reducing the emission of greenhouse gases" (ref. 4.3 Investment Policy, 365). CC aspects can be identified in design phase documentation but on a highly general and theoretical level, assuming that an IWRM approach automatically will contribute to strengthened CC adaptive capacity (score '3')

	Pathway integrity The project (e.g., Mission report) does not exhibit any logical pathway from CC challenge to response, as hinted to in the Credit Proposal (see Evidence and reasoning of this section above) (score '2')
General quality of project design	**Explanation clarity** The project was clearly designed and planned. Overall objectives were defined and measurable objectives (and sub-objectives) were set as well. Risks were identified and analyzed, but their mitigation as part of the project could have been more clearly spelled out. A Planning Matrix for Swiss Grant Contribution to RESP II (2009 to 2012) was well prepared, but the Planning Matrix could have greatly benefitted by identifying who should be responsible for what task and within what time frame. Also, a coherent and clear self-assessment was carried out detailing project status and areas of improvement. However, while there is an initial mentioning of CC in the Credit proposal, the project design (or monitoring of implementation) does not elaborate further on this aspect (score 6). **Participatory design** From the Mission Report, it becomes apparent that the project has been well anchored on a local level, for example in establishing and working with WUA:s (Water user associations). It also builds on extensive previous work by SDC and WB in the region. (score 5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-06841.01 Disaster Risk Education in Public Schools (Jordania/Lebanon)
Documents used	(a) 7F-06841.01 Credit Proposal_UNICEF Disaster Risk Education.pdf, dated 23.9.2010 (b) Change of credit duration, dated 30.10.2013 (c) UNICEF Jordan progress report 1/12/2010- 30/11/2011 (d) Disaster Risk Reduction Education in Lebanon. Revised project proposal to the Swiss Development Council (SDC). UNICEF & Save the Children Sweden, March 2012
People interviewed	Desk study based on documents received from SDC/SECO.
Basic data	Start date: 1.10.2010. and date: 28.2.2013 Swiss budget CHF 1,1 million (SDC/SEC spreadsheet/excel) The credit proposal notes that project duration is 1.12.2010 to 30.4.2013, with source b, extending the project until 30.6.2014.
Location	The project focuses on maintaining safe learning environments in and around selected public schools in Lebanon and Jordan through hazard mapping, community outreach, and disaster risk-related educational policy and curriculum development, in order to minimize the loss of life and prevent interruption of education in case of disaster. The project takes a regional approach and is a continuation of previous projects. While focusing on DRR in schools, it offers an avenue to explore community-based DRR in Jordan and Lebanon. In addition, the project's hazard mapping can serve as a basis for the prioritization of schools with regard to future activities such as retrofitting, for which there is interest from larger donors.
Partners	**Funding partners**: SDC, UNICEF **Implementing partners**: UNICEF (UNICEF Lebanon and Jordan), UNDP, UNESCO, Save the Children **Other partners**: Ministry of Education (Jordan), Ministry of education and higher education (Lebanon), as well as Jordanian Civil Defence, the Jordanian Red Crescent, the National Security and Crisis Management Centre (NSCMC), the Greater Amman Municipality (GAM), the Royal Scientific Society (RSC), Jordan Engineering Association (JEA) and the Royal Geographic Centre (RGC).
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC6 - Adaptation: Awareness Raising**. A pathway to informed dialogue and decision making through the accretion and management of CC-related knowledge. **Output**: (a) generate, collect and analyse CC-related data; (b) involve multiple stakeholders in multi-level dialogue on CC. **Outcome 1**: (a) increase in knowledge and awareness on CC (trends and variability) and related vulnerabilities. **Outcome 2**: (a) decision making is based on improved climate risk information. **Expected validation criteria**: Education & training for mitigation (ETM); Research & monitoring for mitigation (RMM); Education & training for adaptation (ETA); Research & monitoring for adaptation (RMA); Knowledge for adaptation (KFA).
Purpose	To support the work of UNICEF through a financial contribution focused on maintaining safe learning environments in and around selected public schools, through hazard mapping, community

	outreach, and disaster risk-related educational policy and curriculum development, in order to minimize the loss of life and prevent interruption of education in case of disaster. (source a)
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC/SECO as 50% relevant to adaptation, and as being significant (OECD/DAC Rio Marker guidelines) in addressing climate change. The project was initially classified by the Gaia review team as meeting validation criteria **Adaption against Disasters (AAD**) linked to Result Chain 7
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	In line with source a, the project should achieve the following results 1. The DRR standards are increasingly reflected in education policies 2. Pupils in around 100 selected public schools, teachers, and surrounding communities have enhanced their knowledge and skills about self preparedness and mitigation of disasters through periodic sensitization sessions and development and implementation of minimum safety standards. The progress reports provide evidence of concrete results achieved (source c) , including i) preparation of vulnerability assessment tools and completion of the assessment process; ii) preparation of the DRR awareness vulnerability assessment report; iii) improved coordination of DRR interventions at the Ministry of Education; iv) preparation of DRR Educational material through UNICEF/ UNESCO joint project; and v) capacity building of officials in DRR through their participation in international conferences. As an outcome of the first activities and results the need for a separate awareness intervention was identified and subsequently a revised project proposal prepared (see source e). Progress e.g. in the areas of strengthened preparedness for disasters and improved awareness, contribute in many cases also to improved preparedness for CC related disasters even if CC is not referred to in progress reporting.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Based on the credit proposal the first phase of the project included hazard mapping (including remote survey with spatial data). While this is mainly geared to serve the retrofitting needs (of school buildings), it can also contribute to lay the basis for mapping of CC related risks. The second phase, with a strong focus on awareness raising, including sensitization sessions with students, and teachers and surrounding communities, could also provide a window of opportunity to raise awareness of CC risks and preparedness to cope with any CC related disasters. However, no indirect evidence of making use of these opportunities is mentioned in available progress reporting.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	While many of the preparedness aspects addressed in this project can also strengthen preparedness for CC related disasters, it should be noted that improved preparedness for e.g. earthquakes does not necessarily or automatically also help in CC risk prevention. While focusing on DRR in schools, the project offers an avenue to explore community based DRR (source a), which in our view also provides opportunities to advance community based CC adaptation measures. Also the fact that the project promotes hazard mapping it can serve also for mapping of CC hazards, if sufficient climate data is available for such exercises. The close collaboration with partners that are also aware of CC related disasters (such as UNDP, UN-ISDR), with experiences of DRR projects in the region (including 3 projects by UNDP, source c), and

	the knowledge of UNICEF in the region working with water issues are supportive of a good understanding of CC related DRR being available for this particular project. Also the clear consideration and aim to mainstream gender aspects, and aim to encourage participation of women and girls into community bases initiatives, is something that is generally an effective no-regrets measure to community based CC adaptation.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 50% relevant to adaptation, and as being significant (OECD/DAC Rio Marker guidelines) in addressing climate change. Based on available evidence, the project is not addressing CC specifically but this decision has been taken after explicit CC considerations (which could be called a preliminary CC screening) and in this perspective the CC adaptation effectiveness as such can be scored low. However, this does not in any way reflect the potential effectiveness of the project itself and its key targets, on which available documentation provide clear signs of progress. Also, based on the assessment, the project has the potential to contribute also to CC adaptation, if explicitly mainstreamed to it, making use of any latest climate data e.g. from the IPCC 5^{t} assessment report, or other regional/national climate scenario work. We suggest a CC adaptation effectiveness score '4'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project has a clear objective to help maintaining safe learning environments in and around selected public schools, through hazard mapping, community outreach, and disaster risk-related educational policy and curriculum development, in order to minimize the loss of life and prevent interruption of education in case of disaster. CC as such is not considered a key disaster to be addressed. However, the project design (source a) does (quite exceptionally among all projects reviewed as part of this effectiveness assessment) take up the issue of climate neutrality of the project (i.e. the GHG emissions produced by this project itself) and in particular, it explicitly addresses the issue of CC adaptation, noting that due to the fact that climate scenarios at the time of designing this project were inconclusive for middle East region, would not be addressed within the project. In this light the marking of climate marker in credit proposal data sheet as zero/0, can be considered an "informed zero" from CC perspective. The revised project proposal by UNICEF & Save the Children Sweden (source d) refers to Lebanon facing a number of risks from both natural and human induced disasters, especially earthquakes, droughts, water scarcity, floods, storms and epidemic, and that climate change acts as a multiplier for many of these hazards (score 6). **Pathway integrity**. While the project aim is well described, the expected results as well as indicators to be followed are logical, and provide a solid pathway to achieve the expected results. As noted above CC aspects have been noted from the perspective of direct project CC impacts and in addition the possibility to take forecasted CC impacts has been considered (score 6).
General quality of project design	**Explanation clarity**. The credit proposal is well prepared, defining the expected results, and in particular the project indicators very clearly. It notes that a more detailed logframe will be prepared and submitted 6 months into the first phase. Also the credit proposal provides an exceptionally solid description of key regional stakeholders and the alignment of

	the project with major international and regional and national strategies and DRR initiatives (score 6). **Participatory design**. The project builds on extensive experiences from previous projects in the region, with projects in Lebanon and Jordan focusing on natural and manmade disasters, including projects addressing building design, policy dialogue in DRR issues and DRR related capacity building. Based on available documentation, we take this as a sign of a participatory process when designing this particular project (score 5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-06983.01 Strengthening Climate Change Adaptation in China and Globally
Documents used	(a) Credit proposal final (no date indicated) : Strengthening Climate Change Adaptation in China and Globally, CHINA – UK – SWISS PARTNERSHIP (b) Kreditantrag, China - UK Swiss Partnership, Phase 01 von 01.06.09 - 31.05.2012.pdf (dated 14.5.2009) (c) Final Report, Adapting to Climate Change in China, Project Phase I (ACC Phase I), October 31 2013, Author Rebecca Nadin (d) Street, R. and S. Opitz-Stapleton (2013), ACCC Resource Manual: Reflections on Adaptation Planning Processes and Experiences , 134 pp., DfID-China: Beijing (e) Adapting to Climate Change in China (ACCC), Annual Report August 2010(7F-06983_ACCC Annual Report Aug 2010 final.pdf) (f) Scoping Assessment Report: Adaptation to Climate Change in China project (ACCC) Phase II, Submitted by Team A 16 December201, including Annexes 7.4-7.8 (g) ACCC Project Annual review. REVIEW REPORT, Final Version, 08 November 2010 (h) ACCC CONFERENCE REPORT and ACCC Guiding Principles - International Conference on Climate Change.pdf. International Conference on Climate Change Adaptation: Policy, Practice & Legislation, Beijing 2nd-4th July 2013
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.6.2009 and end date: 31.12.2015 (SDC/SECO excel/spreadsheet) Budget: CHF 7,4 million (SDC/SECO excel/spreadsheet) The credit proposal refers to Phase 1: 01.06.2009-31.05.2012 with a budget amounting to CHF 3,2 million. It notes that the project will run for three years from June 2009 to May 2012 with a total budget of CHF 7,5 million and SDC contributing CHF 3,2 million to the programme. The final report concludes that the project (ACCC I) was implemented between June 2009 and October 2013 (being extended from 2012 to late 2013).
Location	Addressing CC challenges in China is of utmost importance, taking note of the high vulnerability of the country to natural climate variability and advancing impacts of climate change, and China being the lead GHG emitting economy globally. The project is based on DFID's years of experiences and lessons learned with China's lead ministry, the National Development and Reform Commission (NDRC), and previous work on adaptation of the UK Department for Environment, Food and Rural Affairs (DEFRA) (now transferred to the new Department for Energy and Climate Change, DECC), in partnership with the Chinese Ministry of Science and Technology (MOST). The project will contribute - in China and other countries- to the ability to research and understand the risks and impacts of climate change, develop appropriate adaptation options, and mainstream these into national and regional planning and management (sources a and b).
Partners	**Funding partners**: SDC, DFID China, DFID Research and DECC

	(Department for Energy and Climate Change). **Lead Chinese project partners** China's National Development and Reform Commission (NDRC), Ministry of Water Resources, the Ministry of Agriculture, the Ministry of Health, the Ministry of Science and Technology, the Ministry of Environment and the Ministry of Civil Affairs (which leads on disaster risk reduction) **Other partners**: Chinese Academy of Agricultural Sciences, the Chinese Meteorological Administration (Regional WMO Center in East Asia), Chinese Academy of Social Sciences, as well as other national and provincial institutions **Project beneficiaries:** expected direct project beneficiaries are climate-vulnerable populations of China, particularly, but not limited to, those based in the three case study provinces of Ningxia, Guangdong and Heilongjiang (sources a and b).
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: **(a) Mainstreaming of adaptation (MOA); Adaptation against disasters (AAD); Resilience for adaptation (RFA).**
Purpose	This project aims to improve international knowledge on the assessment of climate impacts and risks, and develop practical approaches to climate change adaptation, by helping China integrate climate adaptation into the development process to reduce its vulnerability to climate change, and by sharing this experience with other countries. The envisaged project outputs are: 1) Improved development of, and access to, climate change science in China; 2) Comprehensive risk assessments in selected sectors, based upon vulnerability and impacts, produced at national and provincial level; 3) Climate risks integrated into planning and management within the three project provinces, and informing national level processes; 4) Increased awareness and capacity among Chinese policymakers and other key stakeholders to address climate change adaptation within China's development process; 5) Knowledge sharing between China, UK, Switzerland and other countries in Asia and Africa, to further develop climate change adaptation approaches, and better understand the economics of adaptation to climate change (sources a and b).
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The expected outputs are at the core of what can be considered the central building blocks for effective adaptation and the project was initially classified by the review team as meeting validation criteria **Mainstreaming of adaptation, Research & monitoring for adaptation (RMA) and Education & training for adaptation (ETA),** which highlights the many overlaps with C6 (Adaptation awareness raising) that this broad-based intervention

	represents as it aims to address CC adaptation holistically. The project was grouped by Gaia into Cluster 6: Policy development
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	This project builds on the first and second phases of previous UK funded projects on impacts and adaptation to climate change in China (www.china-climate-adapt.org). The focus in this review is on the Swiss funded period of the intervention but any signs of effectiveness must be seen in the context of the project background, as well as input by other partners, in particular by DFID, in project phase 01.06.2009-31.05.2012 under review here. The reporting provides evidence of progress on all five project outputs, which are fully in line with measures that strengthen the adaptive capacity of a country, and contribute to mainstreaming CC adaptation into decision making. Direct evidence is available in the final report(source c) which notes that the project has helped i) establish a multi-disciplinary research team in China capable of delivering integrated, policy-oriented research on the science and biophysical impacts of climate change, climate change vulnerability and risk assessment, and adaptation planning; ii) advance scientific research on climate change impacts, vulnerability and adaptation through the development and application of a methodological framework for integrating climate risk assessments and adaptation planning at the national and provincial level, and in multiple sectors; and iii) share regionally and globally, knowledge products generated by the project and experiences in undertaking integrated, policy-oriented climate risk assessments and adaptation planning, and in engaging stakeholders and informing national adaptation policy processes. With regards to policy impacts the final report notes that ACCC has also made significant contributions to the adoption of adaptation planning approaches in China. In particular, the ACCC has made a supported the drafting of China's National Adaptation Strategy (NAS), which is a key component of adaptation work listed in China's Twelfth Five Year Plan for National Economic and Social Development. Policy recommendations have been submitted to national line ministries responsible for health, disaster risk reduction, agriculture and water resources. In two of the three pilot provinces (Ningxia and Inner Mongolia), proposed provincial climate change adaptation strategies were drafted and submitted to the relevant authorities to consider, and in the third province (Guangdong) special reports were submitted to government to inform drafting of the provincial Twelfth Five Year Plan, to provincial agencies responsible for disaster reduction and to provincial political bodies. (source c, section 3.1). In addition the project has produced a significant number of peer reviewed publications on climate impacts, vulnerability and risk assessment. The progress report provides more detailed evidence of progress on each five key project area that directly contribute to strengthened adaptive capacity and adaptation mainstreaming.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	A considerable amount of documentation (including manuals, training material, policy briefs, case studies, conference participations etc) is available as evidence of outputs and deliverables (see e.g. source d). The fact that a follow-up phase has been suggested (and outlined in source f) can be taken as a positive sign of the value-added provided by phase I and the need to continue, taking into account the achievements so far, the need to address the strategic priorities of NDRC and in particular address important lessons

	learned from phase I (source f, section 2.1.2). A further issue that could bee improved upon is the aspects of gender, as gender dimensions of climate change impacts, vulnerabilities and risks were not explicitly addressed in depth in the national or provincial assessments, indicating a need for more targeted awareness raising and capacity building on this topic (source c) . This topic was also highlighted in the Scoping assessment report looking into a follow-up phase ACCC II in 2014-2016 (source f).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The evidence for replication in other countries still to be seen but lessons are being actively shared and can be expected to contribute positively in several other countries. Already during the project e.g. lessons were share with Mongolia, and the field mission conducted by Gaia team, noted the appreciation by Mongolian partners of sharing of experiences from China – hereby contributing positively to the effectiveness of Swiss funded interventions also in Mongolia. While the project is focusing on adaptation, and by improving capacity to understand climate-related impacts, risks and vulnerabilities, it is likely that the project has helped to some extent China's policymakers understand the importance of climate change mitigation to safeguard China's economic and social development. As also noted in the credit proposal (source a, annex 4) "…there are also unquestionable global benefits of increased climate change mitigation and adaptation action at national and provincial level in China."
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) Based on our analysis the project has been effective in linking climate change research with policy making and development. It is difficult to imagine a more timely CC intervention in China and we accord it a CC adaptation effectiveness score of 6.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The design describes well the CC challenges that are to be addressed and how the intervention will strengthen the adaptive capacity in China, and how it should further help effective implementation of similar activities in other parts of the developing world (score 7). **Pathway integrity**. The credit proposal and its logframe provide a logical and solid pathway to address the impacts of CC in China and strengthen the adaptive capacity through identified main project activities (score 7).
General quality of project design	**Explanation clarity**. The credit proposal is clear, explaining the context and objectives in a solid and well structured manner (score 7). **Participatory design**. The credit proposal refers to several years of proven collaboration of UK-China partnerships, and the project activities have been designed in direct response to Chinese government requests. These collaborations have included a number of consultation meetings with key stakeholders on the design and focus of the respective interventions (see source a, annex 4).No further information, explicitly referring to any additional participatory efforts or processes of preparing this phase is presented (score 6).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-07733 Climate Change Adaptation in China: Monitoring and Early Warning of Glacier Lake Outburst Floods in the area the Yarkant River
Documents used	(a) Credit proposal (Main credit proposal to opening credit Nr 7F-07733.01, date 7.9.2012 (b) Project Description J.pdf (no date mentioned in the document) (c) Progress Report of Step 1, 2011 by Ch. Haemmig & H.R. Keusen - Geologists, Swiss Advisory Team (Geotest, Zollikofen, March 19th, 2012) (d) Yarkant River Bericht_Die Alpen_09.2013.pdf (e) NR. 2 / JUNI 2013, DAS DEZA-MAGAZIN FÜR ENTWICKLUNG UND ZUSAMMENARBEIT , www.deza.admin.ch (f) Sino-SwIss Cooperation on Monitoring and Early Warning in the area of Yarkant River, Uygur Autonomous Region, Province Xlnjiang, P.R. China: Flood modelling and early warning system. Report of the field mission from September 10 - 20, 2013 Report No. 14120920.3 (g) Hazard assessment of glacial lake outburst floods from Kyagar glacier, Karakoram mountains, China. Christoph HAEMMIG, Matthias HUSS, Hansrudolf KEUSEN, Josef HESS, Urs WEGMULLER, Zhigang AO, Wubuli KULUBAYI (Annals of Glaciology (55)66 2014 doi: 10.3189/2014AoG66A001)
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.10.2010 and end date: 31.12.2015 (SDC/SECO excel/spreadsheet) Budget: 2 600 000 CHF (SDC/SECO excel/spreadsheet) NOTE: Credit proposal states as project period 1.10.2010-31.12.2015 and as total Swiss budget CHF 2,6 million until 2015 with Chinese contribution as CHF 0,85 million. The opening credit (1.10.2010-30.9.2013) amounting to CHF 1,35 million, and the main credit 1.10.2012 to 31.12.2015 amounting to CHF 1,25 million. (Contrary to this total project budget is noted as CHF 3,7 million with SDC funding at CHF 1,85 million (source b, referring to project phase 1.10.2010-31.12.2013). In our analysis we refer to the budget and time period as stated in the credit proposal unless otherwise claimed)
Location	By 2050 it is estimated that glaciers in Western China might be reduced by about 27% which will have an impact on the source of water for over 300 million people along the Yangtze and Yellow Rivers. The melting ice from these receding glaciers is heightening the risk of Glacier Lake Outburst flood (GLOF) to critical levels. Yarkant River is located in the southwest of Xinjiang Province, at the margin of south-western Tarim Basin and ranks number one in Xinjiang in flood frequency and in losses caused by floods as well. The Yarkant floods are threatening an alluvial area of 50'000 km2 with a population of more than 1 million and causing damages and losses of about CHF 11,5 million (RMB 70 million) every year in average. There are 33 records of flood disasters during the 50 years between 1949 and 1999. The floods are provoked by meltwater, by rainstorms and – as most violent and disastrous – by glacial lake outbursts (GLOF), effectuating peak discharges of more than 6'000 m3/s. The largest and most frequent glacial lake outbursts occur in the area of Keleqin River in Shaksgam valley in the Karakoram Mountains. Keleqin is one of several

	tributaries of Yarkant River. (source b)
Partners	**Funding partners**: SDC, with Chinese contribution being CHF 0,85 million. **Project partners:** Ministry of Water Resources, Xinjang Department of Water Resources, Xinjiang Kashgar Hydrographic and Water Resources Bureau, Bureau Water Resources of Kashgar Prefecture, Kashagar Management Bureau of Tarim River Basin, Swiss Federal Office for the Environment, Swiss Natural Platform for Natural Hazards **Contract partner**: Geotest AG, Zollikofen
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**
Purpose	The Sino-Swiss cooperation activities aim at improving the management of the high flood risks of Yarkant River, predominantly caused by glacier lake outburst floods and the long term monitoring of the respective glaciers and outburst hazards. The actions are structured into three phases: (1) Establishment of an early warning system for glacial lake outbursts, to be realized in 2011. (2) Risk management for the potential flood areas, to be realized in 2012 and (3) climate change monitoring and analysis, to be realized from 2013 on. The planned measures combine remote sensing (optical and satellite data) analysis with terrestrial data measurements such as gauges close to the GLOF-prone area and monitoring cameras in the glacier area of Shaksgam Valley. Flood modeling and the elaboration of an automated Early Warning System and an emergency risk management plan are other key issues of the project (source b)
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Resilience for adaptation.** The project was grouped by Gaia into Cluster 4: Environmental monitoring
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The reporting available confirms progress on several key project activities (sources c – g) referring mainly to first phases of project, including flood modeling and CC monitoring and analysis (including compilation of base maps and establishment of a detailed Digital Elevation Model (DEM) of the Kyagar Glacier Lake basin, evaluation and forecast of future scenarios for Kyagar GLOFs considering global climate change), early warning system development and establishment (including satellite remote sensing for Early Warning of GLOFs, installation of gauge and warning stations, web cameras etc), as well as increased understanding of glacier change processes under the conditions of CC (see source g). Through the definition of the

	thresholds for triggering an alarm, the implemented GLOF early warning system (EWS) has become fully automatic at the time of this review. The Xinjiang Department of Water Resources, the Xinjiang Kashgar Hydrographie and Water Resources Survey Bureau and the Kashgar Management Bureau of Tarim River Basin are now the owners of the EWS. The authorities are responsible for maintenance of the terrestrial stations and the alarm procedure (source f). The recent field mission report notes that the first objectives in the area of flood modelling have been achieved, which has laid the foundations for carrying out the planned large-scale flood modelling exercises and thereby furnishing the Chinese authorities with reliable hazard index maps. Moreover, it was also possible to ensure the transfer of knowledge, which is to be further deepened in the near future. Based on available documentation, progress on first phases of the project have been concrete and positive, with direct benefits for CC adaptation.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The documentation provides also ample evidence of important capacity building, training, knowledge and technology transfer, which has been matched by commitment of Chinese partners for up-take and making efficient use of deliverables. The project has already produced interesting information about glacier development (source g: Experiences with the hazard assessment of Kyagar lake show that the remote monitoring of glacier flow characteristics, mass-balance estimations and a solid understanding of the glacier dynamics are necessary elements for implementing an efficient EWS.) that can also serve similar project in other parts of the world.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The fact that the project is implemented under the umbrella of broader water management related activities (including dam safety, integrated flood risk management) can be expected to support successful implementation of the project. Also the Swiss forerunner expertise in glacier monitoring and risk management as well as experiences from similar types of interventions e.g. in Peru can be expected to strengthen the potential for good CC effectiveness of this particular project, too.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) Based on our analysis the project has in light of activities implemented so far been very effective through developing a monitoring and Early Warning of Glacier Lake Outburst Floods in the area the Yarkant River. We suggest a CC adaptation effectiveness score of 6.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The design (the credit proposal refers to main credit, period 1.10.2012 to31.12.2015) has an explicit focus on addressing the challenges of CC with a view to develop monitoring and early warning capacity to address existing impacts and forecasted impacts of CC. (score 7). **Pathway integrity**. The credit proposal and its logframe provide a logical and solid pathway to address the impacts of CC based on well established experiences of monitoring and early warning systems (score 7).
General quality of project design	**Explanation clarity**. The credit proposal is clear and presenting a solid description of the context and a clear overall account of project objectives. (score 7). **Participatory design**. The credit proposal refers to the MOU signed between the respective government representative Ministries in 2009,

	and to the commitment by Chinese partners to the project. While vulnerable communities are mentioned as one of the target groups and project beneficiaries in the study area, the design documents do not provide any explicit information about their participation in the project design This aspect is indirectly referred to, though, in the comments by the Operations Committee (source a, Annexes last page), which notes "Although the project is based on technical and scientific knowledge, due attention shall be given to the relevance on the well-being of people, and of the poor segment of society" (score 4).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-07789.01 – Project on Biomass in India (TERI-SDC Project on Biomass, TSMP 2013-2015)
Documents used	(a) Kreditantrag, TERI - SDC Project on Biomass (TSPB), Phase 01 von 01.01.2011 - 31.12.2013.pdf (b) Change of credit duration/No-cost extension TERI Biomass Phase 01 (No. 7F- 07789.01) (c) TSBP-Operational report July–Dec, 2012 (d) TSBP-Operational Report Jan–June, 2013 (e) TSBP-Operational report July–Dec, 2013 ((f) TERI-SDC Biomass Project (TSBP), 2013 – 2015 (g) Rural Electrification Policy, Ministry of Power (India), 23.08.2006 (h) Internet page of NSE (National Stock Exchange of India Limited), www.nseindia.com (i) Internet page of Phoenix products, phoenixproducts.info/index.html
People interviewed	Desk study based on review of documents shared by SDC/SECO (above) as well as additional information search from relevant websites (sources h and i).
Basic data	Start date: 01.01.2011 and end date: 31.12.2016 (SDC/SECO excel/spreadsheet) Of which the Credit proposal phase: 01.01.2011 – 31.12.2013 Of which a Change of credit duration was issued on 14.07.2012 to extend the Credit proposal until 30.06.2015. The new duration was changed as follows: 01.01.2011 – 30.06.2015. Budget: CHF 4,5 million (bilateral contribution) of which SDC's part (Credit proposal) CHF 2,4 million (approved: 06.12.2010).
Location	India, rural areas in eg. Bangalore, Hubli and Belgaum.
Partners	**Funding partners**: Swiss Agency for Development and Cooperation (SDC) Provided documentation does reveal the other(s) bilateral contribution(s) **Implementing partner:** TERI – The Energy and Resources Institute (commonly known as TERI) established in 1974, is a research institute based in New Delhi focusing its research activities in the fields of energy, environment and sustainable development. **Other parties/beneficiaries** <u>Other parties</u> Danish Technical University: Technical backstopping (SDC uses the term backstopping as follows, "advisory services, supervision, support and a guarantee of a certain continuity in the knowledge level with regard to an action ororganisational unit … backstopping mandates are entrusted to external consultants (organization developers, economists, engineers, etc.) who can manage a program for several years as a neutral authority". Sorane Sa: Technical backstopping – A Swiss engineering practice primarily focussed on: active and passive solar energy provision, research, consulting on energy management, and collaboration of multi-disciplinary project. NTPC (National Thermal Power Corporation Ltd) – One of India's largest power companies, listed on the NSE (National Stock Exchange of India Limited)

	Hubli College of Engineering Centre for Electronic Design and Testing at Indian Institute of Science UNIDO (The United Nations Industrial Developmentorganisation): Capacity building and facilitation of technology transfer. CCD (Climate Change Department of the Switzerland Embassy in India) <u>Beneficiaries:</u> Direct beneficiaries: - Communities in four villages - 40 small enterprises that shift to clean energy services using thermal gasifier systems based on biomass - Partners in two other developing countries (selected on 09.12.2013 by the SDC in consultation with the project to be: Ethiopia and Thailand) Main indirect beneficiaries: - Biomass energy and renewable energy programmes of the of Government of India - Local rural communities and institutions (e.g., industry associations and governmental agencies), in e.g., Orissa, Madhya Pradesh, Maharashtra and Jharkhand. - Forest and agricultural departments - Small enterprises - Participants of knowledge sharing networks: CoSMILE (Competence Network for Small and Micro Learning Enterprises), Bioenergy list and TERl Web for knowledge sharing.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC3 - Mitigation: Renewable Energy.** A pathway to promote renewable energy through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of power substituted (MWh) and tCO_2e conserved. **Output**: (a) remove regulatory obstacles to RE and create incentives for RE; (b) facilitate access to finance & technology for investments in RE. **Outcome 1**: (a) increased production of RE; (b) increased access to RE in rural areas. **Outcome 2**: (a) increased use of RE reduces GHG emissions; (b) people have better access to affordable energy; (c) reduced dependence on energy imports **Expected validation criteria**: (a) **Applied technology for mitigation** ("Reducing or stabilising GHG emissions in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors through application of new and renewable forms of energy, measures to improve the energy efficiency of existing generators, machines and equipment, or demand-side management"); and (b) **Capacity building for mitigation (CBM)**. ("Developing, transferring and promoting emission-reducing technologies and know-how, including building capacity to control, reduce, prevent or reverse emissions of GHGs in the waste and sewage management, transport, energy, agricultural, construction, industrial and other sectors.")
Purpose	The overall goal is to accelerate the usage of biomass based clean energy solutions so that rural communities and small enterprises secure access to clean energy services.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 25% relevant to adaptation and 75% relevant mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Capacity Building for Mitigation (CBM) and Education and Training for mitigation**

	(ETM) The project was grouped by Gaia into Cluster 1: Renewable Energy
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Mitigation effectiveness According to documentation (Credit proposal, source a), GHG emissions reductions are to be expected in range of approximately 85 000 tons of CO_2 over a period of fifteen years. To date no hard data on emission reduction is available in the Operational Reports (with the latest submitted in January 2014, covering progress in July – December 2013, source e), which is understandable taking note of the early phase of project implementation. Adaptation effectiveness No direct evidence of adaptation effectiveness is yet available.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Mitigation effectiveness While no GHG emission reduction can yet be reported, the project has made progress on, as a part of impact and monitoring, establishing a monitoring protocol for estimation of reduction/avoidance of CO_2. The Operational Report (July to December 2013, source e) notes that smart on-line GHG monitoring systems have been installed in all the five identified locations (Nagappa and Sons (Bangalore), Ashok Iron Works (Belgaum), Sai foods(Bangalore), Belgaum Sands (Belgaum) and Bhagya Lakshmi Ind (Bangalore), laying the foundation to systematically monitor and report of achieved emission reductions. According to available reporting, the project has invested in local awareness activities, and although not yet quantifiable, these efforts could contribute to improving the social fabric and willingness to adopt more climate friendly technologies. Adaptation effectiveness Tests carried out during the course of the project show that a two-stage power gasifier technology can achieve a 40% reduction in wood consumption and a very clean gas that can be used for power generation. A reduction in non-sustainable use of wood for energy purposes can, in addition to reduce GHG emission, contribute positively to climate resilience of local communities. The Government of India has acknowledged the role of forests in providing livelihoods to strengthening the viability of local communities, as well as involving poor communities.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	There is ample evidence from different parts of the developing world that sustainable use of biomass as input for energy production has the potential to reduce energy poverty, contribute to CC mitigation as well as provide adaptation benefits. The fact that TERI, the implementation partner, also holds similar biomass references from some 15 other projects in India, should also contribute to the success of this project, and also help integrate aspects of local economic development aspects to the intervention, which supports the sustainability potential of the intervention.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SECO as 25% relevant to adaptation and 75% relevant mitigation. Based on our review this classification is in line with the project objectives and activities implemented so far. Taken note that the project is only in its early phase, we suggest at this stage a forecasted mitigation effectiveness score of 5 and an adaptation effectiveness score of 4.
Project design aspects	
CC-relevance of project	**Evidence and reasoning**

design	The Credit proposal (source a) exhibits a clear and logical linkage to CC, recognizing the need for modifying and developing low-carbon energy systems, in this particular case: Biomass gasification technologies. There is also a clear reference to SDC's Global Programme on Climate Change (GPCC), and the associated need for promotion of decentralized clean energy systems based on biomass resources in developing countries. The Credit proposal also highlights that finding local solutions and action on national levels are crucial given difficulties in the United Nation's Framework Convention on Climate Change (UNFCCC) climate change negotiations. There is no reference in the project design to CC adaptation as such nor how the project could contribute to strengthen resilience in light of CC (score 6). **Pathway integrity** The project exhibits clear logical pathways from CC challenge to response. The Credit proposal includes a Logical Framework Analysis (LFA) that includes Strategy for intervention, Key indicators (KPI), Sources & Means of Verification, and Assumptions & Risks. A CC-relevant KPI includes the expected reduction of GHG emissions reduction in the range of 85 000 tons of CO_2 over a period of 15 years. Overall, the outputs are also quantified in ways that makes follow-up concrete and measurable. The project is defined principally as a mitigation project, and as such, the project is establishing itself well. In terms of adaptation, no pathway for this project impact is present in the design documentation (score 6)
General quality of project design	**Explanation clarity** The project has been clearly designed and planned. Overall objectives are defined and measurable objectives (and sub-objectives) have been set as well. Risks have been identified and analyzed, with clear and logical thought-through mitigation efforts. The Logical Framework Analysis (LFA) is clear and succinct in its preparation; however, the LFA could have benefitted from also including mile stones per activity as well as proposing party responsible. Theorganisational diagram is clear, although it would have benefitted from making more obvious references to the different partners of the project (see section Partners – above in this document). (score 5). **Participatory design** Based on documentation, the project appears to be making well use and integration of local research and consultation processes (including state, regional and local levels) (score 4).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-07807.01 Weather-index based Crop Insurance in Zimbabwe, Swaziland, Zambia, Malawi
Documents used	(a) Concept Note 7F-07807, dated 10.11.2010 (b) Concept Note 7F-07807.01, dated 26.11.2010 (using the term credit proposal for the CHF 0,15 million opening credit) (c) WII1_note to the file_MicroEnsure end of contract_Dec2013.pdf (dated 9.12.2013) (d) 7F-07807_Publication Award 2012_SouthAfrica_2.pdf
People interviewed	Desk study based on documents received from SDC/SECO.
Basic data	No start / end dates available in (SDC/SEC spreadsheet/excel). According the SDC/SECO spreadsheet only CHF 0,17 million had been disbursed by end 2012. Sources a and b refer to a total budget of CHF 6,5 million (for phase 1: CHF 4,1 million and CHF 0,15 million for opening credit") with time schedules of 1.1.2011 to 31.12.2016. The project has been postponed (sources a-c).
Location	Zimbabwe, Swaziland, Zambia, Malawi The annual number of weather related catastrophes all over the world has increased by 100% since 1980 causing major damages both in the North as well as in the South. The economic losses show a similar trend with the losses doubling in both high income countries as well as in medium and low income countries. Weather-related losses were the third highest ever in 2008, exceeding $200 billion globally with $40 billion losses from Hurricanes Ike and Gustav in the U.S. alone. Even if the absolute economic loss for poor farmers in the South looks modest it can be 100% of their annual income. At national level in Southern Africa this can represent up to 15% of GDP. The same catastrophe in the north would represent only 2 to 2.5% of the GDP even if it was higher in terms of total losses. Up to 70% of the population in Southern Africa depends on agriculture for their livelihoods. Farmers are by far the biggest economic group accounting up to 50% of national economies. To reduce the impact of these extreme weather conditions an insurance scheme could be an innovative instrument for the farmers in the south as it is the case in the north. For a fixed premium payment individuals can limit the amount of loss caused by natural disaster in the future. The weather index insurance is a product designed to provide compensation for farmers when the rainfall during a crop growing cycle is insufficient to grow crops and to realize good yields or great areas are overflowed damaging seeds and plant life. Traditional agricultural insurance relies on on-farm monitoring of losses, evaluated through farm inspections. Weather index insurance does not estimate yield reduction on every single parcel of land due to disadvantageous weather conditions; based on known correlation between water supply and yield it measures changes in rainfall. It is therefore important to establish a strong relationship between the amount of rainfall needed for optimal growth and the type of seed planted in given areas. Weather stations measure the rainfall and these measurements are compared to an agronomic model specifying crops' rainfall needs. If the needs are not met, farmers insured under that station receive a payout (sources a and b)
Partners	**Funding partners**: SDC **Possible implementing partners**: Swisscontact (SC)

	Possible other partners: Syngenta Foundation, Swiss Re Note: the final project implementation strategy and partners not confirmed at the time of this project review.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC6 - Adaptation: Awareness Raising**. A pathway to informed dialogue and decision making through the accretion and management of CC-related knowledge. **Output**: (a) generate, collect and analyse CC-related data; (b) involve multiple stakeholders in multi-level dialogue on CC. **Outcome 1**: (a) increase in knowledge and awareness on CC (trends and variability) and related vulnerabilities. **Outcome 2**: (a) decision making is based on improved climate risk information. **Expected validation criteria**: Education & training for mitigation (ETM); Research & monitoring for mitigation (RMM); Education & training for adaptation (ETA); Research & monitoring for adaptation (RMA); Knowledge for adaptation (KFA).
Purpose	To design an insurance system based on weather monitoring and pay-outs based on known correlations between water supply and the yields of various crops. The overall objective is to reduce the vulnerability of 100 000 farmers to climate change, promote and protect investment in farming and improve food sustainability through the provision of an additional
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC/SECO as 100% relevant to adaptation, and as being principal (OECD/DAC Rio Marker guidelines) in addressing climate change. The project was initially classified by the Gaia review team as meeting validation criteria Resilience for Adaption (RFA)) linked to Result Chain 7 In Gaia preliminary review the project was classified into Cluster 7: Disaster risk insurance
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Due to the documentation available, and major delays encountered in actual project implementation, no hard evidence of the project´s CC effectiveness is available at the time of this review
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Due to the documentation available and major delays encountered in actual project implementation, no hard evidence of the project´s CC effectiveness is available at the time of this review. The fact that during the actual implementation phases, which is now foreseen to start in 2014 (source c) with a focus on Malawi and Zambia.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The project foresees to make use of experiences and lessons learned from a similar project recently implemented in Kenya and Bolivia. Also the other similar types of projects were being launched in Mongolia and Haiti that in principle could support successful implementation of this project. The collaboration foreseen with partners that are highly aware and experienced with CC related insurance (such as Swiss Re, and based on source c more recently also WFP) is another reason to expect solid integration of CC risk knowledge to the project. While these aspects can be seen to contribute positively to the forecasted effectiveness of the project, it could be noted that more broadly these kinds of interventions should be actively integrated to interventions that strengthen and proactively improve livelihoods in light of advancing CC. Based on Gaia review team experiences from developing country partners, “only coping with

	the impacts of an additional CC risk", is not the primary goal of developing country partners. The fact that modifications have been made to the approach (source c) and the actual implementation phase in 2014 integrates the particular aim to "integrating the insurance component with other risk management tools (i.e. saving, lending, disaster risk mitigation), the R4 approach has the broader objective to build livelihood resilience amongst food insecure and vulnerable rural households, which is particularly relevant in the context of Southern Africa where climate variability is already severely affecting farming systems in the region", is based on our Gaia view a highly positive amendment that should contribute to strengthen the CC adaptation effectiveness potential of the intervention.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 100% relevant to adaptation, and as being principal (OECD/DAC Rio Marker guidelines) in addressing climate change. Based on available evidence, the project is fully relevant to CC adaptation, and has the potential to contribute importantly to reduce the vulnerability of farmers and their families to weather extremes. However, due to the documentation available, and the delays encountered in actual project implementation, we will provide only a score of potential climate effectiveness, with a "forecasted CC adaptation effectiveness score of 5.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The concept note defines very clearly the project objectives, which are explicitly addressing CC challenges, including increased frequency of extreme climate events, such as droughts and floods. The concept note also recognizes that changes are expected to rainfall and weather patterns, which will be taken into account during the project. Within this state of project design it cannot be expected that more detailed information of forecasted impacts (with downscaling on regional and local level) would be presented, in particular noting the overall lack of downscaled climate scenarios for the foreseen partners countries. (score 6) **Pathway integrity**. The concept note provides a comprehensive overall description of the project objectives and activities. It provides a pathway to address risks from weather extremes, with a concrete hardware focus on weather stations, while not being specific about how forecasted CC impacts will be integrated (score 5).
General quality of project design	**Explanation clarity**. The concept note / credit proposal provides a general presentation of the planed intervention, but several of the more detailed aspects (including role of stakeholders in project implementation, number and selection of partner countries, final approach) seem to be left for the feasibility study, to be financed by the opening credit (c). **Participatory design**. The project builds on experiences from previous projects in the same thematic area (including projects in Kenya and Bolivia) but no specific reference of how key stakeholders have been involved in the project design so far, is provided in available documentation (score 3).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-07916 Contribution to Haitian Catastrophe Micro Insurance Facility – Reducing Disaster Risks by providing catastrophe insurance
Documents used	(a) Credit Proposal , dated 19.4.2011 (b) EVALUATION OF FIRST-YEAR RESULTS: Fonkoze's Kore W Natural Catastrophe Insurance for Haitian Micro-Entrepreneurs. Fonkoze, May 2012. (c) Fonkoze website, http://www.fonkoze.org/ (accessed 7.2.2014)
People interviewed	Desk study based on documents received from SDC/SECO, with additional search on Fonkoze website.
Basic data	Start date: 1.5.2011. and date: 31.12.2012 Swiss budget CHF 1,25 million (SDC/SEC spreadsheet/excel) The credit proposal refers to a Swiss contribution of CHF 1,0 million , with a duration of phase from 1.5.2011 to 31.12.2014
Location	Haiti is one of the most disaster prone countries in the world and one of the ten global climate change hotspots. 77% of Haitians live on less than USD 2 a day. Disasters not only make poor people poorer, they also increase future vulnerability. The 2010 earthquake had a devastating effect on micro-entrepreneurs who lost assets, merchandise and markets. Haiti highlights the importance of incorporating disaster risk reduction into all aspects of development strategies. The pilot initiative Microinsurance Catastrophe Riskorganisation, created to help protect Haiti's micro credit borrowers, is a unique opportunity to set up a new long term means for reducing financial risks to natural disasters as stated in the medium term strategy.
Partners	**Funding partners**: SDC, DFID **Implementing partners**: Fonkoze in partnership with its insurance company MiCRO (which is a brand-new (re)insurance company to insure the risks of the world's most vulnerable, and the rollout of Kore W, Fonkoze's catastrophe recovery product for its clients in Haiti) **Other partners**: MiCRO is strategic collaboration between a number of stakeholders including Fonkoze, Mercy Corps, Swiss Re, Caribbean Risk Managers Limited, Guy Carpenter and Company, LLC, Alternative Insurance Company (AIC), SFRi, the UK Department for International Development (DFID) and the Swiss Agency for Development and Cooperation (SDC).
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC6 - Adaptation: Awareness Raising**. A pathway to informed dialogue and decision making through the accretion and management of CC-related knowledge. **Output**: (a) generate, collect and analyse CC-related data; (b) involve multiple stakeholders in multi-level dialogue on CC. **Outcome 1**: (a) increase in knowledge and awareness on CC (trends and variability) and related vulnerabilities. **Outcome 2**: (a) decision making is based on improved climate risk information. **Expected validation criteria**: Education & training for mitigation (ETM); Research & monitoring for mitigation (RMM); Education & training for adaptation (ETA); Research & monitoring for adaptation (RMA); Knowledge for adaptation (KFA).
Purpose	To support the work of MiCRO (a donor-capitalized reinsurance facility) through a financial contribution to its capital base focused on

	developing a disaster micro-insurance product for microcredit borrowers.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC/SECO as 50% relevant to adaptation, and as being significant (OECD/DAC Rio Marker guidelines) in addressing climate change. The project was initially classified by the Gaia review team as meeting validation criteria **Adaption against Disasters (AAD**) linked to Result Chain 7
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Based on the first year evaluation (source b) year 2011 (as in many previous years) brought devastating floods to certain parts of the country, wiping out marketplaces, inundating merchandise, and destroying homes. The report states that in 2011, however, Fonkoze clients turned to Kore W to get back on their feet following the disasters. In total, between January 2011 and February 2012, 6,794 clients directly benefitted from the insurance coverage—receiving both an emergency payout and the cancellation of their loans. This direct sign of the projects contribution to strengthened resilience in the wake of CC, too. The evaluation report highlights also some challenges in the actual implementation of the scheme (such as too long times between events and payment) and that Kore W remains a secondary step in the chain of emergency response behind support from friends and family and reduction of spending.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project has achieved major results during the first year of implementation (source b), and the access to a considerable number of clients, has also been as pathway to increase awareness of disasters and options to improve disaster preparedness, which also contributes to general CC adaptation capacity. According to source b, 54% of clients used their 5,000 HTG emergency payout to pay off debt to friends, family, or in some cases, moneylenders. Fairly small percentages of clients used the payout to work less or to repair their house. A large majority of clients (69%) used their payout to increase their savings or to invest in their business. While this does not indicate in any way that the payouts would have been used in a "climate smart" manner (i.e. helping to better cope with expected CC impacts) it points out a potential area/pathway for strengthening the CC adaptation effectiveness of the scheme, by e.g. in the future suggesting CC screened and proofed measures and examples to clients for using of the payouts.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The insurance scheme is addressing natural disasters, with a particular focus on most vulnerable people in high-risk regions – offering one tool to help reduce poverty in a sustainable manner. The scheme provides, without explicitly referring to CC and forecasted changes in weather extremes, a solid (no-regrets) basis to strengthen the resilience of vulnerable populations to the already experienced as well as advancing impacts of CC. The involvement of project partners that are also global forerunners in the explicit management of climate risks (such as Swiss Re as well as among development cooperation partners DFID) forms another reason to expect solid integration of lessons learned and best practices, as well as the latest information from CC science on expected changes in risk profiles, and hereby the project to be effective specifically from the CC adaptation perspective, too.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC/SECO as 50% relevant to adaptation, and as being significant (OECD/DAC Rio Marker guidelines) in addressing climate change. Based on available evidence, the project already has in fact contributed to strengthen the resilience of project

	beneficiaries against the impacts of climate variability (in particular weather extremes) and also to the impacts of CC in Haiti. We suggest a CC adaptation effectiveness score '5'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The product has been designed to protect Haitian microloan clients from the devastating effects of natural disasters. Through the cancellation of loan balances and disbursement of emergency payouts, Kore W helps clients recover quickly after being impacted by floods, hurricanes, high winds, landslides, or earthquakes. While the project concept does not explicitly refer to climate change and how CC may alter the risk profiles in the coming years and decades, the overall framework integrates risk of climate variability and weather extremes. (score 6). **Pathway integrity**. As noted in source b, Kore W is designed to provide rapid relief to victims of natural disasters through a predictable response, thereby increasing their chances of quick stabilization and long-term recovery. The pathway to provide relief is logical and clear, and while it refers to natural disasters, it is just as valid for the impacts of CC. The payout under Kore W is structured to assist client recovery in the short- and long-term, which in principle provides the basis to build CC resilience strengthening into the scheme. (score 6).
General quality of project design	**Explanation clarity**. As the credit proposal does not provide any information of the intervention itself, based on the first year evaluation report (source b), while the flow of insurance benefits from international markets to Haitian Micro-Entrepreneurs is quite complex, it is well explained in the evaluation report. (score 5). **Participatory design**. The scheme is building on long-term experience of Fonkoze (launched 1994) in the insurance sector and its microloan clients. Based on the evaluation report (source b) as well as additional information (source c), while no detailed credit proposal is available for this Swiss contribution, we assume a participatory process has taken place in designing the scheme (score 5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-07923.01 Coastal protection of the City of Beira, Mozambique
Documents used	(a) Credit Proposal, Date 2.3.2011 (b) Change of credit duration (date 14.11.2012) (c) Assessment of Proposed Solutions for Beira Costal Protection and Associated Costs, Final Report Prepared by Jaime Palalane for Swiss Agency for Development and Cooperation, 8th of February 2013 (d) REABILITAÇÃO DA PROTECÇÃO COSTEIRA DA CIDADE DA BEIRA – FASE 1 (Elaborado pelo: CONSELHO MUNICIPAL DA BEIRA), July 2013 (e) ASSISTÊNCIA TÉCNICA NO ACOMPANHAMENTO DAS OBRAS DE PROTECÇÃO COSTEIRA DA CIDADE DA BEIRA. RELATÓRIO DE VISITA Nr 1.. Autor: Dinis Juízo Data de visita: 27 de Março de 2013 (f) ASSISTÊNCIA TÉCNICA NO ACOMPANHAMENTO DAS OBRAS DE PROTECÇÃO COSTEIRA DA CIDADE DA BEIRA. RELATÓRIO DE VISITA Nr 2. Autores: Dinis Juízo e Jaime Palalane Data de visita: 23 de Abril de 2013. (g) ASSISTÊNCIA TÉCNICA NO ACOMPANHAMENTO DAS OBRAS DE PROTECÇÃO COSTEIRA DA CIDADE DA BEIRA. RELATÓRIO DE VISITA Nr 3. Autores: Dinis Juízo e Jaime Palalane, Data de visita: 11 de Junho de 2013
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.4.2011 and end date: 31.12.2013 (SDC/SECO excel/spreadsheet) Budget: CHF 3,6 million (SDC/SECO excel/spreadsheet) The original credit proposal (source a) referred to project completion by 31.12.2013 but due to delays (mainly related to lacking capacity of Municipality of Beira) the project duration was extended until end 2013 (source b).
Location	The city of Beira is the second largest city in Mozambique with 550'000 inhabitants. The port of Beira and the railway lines connected to it form the principal in and outlet for import and export from Zimbabwe, Zambia and Malawi. Thus, the port of Beira is the principal source of wealth and development for the city and its hinterland. Beira is situated in a very flat and low sedimentary area. The level of the surface of major parts of this area, including many areas close to the shoreline, is critically low as they are situated between 6 and 7 meters above the Chart Datum while high tides reach 7,1 meters above Chart Datum and the sand dunes along the shoreline at certain locations are as low as about 9 meters above Chart Datum. Since the 1950s the Beira coast is protected by a groyne field, but these groynes are now partly worn down and no longer effective. Mozambique's climate change report identified the Beira coastline as highly vulnerable to the effects of climate change and calls for protective measures along with the installation of monitoring and early warning systems. A complementary investment in coastal protection is thus also a way to safeguard past and future investments in the institutional development and service delivery capacity of the municipality.
Partners	**Funding partners**: SDC **Implementing partner:** Beira Municipal Council
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a

	regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**
Purpose	The overall goal of the intervention is to safeguard the city's development potential and protect the citizens of Beira against the effects of climate changes by taking preventive measures against rising sea levels and more frequent and stronger cyclones.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Resilience for Adaption (RFA) and Adaption against Disasters (AAD)** The project was grouped by Gaia into Cluster 10: Disaster risk reduction (DRR)
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The project has been delayed (with tendering procedures starting in 2012) and due to that reason concrete implementation was only in early phases in 2013. However, activities implemented so far (sources d and g) note positive progress on phase I (despite some changes made to plans) with direct evidence of curbing erosion.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The reports identify also needs for immediate follow-up and amendments, including needs to strengthen rapidly the capacities of the implementing partner Beira Municipality, but provide no further indirect evidence of adaptation effectiveness as such..
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	While the project can benefit from experiences with similar kinds of projects in other parts of the world, hereby contributing to the effectiveness of this project, key issues with regards to the outcome seem to be related to strengthen the implementation capacity of national and local partners as well as how financial constraints related to completion of works and overall sustainability will be guaranteed. E.g. the project funded through the Adaptation Fund (with Swiss contribution) in Senegal, being the first AF project completed is addressing coastal erosion and could serve as reference for finalizing this intervention in Beira successfully (see https://www.adaptation-fund.org/project/1327-adaptation-coastal-erosion-vulnerable-areas)
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) In our view the project is highly relevant to CC adaptation also taking in design note of the need to prioritise solutions that are robust and flexible enough to cope with longer-term forecasted impacts of CC. However, due to challenges and delays in implementation so far only a moderate CC adaptation effectiveness score can be given. Solid implementation and finalization of the project would allow a high CC adaptation score for this project but at this stage it seems most relevant to focus on strong and practical implementation in line with identified project goals, which will directly also contribute to strengthened CC resilience (score 4).

Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The evidence and reasoning in the credit proposal is solid with explicit objective to address the CC challenge. The Beira coastline has been identified as national priority with regards to its vulnerability to the impacts of CC calling for the installation of monitoring and early warning systems (score 7). **Pathway integrity**. The design document (source a) outlines a set of concrete measures, tailored for the local context, using simple construction principle (that can be handled by local constructors), flexible to accommodate changes if needed, and which are addressing climate variability and extremes as well as forecasted impacts hereby referring to CC for 2030. This 2030 perspective can be considered understandable in the local socio-cultural context as a "feasible future reference point", but from the perspective of addressing CC impacts optimally, the solution should be able to address impacts forecasted even beyond 2030, and this issue is also in our view validly raised in the Assessment of Proposed Solutions for Beira Costal Protection and Associated Costs (source c), which improves the quality through more solid "climate proofing" of the design in light of latest climate science (score 5).
General quality of project design	**Explanation clarity**. The credit proposal is clear, the project being highly relevant, and addresses an urgent need for which a concrete solutions is proposed (score 6). **Participatory design**. The design documents refer to several components that indicate the relevance of the intervention, including a national priority setting process for addressing CC challenges (the intervention is aligned with the priorities identified in the Study on the Impact of Climate Change on Disaster Risk in Mozambique, produced by the National institute for Disaster Management (INGC) in 2009 as well as in the Cooperation Strategy for Mozambique (2007-2011) which is aligned with the Governments poverty reduction strategy (PARPA) and the African peer review mechanism (APMR) which have singled out the need to address the climate vulnerability of Beira. The design phase has included consultations with Beira municipality, confirming the commitment on highest level but also pointing out important capacity challenges that should be addressed as part of the intervention (score 5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SDC 7F-08104, Reducing vulnerability and adaptation to climate change in Nicaragua
Documents used	(a) Plan de Accion y estrategia de comunicacion CC en Las Segovias (b) Proposition de credit (Kreditantrag) 7F-08104.01 (c) Informe de avance 2013 TACC CD (d) Informe 2012 version final (e) Resumen ejecutivo informe 5
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.9.2011 and end date: 30.6.2015 (SDC/SECO spread sheet/ excel). Budget: CHF 3,5 million (Disbursed (2003 – 2012): CHF 1,3 million)
Location	Nicaragua ranks fifth among the most affected countries by extreme weather events resulting in loss of lives and affecting the natural resources and livelihoods. It is in this Central American country that precipitation is expected to largely decline over the next thirty years, with Las Segovias region being the most hit region affecting agricultural and pastoral activities practiced by mostly poor people. Las Segovias region in Nicaragua comprises three departments of the north (Estelí, Madriz and Nueva Segovia), which concentrates more than 30% of the municipalities in the "dry corridor "of the country. Its main economic activity is heavily dependent on agriculture and livestock in the rainy season. Due to climate change impacts, the region has suffered periods of drought that caused food shortages especially in rural families living from agriculture. Similarly, excess rain has caused losses in livelihoods of poor families and environmental degradation in the region.
Partners	**Implementing partner**: United Nations Development Programme (UNDP) – partner in charge of project implementation locally. **Other partners**: - Ministry of Environment and Natural Resources (MARENA) – governs the agricultural sector policies and its participation in the project focuses in promoting the inclusion of the CC topic in the sector. - Nicaraguan Institute of Agricultural Technologies (INTA) – provides technical assistance in the promotion of practices to adapt to climate change. - The Executive Secretariat of the National System for the prevention, mitigation and management of disasters (SE- SINAPRED) - includes all institutions in charge of disaster management. Its network of collaborators, which extends across the country, is the liaison between the project and the local communities. - Nicaraguan Institute of Territorial Studies (INETER): provides weather information to build CC scenarios for Las Segovia and Nicaragua, and support the whole methodological process to strengthen the capacities of the Directorate of Meteorology, in addition to publishing studies prepared by the project. - Municipal authorities of Somoto , Estelí , Ocotal, Condega , Telpaneca , Totogalpa San Lucas , Santa Maria , and Contempo Macuelizo: execute the infrastructure work to protect from extreme weather events and manage the inclusion of the issue of CC in municipal planning processes as recommended in the Regional Climate Change Strategy for Las Segovias .

	- The Segovias Universities (FAREM, UCATSE and UNI - North): Implement action plans to ensure the inclusion of the issue of climate change and gender in the teaching - learning and research. - Municipal offices of the Ministry of Education: Implement the action plan to insert CC theme in the curricula of primary and secondary schools of prioritized watersheds.
Result chain	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**.
Purpose	To mainstream capacity and awareness on climate change by developing an inclusive CC strategy for the Department of Las Segovias and by networking local public, civil society and private institutions to promote knowledge dissemination and sharing on adaptation principles and practices.
Pre-review estimates of CC relevance (*Prima facie* CC relevance)	SDC/SECO assessed this project as 100% relevant to CC adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and it was validated by the review team as meeting the criterion **Knowledge for Adaption (KFA)** and **Mainstreaming of adaptation (MOA)**. Included by Gaia review into: Cluster 6: Policy development
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The project was designed to tackle CC adaptation specifically. Based the project proposal (Proposition de credit - Kreditantrag - 7F-08104.01) and the RC-7 definition, the project approach to **Outcome 1**: *(a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods)* includes actions to i) mainstream the issue of Climate Change into the strategies of public and private institutions, as well as local governments to better prepare for the effects of CC (Result 1); and to ii) induce behavioural changes among population by introducing the topic of Climate Change on the agenda of variousorganisational bodies (localorganisations, civil society, regional universities, churches, schools, etc.) (Result 2). With regards to **Outcome 2**: *(a) increased community resilience to the consequences of climate change*, the project aims to increase awareness among farmers, cattle growers and loggers on the effects of climate change and production practices to enable them to preserve and possibly enhance their livelihoods threatened by climate change. Based on the progress reports (d and c) during 2012 the project focused in recruiting project staff, identification of stakeholders in the various areas of execution, preparation of terms of reference, kick-off of studies and prioritization for implementation in specific watersheds. Therefore, 2012 was needed to setup the basis of the project with little direct CC effectiveness. In 2013, however, the project shows more direct CC adaption effectiveness as the studies to provide inputs for the Regional Climate Change Strategy were completed and reviewed, and partnerships with the Meteorology Unit of the Nicaraguan Institute of Territorial

	Studies (INETER) were made to ensure the institutionalization of studies on climate change scenarios in Las Segovias. Together with MARENA and 10 municipalities, some 10 infrastructure works to protect against extreme weather events were completed. All work in coordination with the MARENA allowed municipalities to leverage the 25 % additional funds for this project outcome. Furthermore, and with a higher incidence in relation to CC adaptation, an inventory of technologies for adaptation to climate change has been made and two NGOs and one municipality were hired to start the implementation process of adaptation to CC in 4 selected watersheds in the region.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project proposal indicates that about 200,000 people (one third of the population of the region) will benefit indirectly by the project. Although in the available documentation it is not explained how this will be achieved, based on our review and lessons learned from similar types of projects in the region it can be expected that higher awareness on CC issues among farmers, cattle growers and loggers, as well as mainstreaming of CC into national policies and strategies for the agricultural sector will indirectly strengthen the CC adaptive capacity of the country. In relation to capacity building related to CC, action plans were implemented to insert the subject of CC in the educational system - three universities in the region adopted CC issues into their curricula, a strategy to communicate the issue of CC in Las Segovias was developed and a diagnosis was made to strengthen the teaching of CC issues in about 10 primary and secondary schools in the region. Along with the National Autonomous University of Nicaragua, Multidisciplinary Regional Faculty – Estelí (FAREM) a CC related graduate course was designed to build CC capacity among professionals and municipal authorities.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The Climate Change Adaptation Programme (PACC) in Peru, a project financed by SDC and visited for this same effectiveness evaluation assignment, is showing good evidence of positive impacts in mainstreaming CC into national policies as well as creating awareness and capacity building in CC resilience among Andean rural communities. Similar to this project, PACC aimed, among others, at mainstreaming CC adaptation successfully integrating it into development plans at the regional which later on scaled up at national level. Furthermore, PACC worked extensively with the local rural communities providing them awareness on the need to conserve water resources and food security, as well as know-how on how to take into action related initiatives. Based on the lessons learned from the PACC intervention, and the latest progress report of this project in Nicaragua, covering the period from January until November 2013, which shows no major delay in the project implementation plan, gives additional reason to expect good effectiveness also for this intervention
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). In our view the project is 100% relevant for CC adaptation, and even if the project it is still in its early phases, based on the first progress reports as well as experiences from similar projects in the region, we give a CC adaptation effectiveness score of 5.
Project design aspects	

CC-relevance of project design (Evidence and reasoning, Integrity of the RC pathway)	**Evidence and reasoning.** SDC supports the vision that rural areas, particularly vulnerable areas, must have a sustained effort to adapt to the effects of Climate Change in order to achieve sustainable development (source b). The need to act on CC adaptation is very clear in the area of intervention - dry corridor, Nicaragua ranks fifth among the most affected countries by extreme weather events, etc. In line with the design documents the project focuses firstly on the development of a climate change strategy for the region of Las Segovias, based on existing documentation developed in a participatory manner by universities, experts and local communities. This strategy gives way to the development of potential climate change scenarios in the region upon which adaptation options, policies and funding requirements are identified. In parallel, the project also focuses on the diffusion of technologies for adaptation to climate change and the promotion of knowledge management. Farmers, cattle growers and loggers were trained on the effects of climate change and production practices enabling them to preserve and possibly enhance their livelihoods threatened by climate change. The project addresses CC adaptation through a tested recipe – well supported strategy leading to national policies and local capacity and awareness building. When positively adopted by the country, this recipe has proven to be effective in establishing the issue of climate change in the country's agenda and among beneficiaries. **Score: 6** **Pathway integrity.** The CC challenge is being addressed in the design in a well structured and comprehensive manner, with a solid pathway represented in the logical framework from the CC challenge to suggested solutions. **Score: 7**
General quality of project design (Clarity of explanation, Extent of participation)	**Explanation clarity.** Based on available documentation, the project appears well designed, with a logical approach in line with the region/country's policies, priorities and needs. **Score: 6** **Participatory design.** Although a participatory approach is mentioned in the project proposal, the information available does not provide a picture clear enough to determine the extent of participation in the project design. Nevertheless, it can be noted that the design of the project very well addresses the CC adaptation needs in the target area and beneficiaries. These needs were identified in a participatory manner involving universities, experts and local communities. **Score: 5**

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	7F-08274 - Multilateral Contribution to the Adaption Fund
Documents used	(a) Credit proposal, dated 30.11.2011 (b) Report of the Adaptation Fund Board, 4 November 2010 (c) Report of the Adaptation Fund Board, 22 November 2011 (d) Report of the Adaptation Fund Board, 29 August 2013 (e) Progress of the adaptation fund (including Annex 2 Annex 2: The situation, as of January 2014, of accredited national, regional and multilateral implementing entities accredited for the Adaptation Fund, Annex 3: Schedule of Receipts and Cash Transfers to the Adaptation Fund as of November 30, 2013, as well as Annex 4: Projects, programmes and formulation grants approved for funding from the Adaptation Fund, as of January 2014 (source Mikko Ollikainen | Senior Climate Change Specialist, AF as well as https://www.adaptation-fund.org/ (f) The effectiveness of climate finance: a review of the Adaptation Fund, ODI Working paper 373, April 2013 Nella Canales Trujillo and Smita Nakhooda
People interviewed	Desk study based on review of documents shared by SDC/SECO (above). In addition, documents e (above) were retrieved directly from the Adaptation Fund (with complementary interview 30.1.2014) and document f from ODI website to complement the analysis.
Basic data	Start date: 15.12.2011 and end date: 31.12.2013 (SDC/SECO excel/spreadsheet) Budget: CHF 3,0 million (SDC/SECO excel/spreadsheet)
Location	The Adaptation Fund is the most relevant multilateral funding instrument in climate change adaptation. As a Fund established under the Convention and its Kyoto Protocol, it has a high legitimacy and is closely linked to and under the authority of the UNFCCC. Thanks to its innovative source of funding, its equitable governance structure and its direct access modality it is broadly accepted, especially among developing countries. Swiss Agency for Development and Cooperation was able to directly influence the design of the fund through the election of an Swiss Agency for Development and Cooperation staff as 1 of 16 Members of the Adaptation Fund Board
Partners	**Funding partners**: SDC, with several other donors (including Austria, Belgium, Flanders and Wallonia Regions, Brussels Capital Region, Finland, France, Germany and Norway) as well as cash receipts from the monetization of certified emission reductions (from the CDM). **Implementing partner:** The Adaptation Fund Board acts as the managing and supervising entity of the Fund, the World Bank acts as trustee. Implementing Entities are national legal entities in developing countries and multilateralorganisations accedited by the Adaptation Fund Board. Projects are executed by executing agencies in individual countries. Accredited multilateral implementing entities (MIEs) include the World Food Program, FAO and UNDP. There is an increasing amount of NIEs (national implementing entities) being accredited.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and

	cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**
Purpose	The overall objective of the Adaptation Fund is to reduce vulnerability and increase adaptive capacity to respond to the impacts of climate change, including variability at local and national levels. The goal is to assist developing-country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change in meeting the costs of concrete adaptation projects and programmes in order to implement climate-resilient measures. The Swiss funding supports the UNFCCC Adaptation Fund (https://www.adaptation-fund.org) .
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and initially classified by the review team as meeting validation criteria **Resilience for Adaption (RFA).**
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	In strict sense, direct evidence on adaptation evidence of the AF is still missing, as first adaptation projects funded by AF only started implementation phase. Consequently first mid-term reviews for most projects are expected in 2014. Information from the first project to be completed in Senegal (source https://www.adaptation-fund.org/project/1327-adaptation-coastal-erosion-vulnerable-areas) will be of utmost interest to stakeholders assessing the effectiveness of the AF, but as noted below the project pipeline is considerable, several projects are in implementation phase, and important framework progress has taken place to allow projects funded by the AF to be completed. (source e) a.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Since becoming fully operational in 2010 progress can be identified on many fronts, including (source e): - accrediting 28 implementing entities, of which 15 are NIEs in Africa, Latin America and the Caribbean, and Asia (3 being Regional Implementing Entities (RIEs) and 10 Multilateral Implementing Entities (MIEs)). - approving grant funding to 30 projects and programmes and to nine project formulation activities, in a total of 33 countries (of countries that have received funding, 11 are Least-Developed Countries (LDCs) and four are Small Island Developing States (SIDSs). So far nine NIEs have received funding. With regards to status of resources and approved projects (as of November 2013) • 5 implemented by NIEs, with a budget of USD 44,2 million

	• 9 project formulation grants for NIEs, USD 0,27 million • 25 implemented by MIEs USD 155,6 million • Total USD 200 million The available data also highlights the fact that not only middle income countries have been able to pass the accreditation processes. The fact that both LDCs and SIDSs have completed the accreditation process, and one-third (five out of 15) of NIEs come from either LDC or SIDS, is an indication that the fund has been able to keep the priority on particularly vulnerable developing countries. Also the decision ´by the board to institute a cap of 50 percent of the Fund's project funds that could be allocated to MIEs can be seen as a logical step in this spirit (i.e. to ensure that a sufficient proportion of funds would be available for the ground-breaking direct access modality using NIEs). The fact that the innovative source of funding has been eroding is a source of concern for the future of the fund (source e: ".. the main source of revenue for the Fund—the sale of certified emission reductions (CERs) accrued through the two percent levy on Clean Development Mechanism projects—has drastically diminished due to changes in the carbon market. The price of CERs, which had been relatively constant between 11 and 14 euros per ton between May 2009 and May 2011, dropped rapidly during the second half of 2011, and remained low through 2012, reaching under 0.5 euros per ton by the end of 2012") that needs to be addressed to provide continuity and ensure effectiveness of fund activities.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	In our view the AF is a vital contribution to the international climate finance architecture. Its special features can encourage other institutions to look for innovative finance solutions, taking note the gap between commitments made in international climate negotiation s and reported CC finance flows (e.g. the AF has inspired the design of new climate finance mechanisms such as the Green Climate Fund, and efforts to reform existing climate finance mechanisms such as the Global Environment Facility, source e). But how effective has the fund been as a channel of climate finance: In particular the AF has already contributed to strengthen the focus on direct access for developing countries, which will also highlight the urgency to address capacity needs in a more prompt and comprehensive manner in developing countries aiming to embark on climate resilient green growth pathways. The Swiss input in the AF board and in outlining the functioning of the AF has been noted with appreciation by several stakeholders during this Gaia review (with stakeholders among other referring to "Swiss leadership in the AF, ….the Swiss having a constructive and active role…", as highlighted in the Open Questionnaire conducted as part of this overall evaluation. With regards to the generally positive "Swiss reputation" in development cooperation, it can be considered a plus for the AF and its operations.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SDC as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) In our view the AF is a vital contribution to the international climate finance architecture and its special features make it a crucial contributor to adaptation capacity development and concrete action in vulnerable developing countries. We score the AF for CC effectiveness as very strong (6), and look forward to the results of mid-term reviews and forthcoming evaluations of adaptation achievements for first

	projects.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The adaptation fund is explicitly addressing the adaptation needs of developing countries that are particularly vulnerable to the adverse effects of climate change (score 7). **Pathway integrity**. The mandate, procedures and pathways are solid and have the potential to address the stated CC adaptation objectives. While the funding structure can be considered innovative (CDM based levy) it is also a risk, which has to some extent fortunately been addressed by direct donor contributions (score 6).
General quality of project design	**Explanation clarity**. The objectives,organisational structures, procedures and operational management of the AF are clear and transparent (see also source d, which notes that the Fund was ranked as the first among climate finance institutions in the 2012 Aid Transparency Index assessed by the International Aid Transparency Initiative) (score 6). **Participatory design**. The design phase of the fund was long, involving lengthy international negotiations. The process can be considered participatory and while it represents a compromise, it can be considered within the UNFCCC context a compromise that takes rather well into account the positions of the most vulnerable developing countries. The possibility for direct access and the approach towards NIEs serving as examples of these overall design outcomes. The guidance and requirements by AF that during project development at local level, a proper consultation process involving all relevant stakeholders, particularly local communities and vulnerable groups such as women, is carried out to informs the project development, is taken as sign for solid participatory processes as part of design (within this review it has not been possible to review separately project by project the design aspects). (score 6).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	UR-00366.04.01 Pakka: Scaling up organic and fair-trade cocoa in Ghana Note: two other sub-projects exist under the same project number, i.e. UR-00366.01.01 Competence centre sustain. value chains; and UR-00366.02.01 Competence centre leverage fund. The focus in this evaluation is on UR-00366.04.01
Documents used	Documents provided by SECO: (a) Credit proposal: Financing Proposal to Jean-Luc Bernasconi - Scaling up organic and fair-trade cocoa in Ghana (2008) (b) Inception Report 1.09.2010 – 28.02.2011, produced by Pakka AG in 2011 (c)Scaling up organic and fair trade cocoa in Ghana, financial report 2010-2011 Documents identified by the review team: (d) FAO (2014). Organic Agriculture and Climate Change. Available at: http://www.fao.org/organicag/oa-specialfeatures/oa-climatechange/en/ (e) Wani, Sartaj A, Subhash Chand, G.R. Najar and M.A. Teli (2013). Current Agriculture Research Journal Vol. 1(1), 45-50 (2013). Organic Farming: As a Climate Change Adaptation and Mitigation Strategy. (f) CDE (2013). Organic cocoa production enhances resilience of smallholders, Center for Development and Environment. Available at: http://www.cde.unibe.ch/Pages/Organic%20cocoa%20production.aspx
People interviewed	Desk study based on review of documents shared by SDC/SECO (above) and additional sources identified by Gaia review team.
Basic data	Start date: 1.9.2010 End date: 31.12.2014 SECO project budget: CHF 0,61 million. Overall project budget (according to the credit proposal): CHF 1,23 million (47% SECO, 34% private sector and 19% GTZ (now GIZ). According to the financial report 2010-2011 the funding from GTZ failed. SECO disbursements according to the Master Excel: CHF 0,08 million. (UR-00366.01.01 Competence Centre for the Promotion of Fair Trade and Organic Cotton, Cocoa etc. No data on timing Budget: CHF 1,4 million Disbursements according to the Master Excel: CHF 0,34 million. UR-00366.02.01 Competence centre leverage fund Start date: 1.1.2009 End date 31.12.2011 Budget: CHF 2,0 million Disbursements according to Master Excel: CHF 0
Location	Ghana Suhum-Kraboa-Coaltar, Jassica and Hohoe districts "Ghana is the second biggest producer of cocoa and - especially since the political turmoil in Ivory Coast - it is a key country to meet the globally rising cocoa demand. The expansion of cocoa production in Ghana is, however, linked to many problems related to sustainability: the expansion is foreseen to be mainly realised in the newer plantation areas in Western Ghana, where high-tech, input intensive cocoa production without shade trees prevails. Older production areas have little chance to intensify, and there is a perceptible need to increase the diversity of marketing, production and livelihood options in a

	rapidly changing environment of production and social standards" (Credit proposal, source a).
Partners	Main project implementing partner: **Pakka AG** Other partners: • **The Organic and Fair Trade Competence Centre (OFTCC)** of Helvetas, providing technology transfer and necessary tools from its value chain experience • **Yayra Glover Ltd**, local counterpart, leading all extension and farmer training activities • **Intercooperation**, responsible for project component payment for environmental services • **Other consultants**, providing specific know-how for post-harvesting aspects • **Retail sector partners: Max Felchlin AG** • **The farmer groups** that will concretise and formalise through the project's activities will gradually take over responsibilities in the employment of field officers and compliance to cocoa production standards, and perform societal functions based on democratic principles in the area of effective us e of fair-trade premiums.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC5 - Mitigation: Sustainable Standards**. A pathway to reduce GHG emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. Output: (a) establish access to markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification. Outcome 1: (a) greater use of sustainability certification standards in the commodities trade. Outcome 2: (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets. Expected validation criteria: Regulations & incentives for mitigation (RIM).
Purpose	The project enables a growing number of farmers to improve their livelihoods in a sustainable way by adopting organic and fair-trade standards for cocoa production and by selling their produce via traceable value chains to market players in the Swiss chocolate sector. "Until 2014 the project plans to cover 7'000 farming households that are sustainably cultivating almost 17'000 hectares of cocoa plantations within an agro forestry system. Main activities will be 1) the systematic institutionalization of existing (informal) farmers groups in order to develop them into reliable negotiation and contract partners within the value chain, 2) the support of certification processes of farmer groups according to organic and fair trade standards and corresponding capacity building for involved value chain actors, 3) innovations and trainings for upgrading the quality of post-harvest processing (fermentation, drying, etc.), packaging and traceability and 4) the promotion and establishment of Small and Medium-sized Enterprises (SMEs) that act as service providers to the farmers in order to rejuvenate plantations and maintain soil fertility" (source a).
Pre-review estimates of CC relevance	SDC assessed the project as 25% relevant to CC adaptation (and the previous phases: Competence centre sustain. value chains, 25% relevant to mitigation, Competence centre leverage fund, 25% relevant to adaptation) The initial assessment by the review team identified the project to fit under Regulations & Incentives for mitigation (RIM). (The first to phases were identified to fit under validation criteria Capacity building for mitigation (CBM)). The project was identified to belong to Cluster 11 Organic Farming

	(First two phases were clustered under Cluster 9: Cleaner production centres, recycling and related investment incentives, the fourth phase under)
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	No data available.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Studies show that organic farming may have positive impact on climate change mitigation and adaptation through improved carbon sequestration and lower inputs of fossil fuel dependent resources. Organic agriculture also contributes to management practices that can help farmers adapt to climate change through strengthening agro-ecosystems, diversifying crop and livestock production, and building farmers' knowledge base to best prevent and confront changes in climate. Also emissions from organic farming are considered lower than those of traditional farming. The positive impact of organic farming on CC mitigation is clearest when compared per hectare farmed. However, when yields are considered, organic farming is not that advantaged compared to traditional farming methods due to lower yields per hectare (e.g. FAO 2014, Wani et al. 2013). The project targets to include 7000 cocoa farmers in its activities by 2014. Each farmer has on average 2 ha / cocoa plantations. Should the target be achieved, it can be estimated that thousands of farmers will be able to improve their adaptation capacity towards climate change. The increasing organic farming may also contribute to CC mitigation but there is no evidence of that yet available.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Experience in other parts of the world show that that certified organic cocoa farms have had greater tree and crop diversity than non-certified farms. Organic farmers have also reported higher cocoa yields, higher incomes, exhibited better social connectedness, and participated in more courses on cocoa cultivation than their non-certified counterparts (CDE 2013). While results from Bolivia cannot be expected to be exactly the same in Ghana, the experience shows that organic cocoa farming may have positive impact on CC adaptation and mitigation.
Overall conclusion on effectiveness based on the evidence (1+2+3)	While the data available is insufficient for exact evaluation and confirmation of effectiveness level, it can be estimated that the project will have moderate effectiveness on CC adaptation. The effectiveness on mitigation cannot be evaluated. Evaluation score for adaptation effectiveness is therefore: Score 4.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. No climate change aspects are included in the project design document. Score: 1 **Integrity of the RC pathway**. The CC pathway is not visible in the project design but it can be expected that the project contributes to strengthening farmers associations, clarifying the legal rights for accessing land and improving health conditions by avoiding agrochemical inputs. All these aspects can be seen as contributions to improvements in CC adaptation capacity. Score: 4 moderate
General quality of project design	**Clarity of explanation**. The project design document available shows some reasoning for the project but the real needs for the project are not clear. Should the logframe or other project design documentation have been available, the clarity of explanation could have been easily confirmed. Scoring: 3 **Extent of participation**. No basis for scoring. NA

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00152.01.01 ITC-Organic Coffee Ethiopia - Clearance
Documents used	(a) Ethiopian Coffee Quality Improvement Project – Backstopping Mandate Final Report Activities Ethiopia (reporting period May 2006 to December 2007 (dated 28 July 2008) Documents identified by the review team: (b) ETHIOPIAN COFFEE QUALITY IMPROVEMENT PROJECT 2011. AID FOR TRADE GLOBAL REVIEW: CASE STORY, International Trade Center, 31 January 2011 (c) FAO (2014). Organic Agriculture and Climate Change. Available at: http://www.fao.org/organicag/oa-specialfeatures/oa-climatechange/en/ (d) Wani, Sartaj A, Subhash Chand, G.R. Najar and M.A. Teli (2013). Current Agriculture Research Journal Vol. 1(1), 45-50 (2013). Organic Farming: As a Climate Change Adaptation and Mitigation Strategy. (e) CLIMATE CHANGE AND THE COFFEE INDUSTRY, International Trade Center, February 2010, available at WWW.THECOFFEEGUIDE.ORG
People interviewed	Desk study based on review of documents shared by SDC/SECO (above) and additional sources identified by Gaia review team (source b)
Basic data	Start date: 1.1.2004, and end date: 31.1.2004 SECO project budget: CHF 2,1 million (according to SDC/SECO spreadsheet/excel, and disbursed by 2007). As noted in source a, the project was still on-going in 2007 with source b stating that "Funding from SECO was made available at the end of 2002 but only in late 2003 did Ethiopia and Switzerland formally appoint ITC as implementing agency. The actual project was not implemented until the first half of 2005, due in part to the relevant Ministry's reorganization and its belatedness in approving the project. These delays were probably due to the Coffee & Tea Authority being abolished and the coffee sub-sector coming under the wings of the newly formed Tea, Coffee & Spices Department within the Ministry of Agriculture & Rural Development (MoARD)."
Location	The Coffee arabica L. variety of coffee originated from Ethiopia. It is appropriate for Ethiopia to consider certified organic cultivation, as coffee has been produced without the use of commercial farm inputs traditionally for millennia. The overall development objective for this project is to assist a large number of farmers, processors and traders as well as the country in general in getting higher and more stable prices for coffee. The international market prices for coffee are very fluctuating and all producing countries make efforts in various ways to counteract the negative consequences. Various instruments in the form of buffer stocks, price guarantees etc. have been used to counterbalance the unfortunate effects - but usually with no or little success in the long run. In recent years, many producing countries have tried to distance themselves from the crowd, e.g. by production and sales of specialty coffees, branded products etc.
Partners	**Funding partners:** SECO, the Embassy of Switzerland, IFAD **Implementing partner:** The Ministry of Agriculture and Rural Development of Ethiopia, with the assistance of the International Trade Centre (ITC).
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC5 - Mitigation: Sustainable Standards**. A pathway to reduce GHG emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. Output: (a) establish access to markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification.

	Outcome 1: (a) greater use of sustainability certification standards in the commodities trade. Outcome 2: (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets. Expected validation criteria: Regulations & incentives for mitigation (RIM).
Purpose	To maximise and increase the stability of income for coffee growers (and equity for Ethiopia in general) by enhancing export and niche markets for organic coffee.
Pre-review estimates of CC relevance	SECO assessed the project as 25% relevant to CC mitigation (and significant in terms of Rio Marker terminology). The initial assessment by the review team found the intervention to pass validation criteria **Applied Ecology for mitigation (Applied ecology for mitigation (AEM))** The project was identified to belong to Cluster 11 Organic Farming
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The project was built on the understanding that a key opportunity in increasing coffee exports lies in improving quality. This was the impetus behind the Ethiopian Coffee Quality Improvement Project which involved setting up seven quality-checking laboratories in rural areas to address the needs of smallholder farmers in Ethiopia. In particular the project starting point lied in the fact that Ethiopian coffee farmers had virtually no information regarding the quality of the beans they produced, nor much information on what "good" quality coffee is and how to obtain it. A separate problem was that those who have received information often lack the resources for quality improvement (source b). The available documents state that seven coffee quality-testing laboratories were successfully established in rural Ethiopia. However no direct evidence of the relevance for CC mitigation is provided in the documentation.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Studies show that organic farming may have positive impact on climate change mitigation and adaptation through improved carbon sequestration and lower inputs of fossil fuel dependent resources. Organic agriculture also contributes to management practices that can help farmers adapt to climate change through strengthening agro-ecosystems, diversifying crop and livestock production, and building farmers' knowledge base to best prevent and confront changes in climate. Also emissions from organic farming are considered lower than those of traditional farming. The positive impact of organic farming on CC mitigation is clearest when compared per hectare farmed. However, when yields are considered, organic farming is not that advantaged compared to traditional farming methods due to lower yields per hectare (e.g. FAO 2014, Wani et al. 2013).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	As noted out above, the CC mitigation aspects of organic coffee production have been noted in several studies, as organic production contributes (much) less to climate change than does the industrial type growing of commodity or mainstream coffee (source e). While noting the positive contribution that organic coffee production may have to CC mitigation, it is also good to understand the full chain - also in the organic coffee chain, that contribute to the emission of GHGs (including e.g. the use of tractors, processing equipment, transport vehicles and shipping abroad as well as the consumption end emission sources including roasting, packaging, distribution, grinding/brewing, consumption and waste disposal), which can be decisive for the net-miitgation impact.
Overall conclusion on effectiveness based on the evidence (1+2+3)	SECO assessed the project as 25% relevant to CC mitigation (and significant in terms of Rio Marker terminology). In our view this is a reasonable estimate, recognizing the mitigation benefits that organic coffee production can establish, while also showing understanding of the entire chain in coffee production. Based on the limited project specific evidence, but supported by indirect evidence and in particular other reasons to expect effectiveness we score the project for CC mitigation effectiveness 5.

Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. No credit proposal available for review and analysis (score: NA) **Integrity of the RC pathway**. No credit proposal available for review (score: NA)
General quality of project design	**Clarity of explanation**. No credit proposal available for review (score: NA) **Extent of participation**. No credit proposal available for review (score: NA)

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	UR-00171 Allanblackia standard setting and sustainable supply chain management
Documents used	(a) Credit proposal for Allanblackia standard setting and sustainable supply chain management phase II (b) Completion note for Phase I (c) Phase II, Year 2 Technical Report, 1 st January – 31 st December 2011 (d) UEBT website (http://ethicalbiotrade.org) (e) WB study
People interviewed	Desk study based on review of documents shared by SDC/SECO with additional information retrieved from d and e.
Basic data	**Phase I** Start date: 1.4.2005; End date: 31.3.2008 Budget: CHF 1,0 million (planned from SECO) CHF 0,996 million (actual from SECO) **Phase II** Start date: 1.1.2010; End date: 31.12.2012 Budget: CHF 2,0 million.
Location	Ghana. Phase I: Western region of Ghana (Mpataho, Kwafokrom, Wassa Berekum, Ohiamatuo Simpa and Mmerewa communities). Phase II: Appeiasuman, Kamaso, Gonukrom, Nkrankrom, Mpataho, Wassa Berekum, Ohiamatuo Simpa and Mmerewa communities. Economic growth has been rapid in Ghana in recent years and human development rate is rising fast. Ghana is a petroleum and natural gas producer, one of the world's largest gold and diamond producers, the second largest cocoa producer in the world.
Partners	**Other donors/investing partners**: • Unilever: investment (planned) CHF 3,4 million • Project's partners' in-kind contributions to the overall budget: IUCN CHF 0,12 million, FORIG CHF 0,033 million, ICA CHF 0,027 million • Audemars Piguet **Contract partner**: IUCN
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC5 - Mitigation: Sustainable Standards**. A pathway to reduce GHG emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. Output: (a) establish access to markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification. Outcome 1: (a) greater use of sustainability certification standards in the commodities trade. Outcome 2: (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets. Expected validation criteria: Regulations & incentives for mitigation

	(RIM).
Purpose	To promote sustainable development and trade in Allanblackia oil as a contribution towards national economic development by di-versifying income sources to improve the livelihood of poor rural communities and fostering sustainable biodiversity conservation and management in Ghana. This is done by promoting the instruments that will ensure sustainable harvesting of Allanblackia as well as equitable sharing of benefits amongst the various stakeholders. Allanblackia oil is an alternative for palm oil in some food and cosmetic products.
Pre-review estimates of CC relevance	SECO assessed the first phase of the project as 50% relevant to adaptation but at the same time classified the project as a mitigation project. The second phase was assessed as 50% relevant to mitigation (and significant in Rio Marker terms). The review team identified the project to meet validation criteria for Regulations & Incentives for mitigation (RIM).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	Not available.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project promotes sustainable collection of Allanblackia oil from natural forests and agroforestry plantations. The project documents do not mention climate change mitigation or adaptation goals but it is possible that the project contributes to mitigation and adaptation through increasing the benefits gained from natural forests and therefore promoting conservation of tropical forests functioning as carbon sinks and income generators. The documentation available does not provide information about the final results of the project. Based on the documents available, it is clear that there have been challenges with having large enough yields to provide seeds for further planting. Also the selling price of allanblackia was lower than expected reducing the interest of people to spend their time on harvesting and farming it. While the supply was limited due to the above mentioned issues, the demand was increasing. The problems with increasing the allanblackia supply also reduced the interest of commercial investors such as Unilever to commit to invest in the supply chain. The project was targeting production of 120 MT of allanbackia seeds but the latest information available from 2011 recorded production of only 37 tons. The project worked on developing a sustainability standard for allanbackia under the Union for Ethical Biotrade (UEBT). According to the Year two technical report of te Phase II of the project, UEBT had approved a Community Trading Grant of Novel Ghana (NDGL, a company developing allanbackia supply chain in Ghana) but NDGL had decided to decline the grant because it was not able to provide the necessary co-funding. According to the UEBT website (http://ethicalbiotrade.org) there is standardised allanbackia production in Tanzania today but there is no sign of standard related activities in Ghana. It is still possible that the project contributed to CC mitigation through improving the quality or sustainability of natural forests or by increasing the carbon sequestration of agroforestry lands. Likewise, it is possible that the project contributed to improved livelihoods and better adaptation capacity within the communities participating in the project but there is no direct or indirect evidence of that in the documentation available.

3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Within these types of projects it is possible that the projects contribute to CC mitigation through improving the quality or sustainability of natural forests or by increasing the carbon sequestration of agroforestry lands. Likewise, it is possible that the projects contribute to improved livelihoods and better adaptation capacity within the communities participating in the project. In this particular case there is no direct or indirect evidence of that in the documentation available. Approximately 50% of the 3900 people sensitized about the sustainable allanbackia supply chain management were women. Their empowerment on new income sources can be considered as a no-regrets measure for strengthening their CC adaptation capacity. However, due to limited data available, it is not possible to conclude what has been the actual effectiveness
Overall conclusion on effectiveness based on the evidence (1+2+3)	SECO assessed the first phase of the project as 50% relevant to adaptation but at the same time classified the project as a mitigation project. The second phase was assessed as 50% relevant to mitigation (and significant in Rio Marker terms). Based on our review there is little evidence of climate effectiveness in the available documentation. Despite potential pathways for good adaptation effectiveness (and also mitigation effectiveness) we score the project with score 2.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The project design does not address explicitly CC, either through adaptation or mitigation. However, aspects of CC are referred to in the context of project risks (source a, section 5: "Climate change causes changes to Allanblackia growing conditions"), which are generally considered low for this intervention. (score 3). **Integrity of the RC pathway**. UEBT standard development for allanbackia was clearly included in the project design. Although there are no recorded results of standard development available, the sustainable standards had a significant role in the project from the project design point of view. However, there is no evidence that climate change would have had significant role in the standard. (score: 4).
General quality of project design	**Clarity of explanation**. The credit proposal for the second phase is clear. Within this desk review there were no means to evaluate the detailed project design as the project logframes were not available for review. The project goals and expected outcomes are well explained, and the reason for making the respective choices understandable. (score 4). **Extent of participation**. There is no mention of active stakeholder participation in the project design. However, as the second phase of the project is based on the findings of the first phase, we can assume that key stakeholders have participated in formatting the second phase. (score 4).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00174.03.01 TJ: Khujand Water Supply Project II, EUR, Tajikistan
Documents used	(a) Credit Proposal, dated 17.6.2008 (Finanzierungsantrag an Bundesrätin Doris Leuthard , Vorsteherin des Volkswirtschaftsdepartements) (b) UR-00174 - KHUDZHAND WATER SUPPLY PROJECT_ ANTRAG AN GERBER (KURZE VERSION).doc (date not indicated in the document reviewed: this refers to first phase of the project) (c) KHUJAND WATER SUPPLY INPROVEMENT PROJECT TAJIKISTAN, EXTERNAL EVALUATION REPORT. Prepared by Juerg Kraehenbuehl: Chief of the Mission, Rustam Faiziev National Consultant, 31. December 2007 (d) UR-00174 - 2010 - Khujand Water Supply 1_TJ - Completion Note.pdf (e) EBRD website (accessed 6.2.2014) http://www.ebrd.com/pages/project/psd/2008/38746.shtml
People interviewed	Desk study based on review of documents shared by SDC/SECO. In addition the EBRD website was searched for additional information.
Basic data	Start date: 1.2.2008 and end date: 31.12.2011 (SDC/SECO spread sheet/ excel). Budget: CHF 7,1 million (SDC/SECO spread sheet/ excel, with previous phases CHF 3,7 million and CHF 0,6 million) According to the credit proposal (srouce a) the overall Project budget is EUR 6,6 million. SECO will contribute EUR 4.3 million. EBRD will contribute an EUR 1,5 million Loan and a grant of EUR 0,765 million out of Technical Cooperation Funds. The City of Khujand provides operational subsidies to KWC, if required, so that the Company can maintain a debt service coverage ratio of 1.2 and the Tajik Government finances a new water intake and a water treatment facility for USD 6,6 million.
Location	Khujand, Tajikistan The credit proposal states (source a): In 2004 the Khujand Water Supply Project I was approved. The objective of the Project has been to rehabilitate the water supply and initiate a metering program, improve the quality of services of the Khujand Water Company (KWC) and the living conditions of the population of Khujand. An external evaluation carried out in November/December 2007 showed that the Project has been highly relevant for the population, the City of Khujand and the Tajik Government. The components selected in this Project have been of top priority for the rehabilitation for the water supply system. For approximately 40'000 people (30% of the City population), the water supply infrastructure and the consumer satisfaction has been improved. The performance of KWC in professional and transparent accounting, billing and revenue collection has enhanced. The Khujand Water Supply Project I was in September 2008 andcovered a number of priority investments in the City, but additional efforts were required to make the achievements sustainable and to expand the rehabilitation to other areas of the City. Based on the very good experiences from the first phase, the general design of the Khujand Water Supply Project II remained the same. The second phase of the Project concentrated mainly on water supply, with smaller investments in the wastewater system. The Project rehabilitated the water supply of approximately 50,000 people or 35% of the population of the right bank of the City of Khujand. In addition, 32,900 water meters were installed all over the City. This has the effect that in combination with the first phase 100% of Khujand City has been equipped with water meters. Furthermore, the Project included consulting services for Project implementation, for a Financial and Operational Performance Improvement Program and for a Stakeholders Participation Program. A Master Plan was developed that enables KWC to

	prepare a long-term financial and investment planning based on a clear tariff model. The Master Plan includes also a feasibility study for the wastewater collection and treatment.
Partners	**Funding partners**: SECO, EBRD (and Government of Norway during phase I) **Project partners and beneficiaries:** Khujand Water Company (KWC), population of Khujand
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC4 - Mitigation: Energy Efficiency.** A pathway to promote energy efficiency (EE) through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percentage of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
Purpose	The overall objective is to render financially and operationally sustainable an urban water company through introduction of water meters and the rehabilitation of water supply and waste-water systems. In particular (source a), the second phase of the Project concentrates mainly on water supply, with smaller investments in the wastewater system. The Project will rehabilitate the water supply of approximately 50'000 people or 35% of the population of the right bank of the City of Khujand. In addition, 32'900 water meters shall be installed all over the City. This has the effect that in combination with the first phase 100% of Khujand City will be equipped with water meters. Furthermore, the Project will include consulting services for Project implementation, for a Financial and Operational Performance Improvement Program and for a Stakeholders Participation Program. A Master Plan shall be developed that enables KWC to prepare a long-term financial and investment planning based on a clear tariff model. The Master Plan includes also a feasibility study for the wastewater collection and treatment.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 25% relevant to mitigation and 25 % relevant for adaptation (and significant CC project, according to OECD/DAC/Rio Marker guidelines). It can be noted that the previous phases were classified as 25% relevant for adaptation but still classified as mitigation projects (with no Rio Marker classification significant/principal attached to them). Gaia review team initially classified it as meeting validation criteria **Resilience for Adaption (RFA)** Gaia initial review grouped this project into Cluster 8: Water resources management
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The review here focuses on the second phase of the project. However, the previous phases will be taken into consideration, as far as documentation allows, supporting the analysis, taking note of the joint focus and approach. As noted in the documentation, the project covers i) critical investments, in particular for the technical rehabilitation of the water supply system and installation of water meters, as well as ii) consulting services, which include a) implementation Support and Engineering Services (ISES) for supporting the PIU with the technical realisation of the Project, b) Financial and Operational Performance Improvement Programme (FOPIP) for strengthening KWC including a Master Plan for long term sustainability; and

	c) Stakeholder Participation Programme (SPP) for strengthening costumer relations and water saving. The evaluation report and completion note (sources c and d) highlight important achievements in line with project objectives, and high satisfaction among Tajik partners and beneficiaries. While these are the key objectives and major achievements of the project, and must be credited accordingly, the issue of CC is not addressed through the project and no direct evidence of its CC effectiveness is available in the reviewed documentation. Source e did not provide any further information on potential direct or indirect CC effectiveness of the second phase of this project.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	While, as stated above, the achievements focus on "traditional" development aspects, in this case on improved living conditions and economic opportunities for the population of the City of Khujand (access to water and better hygiene, as stated in source a), some indirect linkages and potential benefits related to CC management can be identified. Firstly, the project has contributed to increased awareness and concrete measures on water usage, which should result in lower bills and water savings. Reportedly, the SPP has improved the awareness of the population about payment obligations, the need for water conservation, hygiene and adequate water use. Also, the evaluation report (source c) also refers in the ToR for the external evaluation that" the efficiency in energy consumption by the utilities (trend analysis in past years)" should be assessed. This could refer to mitigation benefits and has possible served as basis for classifying the project as 25 % relevant for mitigation). However, the evaluation concludes that "The effect of the Project on the energy consumption is marginal and the wastewater issue has not been addressed at all" In sum, taking more sustainable and efficient use of natural resources (including water and energy) as general measures that can contribute to CC mitigation and adaptation, the indirect evidence supports crediting the project with some adaptation benefits.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	Projects that address more sustainable and efficient use of natural resources, in particular water resources, and in particular in this region, have an important potential to help cope with not only existing scarcities, but with the advancing impacts of climate change, and also contribute to easing and prevention tension with often transboundary effects in this river basin.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SECO as 25% relevant to mitigation and 25 % relevant for adaptation. Gaia review team initially classified it as meeting validation criteria **Resilience for Adaption (RFA).** Based on available documentation, the project phases reviewed have not been of relevance from mitigation perspective, but the project has indirectly contributed to adaptation. It is possible that the second phase of the project has also contributed to mitigation (if the energy efficiency aspects in utilities have been taken systematically into account) but this cannot be confirmed with the available documentation. Therefore we suggest a CC adaptation effectiveness score of 3 and for mitigation an effectiveness score of 1.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal does not in any way refer to climate change: not as a potential risk due to experienced and/or increasing weather extremes, nor as an issue to which the project would contribute as a solution - be it through mitigation or adaptation.(score 2). **Pathway integrity**. The central approach of the project, i.e. to contribute also to resource efficiency, in this case in particular to efficiency improvements and saving in

	usage of water, provides an implicit pathway to address CC, in particular from the perspective of adaptation. However, this pathway is not mentioned in the design (score 3).
General quality of project design	**Explanation clarity**. The project documentation explains in an understandable manner the origins of the project, its needs and relevance for Khujand. The project framework is clear and logic, with Phase II building on the successes and lessons learned from phase I. (score 6). **Participatory design**. The second phase build directly upon the success and lesson learned from phase, continuing the work with mainly same project participants. As source a states "Already the first phase has had a positive influence on the satisfaction of the costumers. The second phase, which will improve the access to water in the whole City, will give a further positive signal to the inhabitants and can decrease the likelihood of upcoming tensions. The Project was developed in close coordination with the Cooperation Office and can count on its full support. The first phase, upon which this II phase directly builds, included also a Stakeholders Participation Program (SPP)." (score 7).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00263.13.01 CIPA South Africa (IFC :PEP Africa CIPA ZA)
Documents used	(a) Credit Proposal, dated 23.11.2010 (Reference: 2010-11-23/327) (b) UR-00263 - CIPA report Jan Jun2012.pdf (Climate Change Investment Program for South Africa, PROGRESS REPORT - January to June 2012) (c) UR-00263 - CIPA SECO Semi-Annual Review March 2011.pptx (d) UR-00263 - CIPA South Africa Donor Report June 2011.pdf (e) UR-00263 - CIPA South Africa July-Dec 2011.pdf (f) UR-00263 - CIPA South Africa July-Dec2012.pdf (g) Department of Energy, South Africa (2012), National Energy Efficiency Strategy of the Republic of South Africa (h)Government of the Republic of South Africa (2011), National Climate Change Response White Paper.
People interviewed	Desk study based on review of documents shared by SDC/SECO (above: a-f), with review of additional identified material including sources g and h.
Basic data	Start date: 1.1.2010 and end date: 31.12.2012 (SDC/SECO spread sheet/ excel). Budget: CHF 2,2 million NOTE: source d states that the program was finally approved in mid-March 2011, and entered the implementation phase in April 2011, and source c states in March 2011 that project end date has been extended to Sept 2013 (additional 3 months).
Location	The Climate Change Investment Program for Africa-South Africa (CIPA-SA) is an integrated advisory and investment services pilot project that will work with financial institutions to promote energy efficiency and renewable energy. IFC investment will provide sustainable energy finance through financial institutions on a wholesale basis (credit lines, risk sharing mechanisms or guarantees). The banks will then make loans to interested SMEs for sustainable energy projects. At the same time, SECO, through IFC advisory services, will support banks in doing credit analysis in this area as well as in designing adequate financial products to serve the sustainable energy market. The proposed project will also engage in supporting other key market players such as energy service providers (ESPs), industry associations as well as SANEDI, the government institution promoting energy efficiency and renewable energy. The project will also dedicate efforts to raise awareness on sustainable energy finance as this is an important component of unlocking market potential. The direct beneficiaries are banks, industry associations and SANEDI, whose knowledge and capacity will increase with the proposed intervention. Indirect beneficiaries are SMEs and ESPs in South Africa. The IFC Advisory Services is the executive agency, some parts of the projects will be delivered by consultants procured on a local basis under WB rules.
Partners	**Funding partners**: SECO, IFC **Project partners and beneficiaries:** banks, industry associations, SANEDI (government institution promoting energy efficiency and renewable energy) as well as indirectly SMEs and energy service providers (ESPs) in South Africa.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC4 - Mitigation: Energy Efficiency.** A pathway to promote energy efficiency (EE)

	through reform of policies and incentives, and access to low-carbon technologies, and can be measured in terms of percentage of efficiency increase, tCO_2e conserved, and economic competitiveness. **Output**: (a) remove regulatory obstacles to EE and create incentives for EE; (b) facilitate access to finance & technology for investments in EE. **Outcome 1**: (a) production processes & energy systems are more efficient and reuse/recycle wastes; (b) increased use of EE standards in infrastructure/building, production and goods. **Outcome 2**: (a) increased use of EE reduces GHG emissions; (b) increased local economic competitiveness due to EE. **Expected validation criteria**: Applied technology for mitigation (ATM); Regulations & incentives for mitigation (RIM).
Purpose	The overall objective is to support the work of the IFC (http://www.ifc.org) through TA and awareness raising focused on its Climate Change Investment Program, which encourages financial institutions to invest in energy efficiency and renewable energy. The Swiss contribution focuses on specific measures in South Africa (as described above)
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 100% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines,). Gaia review team initially classified it as meeting validation criteria **Regulations & Incentives for mitigation (RIM)**
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	As noted above, CIPA SA was developed to catalyze markets for sustainable energy finance (SEF) and demonstrate feasible SEF pilot projects and products. This includes facilitating private sector investment in cleaner production (CP), energy efficiency (EE), and renewable energy (RE) projects. The project shall reach its objectives by (source b) i) strengthening financial markets by increasing the capacity of at least three (SECO semi-annual review refers to min 4 banks, source c) banks to finance SEF projects totaling at least $80 million within the project lifetime; ii) Increasing local capacity for sustainable energy finance by strengthening the capacity of energy service companies ESCos) and increasing their number by 40 percent; working with local financial institutions to build project pipelines and to finance viable sustainable energy projects; and improving co-ordination among sustainable energy market actors; and iii) Raising market awareness and increasing clarity on EE and RE regulations to increase the demand for sustainable energy finance. The progress reports provide some direct evidence of progress. No progress data in line with the enhanced logframe on energy savings or GHG emission reductions is provided in the progress reporting (source c stating as expected program results: energy savings of 485,000MWh and annual GHG reductions of 440,000tCO2e/year.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The project activities contribute to CC mitigation and according progress reporting (sources b-f) some progress has been achieved in all three areas (for some areas progress on subcomponents has been above planned, in others below). The progress reports identify also lessons learned and space for improvement during next/remaining phases of implementation.

3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The fact that climate change policies of South Africa are well advanced for a developing country, and SA has emerged as a forerunner country for Africa on CC issues is generally in favour of CC interventions in the country. In the National Climate Change Response White Paper (NCCRWP) South Africa set conditional pledges to reduce emissions by 34 % by 2020 and by 42 % by 2025 with respect to BAU. More explicitly, e.g. the programme aligns with the Department of Energy's Draft Second National Energy Efficiency Strategy, set a target to reduce energy intensity for all uses of energy by 12 % by 2015. Also the synergies with other initiatives in the same sector, including the National Cleaner Production Center (SECO's related energy efficiency project, in partnership with UNIDO and DfID), support South Africa's NCPC to deliver energy audit training in industrial production processes) and can be expected to support effectiveness of this intervention.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SECO as 100% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guideline,). The project has achieved outcomes in all three key areas, which are central in advancing low-carbon development in a country like South-Africa, and engaging the private sector in required investments and low-carbon business development. However, goals have not been achieved to the extent planned, and also, no quantified achievements related to energy savings or GHG emission reductions are yet available. Based on available data we suggest a CC mitigation effectiveness score of '4'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The CIPA SA was developed to catalyze markets for sustainable energy finance (SEF) and demonstrate feasible SEF pilot projects and products. The credit proposal does not provide any detailed information of CC targets as such. However, the SECO semi-annual review specifies (based on an enhanced logframe prepared in late 2010) as expected program results: i) Bank signing => total of 4 banks during program lifecycle ii) Sustainable Energy Lending => it is expected that lending will increase by approximately US$80 million through bank partners. This will result in an energy savings of 485,000MWh and annual GHG reductions of 440,000tCO2e/year.; and iii) Capacity Building => through this program at least seven Energy Services Companies (ESCos) assisted and financed through partner financial institutions. (score 5). **Pathway integrity**. The key project activities provide an evident pathway to address the CC mitigation challenge but the description of the required steps and subsequently required measures to reach the quantified targets rather vague (score 4).
General quality of project design	**Explanation clarity**. The project documentation explains in an understandable manner the origins of the project, its needs and relevance from South African perspective (the "credit proposal", source a, itself does not provide any comprehensive explanation and clarification of the project purpose) (score 4). **Participatory design**. Based on available documentation it is not possible to make any reasonable judgment of the participatory (or not) nature of the design process (NA/not available).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00289.02.01 Commodity Risk Management, Aufst. (as termed in SDC/SECO excel/spreadsheet). Named in credit proposal as Agricultural Supply Chain Risk Management Program with the World Bank
Documents used	(a) UR-00289 - ARMT Credit proposal v-2.doc (b) UR-00289 - ARMT Credit proposal v-2 (1).doc, (2009-12-16/522) (c) The International Task Force on Commodity Risk Management in Developing Countries: Activities, Findings and the Way Forward (World Bank, 2008). , UR-00289 - CRMG Synthesis Report 10-2008 (1).pdf (d) Agricultural Risk Management Team: Agriculture and Rural Development Department, The World Bank - Multi-Donor Trust Fund (Swiss and Dutch) TF050595 Annual Report (July 2010-June 2011) (e) Agricultural Risk Management Team: Agriculture and Rural Development Department, The World Bank - Multi-Donor Trust Fund (TF050595). Annual Report (July 2011-June 2012)
People interviewed	Desk study based on review of documents shared by SDC/SECO (above).
Basic data	Start date: 1.3.2009 and end date: 31.12.2012 (SDC/SECO spread sheet/ excel). Budget: CHF 4,2 million In credit proposal (source b) proposed budget : USD 3,8 million.
Location	The activities of the CRMG are motivated by the recognition of a strong link between risk management, financial stability, livelihoods of the poor, and development, and an increasing awareness of rising volatility in both weather patterns and commodity prices (source c). Exposure to natural disasters and other sources of risk impedes the development process, pushes households into poverty, and drains fiscal resources. Transferring risk from the poor and the systems that support them is important in breaking the cycle of vulnerability. With the support of Switzerland and other donors, the World Bank has been providing technical assistance to developing country institutions to test the use of market-based approaches to managing agricultural risks. This work is at several levels, and includes: (a) developing weather risk management products that can be targeted to small farmers; (b) developing new tools to assess exposure and evaluate how financial instruments might be used to mitigate risk, aimed at traders, processors, lenders, and insurance companies; and (c) supporting governments who are interested in developing risk management strategies to help improve responses to weather and price shocks, particularly in the context of food security and price shocks. The work of the CRMG is financed by two trust funds, the Multi-Donor Trust Fund on Commodity Risk Management (supported by SECO), and the Commodity Risk Management Trust Fund for African, Caribbean and Pacific Countries (supported by the EC).
Partners	**Funding partners**: SECO USD 3.8 million, the Netherlands is the other contributor for an amount of USD 1. 2 million. **Project beneficiaries:** farmers, agribusiness companies, host country governments **Cooperating institutions**: Food and Agriculture Organisation (FAO), World Meteorological Organisation (WMO), African Development Bank (AfDB), Asian Development Bank (ADB), various

	regional organisations (e.g. AFRACA, EAFCA, COMESA, ECOWAS etc) and academic institutions.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**.
Purpose	The overall objective is to support the work of the Commodity Risk Management Group of the World Bank (http://web.worldbank.org) through a financial contribution for the program "Agricultural Supply Chain Risk Management in Developing Countries" executed by the Agricultural Risk Management Team (ARMT) of the World Bank. In particular, ARMT will assist developing country stakeholders (governments, commercial sector, agribusinesses, producer groups and producers) in better comprehending the complexity of agriculture risk management and develop appropriate solutions to mitigate-transfer-cope risks associated with agriculture. It will achieve this through the provision of technical assistance and development of a number of risk management tools for use by the wider development community and stakeholders themselves.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 75% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) while grouped by SDC/SECO simultaneously into Result Chain 7 (see above, i.e. as a project addressing adaptation capacity). We believe the classification of this initiative into mitigation is a mistake (the 75 % relevance estimate should refer to adaptation, and our Gaia review team initially classified it as meeting validation criteria **Resilience for adaptation** (RFA).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The Swiss funding forms part of the overall funding to the program, and in this analysis we assess the climate effectiveness of the total intervention.. While the documentation reveals several aspects that refer to CC as such, some direct (more direct than others) linkages to CC and progress in explicitly mainstreaming CC risk considerations can be highlighted. E.g. related to weather risk mapping work in Ghana, crop suitability assessment explicitly showed that restrictions for agriculture (more risk, more limited crop management, etc.), imposed by climate, increases towards the north. Interestingly, the mapping also noted that he higher climatic risk in the north coincides with higher yields. Section 2.4. (source d) states: The positive effect of radiation outweighs the risks, and can be controlled by proper soil and crop management to increase soil moisture retention capacity and rooting depth. In this way the soil can deliver water to the crops during intermediate droughts. In our view this an excellent sign of a holistic approach, making use of climate science, risk assessment in a holistic manner, which also suggest solutions on a sustainable, climate screened and proofed basis.

2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The multiple workshops organized in beneficiary countries have systematically address CC risks as an integral part of the risk landscape in partner countries, which should contribute to mainstreaming CC into decision making, and allow reducing CC related risks and build CC adaptive capacity (sources d and e). The launch by ARMT of "Weather Index Insurance for Agriculture: Guidance for Development Practitioners" in November 2011 on the FARMD platform (and subsequent downloads of the documents) as well as the ARMT training portal (at www.agrisktraining.org) can also be taken as examples of project achievements that contribute to awareness raising and capacity building in support also of CC adaptation. Likewise, the reported sings of FAO, IFAD, GIZ, and USAID gradually buying into the approach of mainstreaming agricultural risk management into development planning and decision-making, can be taken as a sign of indirect evidence also for CC adaptation effectiveness of this intervention (source e).
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The activities within this intervention provide several pathways for strengthening adaptive capacity and CC awareness in partner countries. The fact that CC is introduced, not as a separate stand-alone issue to be addressed, but as mainstreamed into agricultural risk management, provides in our view a good basis to expect high effectiveness also on CC resilience strengthening. Based on previous experiences by the Gaia review team on development cooperation and in particular mainstreaming of CC risks we believe that the overall approach, as presented in the progress report (source d, executive summary) "holistic risk management; a solution centric, rather than product centric, approach; and the integration of risk management into development planning and agricultural investment decision-making has found traction among a host of development institutions and donors. , is also from CC perspective optimal, and should improve the potential for good adaptation CC effectiveness of the program. The experiences from this intervention can be expected also to serve other Swiss funded interventions in this field (including intervention SDC (7F-06642) Index Based Livestock Insurance Project, Mongolia, which was also reviewed by Gaia as part of this effectiveness evaluation)
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SECO as 75% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines, while grouped by SDC/SECO simultaneously into Result Chain 7 (see above, i.e. as a project addressing adaptation capacity). We believe the classification of this initiative into mitigation is a mistake (the 75 % relevance estimate should refer to adaptation), and our Gaia review team initially classified it as meeting validation criteria **Resilience for adaptation** (RFA). Based on direct and indirect evidence presented in documentation, as well as other information ("reasons to expect CC effectiveness based on other knowledge), we suggest a CC adaptation effectiveness score of '5'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal (source a, b) points out the program shall also develop instruments that help to adapt to climate change. In particular it highlights that "Growing concerns about climate change, major swings in food and other commodity prices, the globalization of food/agricultural supply chains are among the many emerging trends that are prompting developing country stakeholders (national governments, international agencies, financial institutions, producerorganisations, consumerorganisations and other agents in the private sector) to seek advice to better understand the

	more complex environment of risk and the range of alternative solutions" as well as "Although trade promotion instruments and increased competitiveness facilitate market access and can mitigate impacts of climate change, the continuous deterioration induced by climate change is affecting trade particularly in the agro and commodity business.". Even if CC cannot be considered the principal reason for this intervention, which is actually addressing a broad set of risks and actually stressing (source a, section 2) the need for "Holistic risk management on an ex-ante basis along the supply chain will better serve sustainability and reduce the prevalence of post event coping.", CC is clearly recognized as one of the issues to be addressed (score 5). **Pathway integrity**. Based on the activities described in the credit proposal (including Supply Chain Assessments, Cash crop early warning system, Stress Test Tool, Forum for Agricultural Risk Management and Development, Capacity Enhancement for Sustainable Production Initiatives, Capacity Transfer and Training) these components integrate several pathways to address CC related risks (score 5).
General quality of project design	**Explanation clarity**. The credit proposal (sources a, b) provides a clear description of the intervention (score 6). **Participatory design**. The credit proposal (sources a and b) refers multiple achievements in the area from previous initiatives, which can be consider as indicators of participatory design also for the Swiss contribution. These achievements include i) a number of index weather insurance contracts that have been developed for a wide range of commodities and applied at micro, meso and macro levels (e.g. tea, maize, coffee, groundnuts, cotton, paprika e.g. in India, Malawi, Guatemala, Honduras, Thailand, Kenya; ii) training materials elaborated and delivered (e.g. banks and farming cooperatives that have developed price risk management strategies and began to use the products in Brazil, Honduras, Tanzania, Kenya, Uganda - allowing coffee cooperatives and individual growers are hedged against a potential downturn in the international coffee price). While no explicit reference to participatory design approaches is made to in the available documents, the reported achievements and lessons learned from previous phases, serve to provide a high score for participatory aspects in design (score 5).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00372.01.01 and UR-00372.02.01 (Aufst.) The Forest Carbon Partnership Facility (FCPF)
Documents used	(a) UR-00372 - Langversion 071206 Kreditantrag BDL FCPF.DOC (in German) (b) UR-00372.01.01 External Evaluation Management_Response_June2011_FCPF.pdf (c) http://forestcarbonpartnership.org/ (d) UR-00372.01.01 External Evaluation FCPF Evaluation WG PC9 Report_June 8_FINAL_0.pdf (e) UR-00372.01.01 External Evaluation Final FCPF_EVALUATION_REPORT_June 13th.pdf (f) http://www.forestcarbonpartnership.org/peru , and http://www.forestcarbonpartnership.org/vietnam
People interviewed	Desk study based on review of documents shared by SDC/SECO (above) with additional information searched from FCPF website (source c) as well as country specific websites for Peru and Vietnam (source f)
Basic data	Start date: 1.12.2007 and end date: 1.12.2011 for UR-00372.01.01 and start date start date 6.7.2011 end date 31.12.2012 for UR-00372.02.01 (SDC/SECO spread sheet/ excel). Budget: CHF 8,8 million (UR-00372.01.01) and CHF 8,5 million (UR-00372.02.01), with a total of CHF 17,2 million.
Location	The Forest Carbon Partnership Facility (FCPF) is a global partnership of governments, businesses, civil society, and indigenous peoples focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, the sustainable management of forests, and the enhancement of forest carbon stocks in developing countries (i.e. activities adding up to REDD+). It involves 36 countries, and has mobilized USD 160 million for capacity building and performance-based payments to pilot projects which aim to open financial flows for sustainable management of forests and land. With 36 developing and well-forested countries, FCPF is the most important process in REDD. From the SECO priority countries, Vietnam, Ghana, Peru and Colombia are FCPF participants.
Partners	**Funding partners**: The FCPF has two separate but complementary funding mechanisms — the Readiness Fund and the Carbon Fund — to achieve its strategic objectives. Both funds are underpinned by a multi-donor fund of governments and non-governmental entities, including private companies that make a minimum financial contribution of USD 5 million. i) Donor Participants that have contributed to the Readiness Fund: European Commission, Australia, Canada, Denmark, Finland, France, Germany, Italy, Japan. the Netherlands, Norway, Spain, Switzerland, United Kingdom, USA ii) The following Carbon Fund Participants have contributed to the Carbon Fund: European Commission, Australia, Canada, , Germany, Norway, Switzerland, United Kingdom, USA as well as BP Technology Ventures Inc., CDC Climate and The Nature Conservancy **Delivery partners:** The World Bank, the Inter-American Development Bank and United Nations Development Programme are Delivery Partners under the Readiness Fund and responsible for providing REDD+ readiness support services to distinct countries. (source c) **REDD + country participants**: Argentina Bolivia, Cameroon,

	Cambodia, Central African Republic, Chile, Colombia, Congo, Democratic Republic of Congo, Republic of Costa Rica, El Salvador , Ethiopia , Gabon , Ghana , Guatemala, Guyana , Honduras, Indonesia , Kenya, Lao People's Democratic Republic , Liberia, Madagascar, Mexico, Mozambique, Nepal, Nicaragua, Panama, Papua New Guinea, Paraguay, Peru, Suriname, Tanzania, Thailand, Uganda, Vanuatu and Vietnam
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC5 - RC5 - Mitigation: Sustainable Standards**. A pathway to reduce GHG emissions linked to the production and delivery of goods and services through their certification as being associated with minimal GHG emissions, combined with the promotion of consumer preferences and industry compliance. **Output**: (a) establish access to markets for sustainability-certified products; (b) create incentives for producers to seek sustainability certification. **Outcome 1**: (a) greater use of sustainability certification standards in the commodities trade. **Outcome 2**: : (a) Natural pool of resource in developing countries is sustained; (b) increased income security for producers through access to markets. **Expected validation criteria**: Regulations & incentives for mitigation (RIM).
Purpose	The FCPF has two separate but complementary funding mechanisms (the Readiness Fund and the Carbon Fund) with which to advance its strategic aims. These aims are: (a) to assist countries in their REDD+ efforts by providing them with financial and technical assistance in building their capacity to benefit from possible future systems of positive incentives for REDD+; (b) to pilot a performance-based payment system for REDD+ activities, with a view to ensuring equitable benefit sharing and promoting future large-scale positive incentives for REDD+; (c) to test ways to sustain or enhance livelihoods of local communities and to conserve biodiversity in the context of REDD+; and (d) to disseminate broadly the knowledge gained in the development of the Facility and the implementation of related 'readiness preparation proposals' and 'emission reduction programmes'.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 100% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The budget increase (start date 6.7.2011) was grouped into the FSF portfolio. Gaia review team initially classified it as meeting validation criteria **Regulations & Incentives for mitigation (RIM)**
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The Swiss funding forms part of the overall funding to the program, and in this analysis we assess the climate effectiveness of the total intervention (noting total Swiss contribution to FCPF, including UR-00372.01.01 and UR-00372.02.01). The four strategic objectives of the FCPF are: - To assist countries in their REDD+ efforts by providing them with financial and technical assistance in building their capacity to benefit from possible future systems of positive incentives for REDD+. - To pilot a performance-based payment system for REDD+ activities, with a view to ensuring equitable benefit sharing and promoting future large-scale positive incentives for REDD+. - Within the approach to REDD+, to test ways to sustain or enhance livelihoods of local communities and to conserve biodiversity. - To disseminate broadly the knowledge gained in the development of the Facility and the implementation of Readiness Preparation Proposals (RPPs) and Emission Reductions Programs (ERPs).

	With regards to effectiveness of the FCPC the independent evaluation (source e) notes that: • FCPF has clearly demonstrated an ability to raise in-country awareness, understanding, capacity and skills around REDD-plus issues. • South-south learning is increasingly the medium through which in-country experiences are disseminated between participating countries. • The governance structure and processes of the FCPF are seen as highly effective by members and observers alike. The evaluation also highlights that the FCPF had created positive catalytic effects at either national or global levels, including ▪ The creation of increased political momentum within governments to tackle deforestation and address deforestation drivers; ▪ The establishment of a shared, step-by-step process and structure through which to approach REDD-plus readiness; ▪ The engagement of governments in broad consultative processes with stakeholders who would otherwise not necessarily have been consulted; ▪ The use of the R-PP template as the accepted norm for national readiness planning; ▪ Facilitating greater donor co-ordination at the country level through the medium of the R-PP. The evaluation also recognizes some non-intended negative effects generated as a result of FCPF-supported interventions such as the **creation of unrealistic expectations** regarding the degree and timing of REDD-plus benefits and the **creation of new tensions between ministries regarding control over REDD-plus processes** (such as forestry and environment ministries). The WB management response (source b) to the independent evaluation (source e) acknowledges the findings of the evaluation without any major objections. Based on available documentation it is not possible to judge to what extent the recommendations provided in the evaluation have been taken into account (sources d and b) thereafter.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	Based on our document review (sources a-c, above) and the review team´s experience in REDD+, we assess that the program has continued to provide important input to highlight the role of forests in addressing the challenges of CC. The program has served strategically in raising the forestry issue onto the UNFCCC agenda as one of the priority issues, it has served to highlight the socio-economic and environmental interconnections that need to be simultaneously addressed (and the multiple benefits that could be harnessed through REDD+), it has served practically and technically to develop and strengthen MRV capacity (including remote sensing approaches) in partner countries and identifying sustainable ways to provide proper price incentives and performance based payments, making use of market-based instruments, for reducing emissions from deforestation and forest degradation, for forest carbon stock conservation and the sustainable management of forests in developing countries. These issues are also confirmed by progress reported from several participating countries such as Peru and Vietnam (source f), which also highlight some progress achieved on regulation and administrative aspects (including Strategic Environmental and Social Assessment, integrated land-use planning and zoning, improvement of forest tenure security, enforcement of planning and environmental requirements) but also remaining challenges in pricing and carbon markets, including carbon ownership and benefit sharing. While considerable challenges remain in the GHG emission accounting frameworks, in particular in the area of forestry & land-use change, forest tenure security and carbon pricing and ownership, overall progress is

	evident.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	In light of the recent UNFCCC negotiation results and the latest UNEP Gap report, there is an urgent need to achieve considerable emission reductions by 2020 and beyond. Sustainable management of forests (and REDD+) provide a critical opportunity for required emission reductions with multiple co-benefits (not only limited to CC mitigation aspects, but also as a pathway to build CC resilience, strengthen local livelihoods, protect biodiversity, cultural heritages etc) to be harnessed. Subsequently the FCPF is in many respects at the core of international negotiations, and can serve as a pathway for concrete mitigation action.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was assessed by SECO as 100% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). We consider the program of extremely high relevance for CC mitigation, globally, nationally and locally, with considerable emission reduction potential and co-benefit opportunities. In light of the project achievements so far, high CC effectiveness can be attributed to this intervention (with Swiss contribution and expertise serving in these achievements but possible to separately quantify). Based on available data we suggest a CC mitigation effectiveness score of '6'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal (source a) provides clear and strong arguments for the intervention, and specifies why Swiss funding and expertise (section 5), will particularly serve the program and how the program is in line with SECO strategic (section 6) considerations (score 7). **Pathway integrity**. The project objectives and focus provide a solid pathway from the CC challenge to proposed solutions (score 7).
General quality of project design	**Explanation clarity**. The credit proposal (source a) provides a good overall description of the intervention (score 5). **Participatory design**. The credit proposal (source a) refers to numerous interventions and experiences in the focus area, which have served in outlining the program. The FCPF was created in response to the UNFCCC decision on reducing emissions from deforestation in developing countries. The World Bank (WB) was asked by developing and industrialized countries to establish and support a pilot facility for assisting capacity building for REDD1 in developing countries in tropical and sub tropical regions for tapping into any future system of positive incentives for REDD. No explicit reference to participatory design approaches as such is made to in the credit proposal but studying the background to the initiative provides evidence of a broad based consultations (score 6).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00397.02.01- 02.02 WB: SEEC CRIF (global/regional)
Documents used	(a) Kreditantrag , 14.4.2009 (UR-00397.02.01) (b) UR-00397- SECO Progress Report – February 2008 – March 2012 (c) UR-00397 - Entscheid_Budgetaufstockung_2010. PDF (dated 14.9.2010) (d) UR-00397 - SECO - Semi-Annual Report - March 2012 - June 2012.pdf (WB) (e) UR-00397 - SECO - Semi-Annual Report - July 2012 - April 2013.pdf (WB) (f) http://www.europa-re.eberlesystems.ch/
People interviewed	Desk study based on review of documents shared by SDC/SECO (above) with additional information searched from Europa Re website (source f)
Basic data	Start date: 30.9.2010 and end date: 31.12.2013 (SDC/SECO spread sheet/ excel). Budget: CHF 2,2 million, Swiss grant to World Bank (according to (SDC/SECO spread sheet/ excel CHF 1,2 million had been disbursed by end 2012) Source b: Total SECO budget: USD 4,5 million and estimated end date is 2015 (grant closing date) Source c: stating as expected programme duration 2009-2016, total programme budget USD 33,5 million and the envisaged Swiss contribution being: USD 2,5 million + USD 2 million.
Location	The countries of Southeast Europe and Caucasus are vulnerable to the often devastating impact of natural disasters, but insurance coverage against weather risk and geo-related perils is virtually non-existent. The South East Europe and Caucasus Catastrophe Risk Insurance Facility (SEEC CRIF) is a catastrophe risk re-insurance company which has been established with technical assistance of the World Bank and is owned by countries of South Eastern and Caucasus (SEEC) with the aim to increase the number of homeowners, businesses, and government agencies insured against geo-hazards and weather related risks. A grant from the Swiss State Secretariat for Economic Affairs SECO of USD 4.5 million which will help SEEC CRIF in carrying out key preparatory technical activities such as country risk assessments in selected countries, the development of actuarial and underwriting tools during the start-up phase and the launch of parametric weather risk insurance products.
Partners	**Funding partners**: SECO USD 4.5 million, GEF USD 5.5 million, IBRD (part 1) USD 1.045 million IBRD (part 2) USD 0.1 million, UNISDR (part 1) USD 0.385 million, UNISDR (part 2) USD 0.55 million, EU/UNISDR USD 0.370 million. **Partner countries/Implementing organisations:** participating governments Albania, Serbia and Macedonia with expression of interest to participate from Bosnia&Herzegovin and Montenegro, local from participating countries **Executing agency**: Europa Reinsurance Facility Ltd. (Europa Re), which is a Swiss-based specialty property catastrophe reinsurance company owned by countries of Southeastern Europe (SEE).
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC7 - Adaptation capacity**. A pathway to build national capacity (possibly via a regional or international institutional intervention) to undertake sectoral and cross-sectoral adaptation planning and to deliver resources to support

	local adaptation efforts. **Output**: integrate CC adaptation into development plans of all key sectors (e.g. agriculture, forestry, water, health, land use, urban planning). **Outcome 1**: (a) increased capacity for CC adaptation and risk reduction (in order to protect people's livelihoods). **Outcome 2**: (a) increased community resilience to the consequences of climate change. **Expected validation criteria**: (a) **Mainstreaming of adaptation**; (b) **Adaptation against disasters**; and (c) **Resilience for adaptation**.
Purpose	The overall objective is to support the establishment of the World Bank's South East Europe and Caucasus Catastrophe Risk Insurance Facility through a financial contribution
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 100% relevant to adaptation (and principal CC project, according to OECD/DAC/Rio Marker guidelines). The project was initially classified by the review team as meeting validation criteria **Resilience for adaptation** (RFA).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	The Swiss funding forms part of the overall funding to the program, and in this analysis we assess the climate effectiveness of the total intervention, as it is impossible to assess the effectiveness of separate project components. The progress reports provide evidence of several activities that contribute to the development and strengthening of adaptive capacity in the region. One recent, concrete and practical sign of progress is the fact that in December 2013 Swiss Financial Market Supervisory Authority FINMA granted to Europa Reinsurance Facility Ltd a reinsurance license as per 1 January 2014. Technical work on the regional flood and quake risk models for the region has taken place. In November 2011, Europa Re contracted AIR for developing a probabilistic high resolution regional earthquake and flood risk models for 3 countries in South East Europe. The models will be used for underwriting and pricing flood and earthquake risk in these countries for different classes of property insurance. Several studies have been finalized (source e, and f), and other measures taken place in line with project planning. While no explicit CC relevant key performance indicators were included into the logframe, the measures implemented so far provide evidence of progress that contributes to strengthening of adaptation capacity in Serbia, Macedonia and Albania. The quantification of that progress is not possible yet, based on available data and publications. In line with source b, the attainment of the program will be tracked by the level of catastrophe insurance penetration in each country member of Europa Re. It is envisaged that the rate of insurance penetration will increase from 1-2% in 2010 to about 10-15% in 2016 once the program is fully operational. The progress report also notes (source b) and confirms the expansion of project focus, i.e. to cover also climate related hazards, such as temperature and precipitation(including hail) extremes. This expansion, to cover more explicitly CC aspects was confirmed by the receipt of second batch of funding from SECO and from GEF (in the amount of USD 5.5 million in 2011). A further concrete example
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	The field missions to the region executed as part of the overall effectiveness assessment provide ample evidence of critical capacity building, awareness raising as well as concrete, practical assistance needed by the countries, in order to cope with natural climate variability and hazards but also advancing impacts of CC. It can be expected that the insurance sector can serve as an important driver of the required awareness raising and capacity building, while also directly serving the economic interests of the participating countries. The SEE lack

	downscaled climate change scenarios of expected CC impacts and modeling capacity, which this programme can help with, and simultaneously help mainstream CC more broadly and effectively to decision making in the region.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The programme has the possibility to make use of experiences from similar initiatives in other parts of the world, also including Swiss funded intervention (e.g. in Mongolia). Also Swiss experience generally in the insurance sector and re-insurance and more specifically global leadership in addressing CC risks (insurance and re-insurance) can be expected to support the successful implementation of this programme. It is also possible that the programme has considerable replication potential in the region and other parts of the world.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was classified by SDC (HQ) as 100% relevant to CC adaptation (CC as principal objective). Even if the the program was not initially primarily driven by CC aspects, the early amendments to project design and focus provide strong evidence for high CC relevance also in practice. A solid insurance scheme and wide coverage of main actors in the region is an important prerequisite for sustainable development and growth in the region. With the explicit study of CC impacts in the region included into the program, subsequent modeling and comprehensive integration of CC into all project aspects the programme will contribute directly and indirectly to strengthen the adaptive capacity against natural hazards as well as advancing impacts of climate change. Based on available data we suggest a CC adaptation effectiveness score of '6'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal (source a) provides solid arguments for the intervention and Swiss contribution, noting that Southeast and Central Europe region is highly vulnerable to a range of natural disasters, including earthquakes and floods, which besides human suffering and loss of life have a significant impact on the economic performance of the affected countries and their macroeconomic standing. However, in spite of these considerable risks, countries in the SECE region have virtually non-existent property insurance coverage of natural hazards among homeowners and small and mid size businesses. It also notes that the frequency and severity of weather-related events is likely to increase with climate change, accompanied by changes in the land-use patterns and increased human settlements in disaster prone areas. The actual evidence for the estimate for an expected increase in climate extremes due to advancing climate change is not provided in the original credit proposal. However, the budget amendment/increase (source c, 2010) notes CC (" due to the growing adverse impacts of CC on the economies of SEE, the countries of Western Balkans have recently requested the Bank that the list of perils covered by SEEC CRIF should also include extreme temperatures and precipitation in addition to earthquakes and floods, which are part of the original design of the Programme and the SECO grant respectively") explicitly also providing detailed information of the CC vulnerability of the SEE region, with specific attention to hydro meteorological aspects. The budget increase is considered to specifically support this project amendment. Also the progress report (source b) notes explicitly that in November 2010, the project team received preliminary endorsement from the Global Environmental Fund (GEF) to fund the climate-change related activities of the program in the amount of USD 5.5 million dollars (score 6). **Pathway integrity**. According to the credit proposal the main rationale of SECE CRIF is to promote a catastrophe insurance market in

	the region by providing access for homeowners and SMEs to affordable but highly dependable and not subsidized insurance coverage caused by natural calamities which does not currently exist in the commercial market. The main insurance product backed by SECE CRIF will be a stand-alone catastrophe insurance cover for the risks of earthquake and flood. The credit proposal clearly highlights homeowners and SMEs being the key beneficiaries, who will be able to buy a dependable stand-alone cat insurance cover separately from a fire policy at a competitive price. It pinpoints also farmers as main beneficiaries as climate change makes floods more extreme and frequent with the brunt falling on agricultural producers. The expected outcomes (source a, section 9) can be considered directly or indirectly supporting the CC adaptive capacity of the foreseen beneficiaries, including households, SMEs, farmers, business sector and the governments more broadly, even if the focus is not explicitly and only on CC induced catastrophes (score 6).
General quality of project design	**Explanation clarity**. The credit proposal provides a solid overall description of the intervention, its focus and particularly highlights the Swissness (source a, section 5) of the intervention. The design is clear about the expected most important benefit of SECE CRIF at **outcome level** being the provision of affordable access to catastrophe insurance (score 6). **Participatory design**. The credit proposal (source a) refers to a meeting first meeting of the SECE CRIF shareholders, held in Sarajevo on March 16-17, 2009, which can be taken as one sign of a participatory process. No further evidence specifically related to the participation of the governments in the design is presented in the credit proposal. However, source c (section 3.1) provides some further evidence of the planning and design, as well as usage of lessons learned from other regions of the world (score 4).

Report on Effectiveness of the Swiss International Cooperation in Climate Change Mitigation and Adaptation Interventions 2000-2012: Project Review	
Identification	SECO UR-00534.01.01 Partnership for Market Readiness
Documents used	(a) Kreditantrag an Bundesrat Johann Schneider-Ammann (Datum: 23.06.2011, SAP: UR-0000534.01.01) (b) PARTNERSHIP FOR MARKET READINESS, Annual Report FY2013 (c) PMR Brochure May 2013 (d) Chairs' Summary of the Seventh Meeting of the PMR Partnership Assembly (PA7) October 22-23, 2013 Marrakesh, Morocco (e) PMR website: http://www.thepMrorg/document/library?title=market+readiness+proposal
People interviewed	Desk study based on review of documents shared by SDC/SECO (above) with additional information searched from PMR website (source e)
Basic data	Start date: 1.1.2011 and end date: 31.12.2014 (SDC/SECO spread sheet/ excel). Budget: CHF 7,0 million (Swiss grant to World Bank) Total budget is roughly estimated at USD 110 million, with USD 22,6 million allocated in grant funding (source b, status as of end April 2013).
Location	Global, with the aim through grant funding and technical assistance to build capacity to support the design and implementation of market-based approaches for GHG mitigation, including domestic emissions trading systems (ETS), carbon taxes, and new crediting mechanisms in developing countries (see below for location/countries).
Partners	The PMR is made up of Contributing Participants who provide financial support to the PMR Trust Fund, and Implementing Country Participants who receive PMR funding and technical assistance. **Funding partners**: SECO ("...der Schweizer Beitrag wird darin als ungebundene Hilfe vergeben ", i.e. untied grant to WB trust fund) with other donors including Australia, Denmark, European Commission, Finland, Germany, Japan, the Netherlands, Norway, Sweden, United Kingdom and United States **Implementing country participants:** Brazil Chile Colombia Costa Rica Mexico Peru, China India Indonesia Thailand Vietnam, Jordan, Morocco South Africa, Turkey and Ukraine. In addition a number of Observer Countries (including Italy Kazakhstan, New Zealand, Singapore, South Korea, and Spain), Multilateral Development Banks, UNorganisations and experts participate in the PMR as observers The World Bank serves as PMR Secretariat, trust fund manager and principle delivery partner to the Implementing Country Participants.
Result chain assigned by SDC/SECO	The project was grouped by SDC/SECO into **RC2 - RC2 - Enabling Framework: Emission Trading** A pathway to promote more universal participation in carbon financing mechanisms, which can be measured in terms of tonnes of carbon dioxide equivalent (tCO_2e) not emitted and finance mobilised. **Output**: Partner countries receive CD on CDM, JI & NMM. **Outcome 1**: (a) Partner countries register and implement programmes under CDM, JI & NMM. **Outcome 2**: (a) mitigated GHG Emissions; (b) revenue through trading of emission certificates. **Expected validation criteria**: (a) Regulations & incentives for mitigation (RIM): Strengthening of regulatory frameworks related to mitigation, including those to discourage GHG emissions and to remove barriers to or encourage, through fiscal, economic, legal and other incentives, investment in reducing GHG emissions.

Purpose	As the world seeks to enhance global greenhouse gas (GHG) mitigation, countries are exploring innovative and cost-effective ways to scale up emission reductions and foster financial flows toward GHG mitigation activities, including through carbon pricing instruments. To support, facilitate, and build "readiness" for such instruments, the World Bank, working with interested countries, launched the Partnership for Market Readiness (PMR) in December 2010. The PMR'S core objectives are to (source b): i) PROVIDE GRANT FUNDING for building market readiness components that support the implementation of market-based approaches to carbon mitigation; ii) PILOT INNOVATIVE CARBON PRICING INSTRUMENTS e.g., domestic emissions trading schemes (ETS), new crediting mechanisms or carbon taxes; iii) PROVIDE A PLATFORM FOR TECHNICAL DISCUSSIONS, country-to-country exchanges, and collective innovation on new market instruments. Share insights and lessons learned with the international community, including the UNFCCC; and iv) SUPPORT EFFORTS TO ESTABLISH COMMON STANDARDS AND APPROACHES for the use of market-based instruments to facilitate a global carbon market or price on carbon.
Pre-review estimates of CC relevance (Prima facie CC relevance)	The project was assessed by SECO as 100% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) and is part of the FSF portfolio. The project was initially classified by the review team as meeting validation criteria Mainstreaming of mitigation (MOM), Regulations & Incentives for mitigation (RIM), and Education and Training for mitigation (ETM).
Evidence for climate change mitigation and/or adaptation effectiveness	
1. Evidence for direct CC effectiveness of the project (GHGs reduced, adaptation)	At the time of this analysis 5 (China, Mexico, Chile, Costa Rica, Indonesia) countries had completed Market Readiness Proposals (with the help of a Tool for market readiness proposals), with drafts prepared by Thailand and Turkey.. A roster of more than 130 experts had been established, a "Technical Work Program" (knowledge products on readiness components) had been launched and a platform for countries and experts to share knowledge on market-based mitigation created. No direct evidence of GHG emission reductions achieved thanks to this intervention can yet be identified.
2. Evidence of indirect effectiveness of the project (side effects, other consequences)	As the new market mechanisms (in comparison to e.g. CDM) aim to address entire sectors and national economies more broadly, they have a better potential to achieve more deep-going GHG reductions (in total volume, beyond offsetting) with lower transaction costs, and also encourage action by countries with no binding emission reduction commitments to date. The activities under the PMR (including assessment of capacities, development of baselines and data, strengthening of MRV capacities and institutional capacities, legal and policy framework development, as well as practical piloting and testing, and awareness raising and activating of private sector actors) are evidently no-regrets measure, regardless of whether a country ultimately implements a market-based instrument. Market readiness has cross-cutting benefits that supports domestic climate change policies and low emissions development strategies. Based on PMR annual report 2013 (source b), 11 countries are engaged in the Preparation Phase: drafting MRPs and preparing to present them to the PA. By autumn 2013 (source d, and e) Chile, China, Costa Rica, Mexico and Indonesia, had presented them to the PA and have been allocated funding to begin the Implementation Phase. E.g. Mexico has allocated 3 million USD to develop and implement crediting NAMAs in selected sectors (e.g., housing, appliances, public transport, solid waste & cement) and to set up registry/tracking system for GHG reductions. While based on these measures no immediate GHG emission reductions have been achieved thanks to this particular intervention, it can be concluded that these measures have contributed to Mexico´s market readiness and overall capacity development, which is today considered of "leadership" level among developing countries. Also China has been allocated 8 million USD for the design and prepare for a national ETS, including work on cap setting, allocation, MRV, mechanisms for price containment, market oversight and a legal

	framework., as well as for analytical work targeted at the inclusion of state-owned enterprises and the power sector into the national ETS. While e.g. the European ETS is suffering from various challenges, a national ETS (with ETS already being launched in parts of China) in China can be expected to have a major emission reduction potential, even on global level, with considerable co-benefits through lessons learned and future linking of various domestic and regional carbon markets opportunities.
3. Reasons to expect CC effectiveness of this kind of project based on other knowledge	The longer-term Swiss experience in development and introduction of market mechanisms can be considered an asset for the PMR initiative, and should contribute positively to the success of the initiative. Also the experiences gained with other initiatives such as the Climate Investment Funds and Carbon Finance Assist will serve likewise to strengthen the initiative and improve its potential for success.
Overall conclusion on effectiveness based on the evidence (1+2+3)	The project was classified by SDC (HQ) as 100% relevant to mitigation (CC as principal objective). In our review and analysis the initiative is addressing a critical component in the global climate mitigation architecture, both in a comprehensive manner (including policy level, as well as efforts to promote correct pricing of carbon) as well as through concrete capacity building measures with interested developing countries. As the actual interventions in the developing countries are only in their early phases it is not possible to identify direct evidence of GHG emission reductions, but the measures are already contributing to strengthening the capacity in implementing partner countries, and are likely to contribute increasingly in and beyond 2014. We suggest at this stage a CC mitigation effectiveness score of '5'.
Project design aspects	
CC-relevance of project design	**Evidence and reasoning**. The credit proposal (source a) provides clear and strong evidence for the CC relevance of this intervention, with background in international work with the aim to introduce a price on carbon and harness market mechanisms to actually promote low-carbon development. The explicit decision taken at the COP in Cancun 2010 confirms the need for this initiative, and its explicit goal to assist developing countries in improving their readiness for market mechanisms, and ultimately contribute to cost-effective and well prioritized mitigation measures (score 7). **Pathway integrity**. The CC relevant goals and pathways to CC mitigation are direct and evident (source a). Also the concept of the intervention clearly acknowledges that while a core objective of the PMR is to support developing countries ready to introduce a market-based policy instrument – such as an ETS – (source b) not all countries have made a decision about the type of market-based policies to pursue and consequently, not all countries will be ready to pilot a market instruments with the PMR However, all countries can enhance their market readiness. Indeed, building such readiness is a no-regrets measure, regardless of whether a country ultimately implements a market-based instrument. Market readiness has cross-cutting benefits that supports domestic climate change policies and low emissions development strategies. (score 6).
General quality of project design	**Explanation clarity**. The credit proposal provides a good overall description of the intervention, its focus on capacity building, and is clearly formulated (source 6) **Participatory design**. The design build on opinions and wishes expressed in international climate negotiations and represent the wishes of participating developing countries. The detailed design of individual interventions under the PMR is not part of this analysis (score 5).

Annex 8: The Swiss FSF portfolio projects

The analysis of the FSF portfolio, as presented in section 5, is based on the following projects, as provided to Gaia consortium by SDC/SECO for review and analysis.[73]

Inst.	Project no.	Result Chain	Project title	Geographical focus
SDC	7F-01358	4	Consultance Environnement / briques	Great lakes
SDC	7F-02706	7	Regional Community Forestry Training Centre	Global
SDC	7F-02728	7	World Mountain Forum for Sust.Develp.	Global
SDC	7F-03445	7	Swiss Agency for Development and Cooperation Partnership for Climate Change Adaptation with WOTR	India
SDC	7F-03461	7	Pastoral Ecosystem Management Mongolia	Mongolia
SDC	7F-05405	7	Coping with Desertification in Mongolia	Mongolia
SDC	7F-05409	7	Adaptation Program in Peru (PACC)	Peru
SDC	7F-06642	6	Index Based Livestock Insurance Project	Mongolia
SDC	7F-06811	7	Climate Change Resilience Fund (Bangladesh)	Bangladesh
SDC	7F-07045	7	Sustainable Management of Natural Resources	Bolivia
SDC	7F-07368	7	Andean Forest and Climate Change	Andean Region
SDC	7F-07693	7	Community-Based Adaptation to Climate Change through Coastal Afforestation	Bangladesh
SDC	7F-07768	7	Scaling-up of Climate Change Adaptation in the "Programa de Reducción del Riesgo de Desastres" in Bolivia	Bolivia
SDC	7F-07795	7	Le programme de récupération du Malecón Tradicional de La Havane et les défis du changement climatique	Cuba
SDC	7F-07802	3	Transforming Tanzania's Charcoal Sector	Tanzania
SDC	7F-07807	6	Weather-index based Crop Insurance in Zimbabwe, Swaziland, Zambia, Malawi	SADC

[73] Four of the projects covered by the FSF portfolio analysis (UR-00085.04.02, UR-00085.04.05, UR-00574.02.01 and UR-00593.01.01) were not included in the comprehensive Swiss CC portfolio assessment of 508 interventions

SDC	7F-07809	2	Linking herders to carbon markets in Mongolia	Mongolia
SDC	7F-07817	3	Water and Energy Security through Microhydels in the Hindukush	Pakistan
SDC	7F-07833	7	Adaptation au changement climatique et réduction de risques liés au recul des glaciers dans la Cordillère péruvienne	Peru
SDC	7F-07834	7	National Climate Change Management	Peru
SDC	7F-07923	7	Coastal Protection of the City of Beira	Mozambique
SDC	7F-07991	7	Regional Initiative “Sistema de Información y Monitoreo Ambiental Andino"	Andean Region
SDC	7F-07994	6	Climate Resilience through Risk Transfer in India	India
SDC	7F-08037	7	Himalaya Climate Adaptation	India
SDC	7F-08049	7	Economies of Adaptation in Water and Agricultural Sectors	China
SDC	7F-08060	7	China: Small Actions in the field of Climate Change	China
SDC	7F-08068	7	Stratégies et technologies d’atténuation et d’adaptation au changement climatique au niveau communautaire en Tunisie	Tunisia
SDC	7F-08073	3	Power Plant Extension in Nepal	Nepal
SDC	7F-08079	7	Surveillance environnemental Sahel	Regional
SDC	7F-08104	7	Reducing vulnerability and adaptation to climate change in Nicaragua	Nicaragua
SDC	7F-08109	7	Initiating a definitive process and means of implementation for the pilot phase of the Rwanda Forest Landscape Restoration Initiative	Rwanda
SDC	7F-08110	1	Indigenous Peoples in GEF and UNFCCC-REDD	Regional
SDC	7F-08114	6	Capacity Building for Climate Observing Systems	Global
SDC	7F-08127	7	Strengthening women against climate change	Bolivia
SDC	7F-08156	6	UNFCCC Adaptation fund workshop Africa	Regional
SDC	7F-08157	3	Biogas Cochamamba - Production of organic fertilizer and biogas	Bolivia
SDC	7F-08163	6	Communication and advocacy program on climate change for young	Peru
SDC	7F-08194	7	Challenges of Nature	Cuba
SDC	7F-08203	7	Citizenship skills Climate Change Adaptation	Cuba
SDC	7F-08216	7	Adaptation to Climate Change through Integrated Flood Risk Management in Changjang River Basin	China
SDC	7F-08219	7	Poverty-Environment Initiative, Lao PDR	Lao PDR
SDC	7F-08269	1	Climate Change Partnership with Indigenous Peoples (Mekong)	Regional

SDC	7F-08320	4	Promoting off-farm employment and income in the Great Lakes region through climate responsive building material production	Great Lakes
SDC	7F-08453	6	Climate services with emphasis on the Andes in decision support	Indonesia, Myanmar, Sri Lanka, Thailand, and Vietnam
SDC	7F-80002	7	Program to strengthen democratic institutions	Bolivia
SECO	UR-00085.03.01	4	PIDG: EAIF, Climate	Global
SECO	UR-00085.03.03	4	PIDG: GuarantCo Climate	
SECO	UR-00085.04.02	3	PIDG: InfraCo Africa RKVII K (WEIN) USD	Africa
SECO	UR-00085.04.05	3	PIDG: InfraCo Asia RKVII K (WEIN) USD	Asia/Oceania
SECO	UR-00123.03.03	3	Platf.Ren.Energ. REPIC III(WEIN)Aufst.	Global
SECO	UR-00340.01.02	5	ONUDI : PPPT+, Phase B (RKVII)	Tunisia
SECO	UR-00340.02.01	4	RECP Globalprogramm UNIDO	Global
SECO	UR-00340.03.01	4	CPC ID	Indonesien
SECO	UR-00372.02.01	5	FCPF WB Forest Carbon (Aufst.)	Global
SECO	UR-00429.02.01	3	SREP Scaling-up RE Progr. Increase, USD	Global
SECO	UR-00432.01.01	4	Topten China	China
SECO	UR-00481.01.01	3	ID: IFC IRenewable Energy Program, USD	Indonesia
SECO	UR-00500.01.01	3	REEEP, EUR	Global
SECO	UR-00534.01.01	2	Partnership for Market Readiness	Global
SECO	UR-00544.01.01	5	REDD+ Presidential Task Force, USD	Indonesia
SECO	UR-00551.01.01	4	IFC: Green Building Codes, CO, USD	Columbia
SECO	UR-00574.02.01	7	ZA: PFM Capacity Baseline in North -West	South Africa
SECO	UR-00576.01.01	4	IFC: Sustainable Business Adv. 0.5%, USD	Global
SECO	UR-00576.02.01	4	IFC: Sustainable Business Advisory, USD	Global
SECO	UR-00580.01.01	4	Global Energy Basel 2012 - 2013	Global
SECO	UR-00593.01.01	4	IFC: E&S Risk Management, Asia, USD	Asia
SECO	UR-00593.01.03	4	IFC: E&S Risk Management, VN, USD	Vietnam

Box A8.1 below summarises the expected results from the FSF portfolio

Box A8.1: Expected Results of Fast Start Financing according to the 0.5% Botschaft

I. The planning and climate adaptation measures as well as the cooperation strategies of Switzerland are integrated at various levels (national, regional, local) in the public and sectoral policies.
Indicator: Number of developed policies and strategies that have been implemented with the support of Switzerland.

II Authorities and the population that benefit from projects that are sensitized to the effects of climate change, the environment and risk prevention capacity to be increased.
Indicators: Number of individuals who have been sensitized to the future effects and increased their environmental carrying capacity; Number of countries with programs to quantify the economic costs and benefits of adaptation measures.

III. Selected communities who participate actively in the sustainable management of forests and contribute to the preservation of natural resources.
Indicators: Number of Communities that are involved in forest management and the number of worked out and implemented use plans.

IV Switzerland will contribute to the development and acceptance of international financing mechanisms for sustainable management of forests contribute (afforestation, reduction of forest degradation).
Indicator: Number of countries that have adopted and implemented plans for sustainable forest management.

V. Switzerland contributes to multilateral funding mechanisms and the dissemination of technologies that reduce greenhouse gases.
Indicators: Reduction of the calculated annual CO_2 emissions in tonnes, introduction of new sustainable technologies in energy production.

VI. The programs used are reducing greenhouse gas or methane and increase energy efficiency in industrial processes.
Indicators: reduction of the calculated annual CO_2 emissions (CO_2 equivalent) in tonnes; proportion of the energy industry, the number of projects for technology transfer to the countries of the South.

VII. Switzerland will support the development of clean-tech SMEs through their start-up financing.
Indicator: Number of clean-tech companies in developing countries that can establish themself thanks to new investments of SIFEM (Swiss Investment Fund for Emerging Markets) in the market and achieve a positive effect on employment.

VIII. The rural communities have access to renewable, reliable energy.
Indicator: Number of people who have new access to a reliable electricity grid, which is based on renewable energy.

IX. The partner cities of the projects will develop plans for energy management, and set up a monitoring system.
Indicators: Number of cities, which perform management plans and quality of the plans.

X. Switzerland will support the development of insurance mechanisms for risk management for natural disasters in developing countries.
Indicator: Number of pilot projects that implement innovative projects for insurance risk management of natural disasters with private sector participation.

Result marks by sector: Adaptation (I, II, X), Forest (II, III, IV), Energy (V, VI, VII, VIII, IX)

Annex 9: Independent evaluations of the effectiveness of the World Bank, IADB and UNDP

a) The World Bank Group

In 2010 the World Bank's Independent Evaluation Group (IEG) reviewed the World Bank Group's (WBG's) far-reaching portfolio in energy, forestry and transport, covering all sub-sectors that represent the great bulk of evaluable activity with potential GHG co-benefits[74]. It observed that "Over the period 2003-08 the WBG scaled up annual investments in renewable energy and energy efficiency from $200 million to $2 billion and helped mobilize more than $5 billion in concessional funds for GHG reduction" (while making the point, however, that "the WBG's resources are small compared with the multitrillion dollar investments needed for low-carbon growth", which it took as a reason to ask "How can the Bank have the greatest impact, both for development and for GHG mitigation?" with its available resources). Its findings are summarised in the following paragraphs.

Renewable energy. The World Bank helped Sri Lanka institute standardised small power purchase agreements that facilitated access to the power grid. Analytical work, capacity building, and demonstration have contributed to Mexican and Chinese adoption of favourable renewable energy payment schemes, which in turn have stimulated more than 20 GW of installed wind capacity in China and hundreds of MW under construction in Mexico. Provision of long-duration loans has a much bigger impact on project bankability than the purchase of carbon credits, at current (i.e. low) carbon prices. As countries increasingly rely on paying price premiums for renewable energy, World Bank and Multilateral Investment Guarantee Agency (MIGA) guarantees against breach of contract and other political risks could be catalytic. The WBG's direct lending for renewable energy is dominated by hydropower, the only grid technology for which there is a substantial evaluable record at the WBG. Among evaluated hydropower plants, 76% had outcomes rated as moderately satisfactory or better, with better ratings in recently initiated projects. Unsuccessful projects are often those for which preparation or implementation of resettlement plans has been ineffective. About two-thirds of hydropower investment volume now goes to run-of-river hydropower (that is, without substantial reservoirs), which has less potential for local social and environmental damage but is more vulnerable to climate change. Direct WBG investments in wind power have been modest. On average, wind power offers significantly lower economic and carbon returns than hydropower because of high capital costs and often low capacity utilisation. Manufacturing cost reductions at the global level, together with better siting and maintenance, are crucial to increasing the competitiveness of wind and other new renewable energy technologies. The largest single area of off-grid renewable energy investment has been in solar photovoltaics, mostly for home use. These projects can have high economic rates of return but have little impact on GHG reductions because off-grid households use so little energy. At current prices, solar home systems have been successful in a narrow niche market: the off-grid household that is either relatively well-off by rural standards or can access good microfinance services.

Energy efficiency. Phase I of the evaluation[75] assessed the most important barrier-removing policies: energy price reform and promotion of energy efficiency policies such as building and appliance standards. It noted that the Bank had pursued price reforms in energy but had put few resources into energy efficiency, although attention to policy-efficiency linkages had since increased. Owners of factories and buildings often fail to borrow for apparently highly profitable energy efficiency opportunities. The WBG's diagnosis is that borrowers lack information, and lenders lack experience and comfort with energy efficiency project finance. The main WBG response has been to

[74] *Phase II: The Challenge of Low-Carbon Development: Climate Change and the World Bank Group*. Independent Evaluation Group (World Bank, 2010)
[75] *Phase I: An Evaluation of World Bank Win-Win Energy Policy Reforms Climate Change and the World Bank Group*. Independent Evaluation Group (World Bank, 2009)

support financial intermediaries with guarantees and technical assistance. These programmes have been directed to China and Eastern Europe, where energy efficiency has long been low. Parallel programmes have been implemented by the World Bank and IFC (both supported by the GEF) but without much communication between them. Contrary to expectations, loan guarantees have turned out not to be a temporary, market-transforming measure that could be discontinued once the banks gained familiarity with energy efficiency lending. Inadequate lending for energy efficiency often reflects wider credit market failures, including onerous requirements for collateral (cf constraints on GCTF uptake and performance affecting project UR-00050.03.01 in Vietnam - see Section 3.2). Because borrowers achieved high rates of return, guarantee programmes could achieve higher impact through tighter targeting on less creditworthy companies, such as SMEs. World Bank-supported projects have been successful in introducing energy service companies (ESCOs) to China, with high returns, significant GHG impacts, and spontaneous replication. Meanwhile, IFC's approach of screening its clients for energy efficiency opportunities leads mostly to small loans with low GHG impacts. Three areas of existing activity stand out as having high impact and high potential for scale-up, these being: (a) proactive IFC support for energy efficiency in the atypical but important cases of large, carbon-intensive factories that face credit or information barriers; (b) increased support for transmission and distribution loss reduction, which offers high economic rates of return and lifetime carbon returns of 7-15 kg/dollar; and (c) substitution of compact fluorescent lamps for incandescent lamps offers very high estimated direct economic returns (in saved energy), together with deferred construction of power plants and emissions reductions of 27-134 kg/dollar.

Forestry. Forest loss, especially in the tropics, generates a quarter of developing countries' emissions. The local and global values of standing forests often greatly exceed the gains from destroying those forests, and tapping this value can offer large economic and GHG gains. The FCPF explores options to monetise the value of standing forests, but the mechanisms to use the funds to conserve forests were still being planned at the time of the evaluation. World Bank experience provides some models for scaling up; for example, PES arrangements also seek to reward property owners who maintain forests, while World Bank-supported programmes in Costa Rica and México have demonstrated the logistics of PES and have helped to popularise this approach globally. Yet many of the payments have gone to areas that are not at high risk of deforestation, diluting carbon and environmental benefits and prompting attention to targeting. The most prominent line of action associated with forest conservation is support for protected areas. These now cover more than a quarter of the tropical forest estate, much of it with World Bank support. A global analysis shows that these areas are on average effective in reducing deforestation, that areas allowing sustainable use are more effective than strictly protected areas, and that areas controlled by people indigenous to them are the most effective of all, while they all also offer biodiversity co-benefits. These findings support the feasibility of the REDD+ agenda in combining sustainable development and forest conservation.

Urban transit. Growing transport demand clogs limited roadway space in the developing world, resulting in severe congestion, air pollution, and GHG emissions. The single largest WBG response has been to support the deployment of bus rapid transit systems, which cost much less than tramways or subways. Key barriers have been the lack of inter-municipality coordination, and opposition by displaced minibus drivers. However, systems have been successfully initiated in Bogotá and Mexico City and are being expanded there and replicated elsewhere (e.g. Lagos, Jakarta). The immediate economic benefits in Mexico City are an estimated 81% economic return and a GHG return of 10 kg/dollar. Larger, sustainable long-term gains will require demand-side management of traffic and rational land use planning.

Coal power. Coal is relatively cheap but also a major source of GHG emissions, and WBG support is now restricted (by its own Strategic Framework on Development and Climate Change, SFDCC) to cases where coal has the lowest cost after environmental externalities have been considered, there is optimal use of energy efficiency, and no concessional funds are available to finance the incremental cost of low-carbon alternatives. The IEG examined five pre-SFDCC coal power projects to determine whether WBG involvement contributed to greater efficiency and whether lower-carbon alternatives had been considered. It found that none of the investment cases would have met the SFDCC criteria,

either because they were not least-cost for generation after accounting for local air pollution or because they did not fully explore efficiency alternatives. The complexity of the issues, however, is illustrated by IFC's support for a supercritical coal plant in India. It will be one of the largest point sources of CO_2 on the planet, but it may nevertheless have reduced emissions by about 10% compared with a scenario without IFC involvement, and indirectly accelerated the diffusion of this higher-efficiency technology in a country that will continue to rely on coal for decades. More than a quarter of India's power is lost in transmission and distribution, however, and a nationwide reduction in distribution losses and other efficiency measures can offer higher returns in power availability, local environmental improvement, and GHG reductions than new construction.

Carbon finance. As an institutional innovation, the World Bank's Carbon Finance Unit (CFU) has played an important demonstration role in helping to open up an entirely new field of environmental finance, popularising the idea of carbon markets, and contributing to the institutionalisation of the market. The Bank's carbon business exit strategy called for the CFU to relinquish its role as carbon offset buyer as the private market began to flourish. But, although the Bank indeed moved into higher-risk, pilot areas of the carbon market (the FCPF and the Carbon Partnership Facility), it continued to build up its lower-risk Kyoto-oriented business after that market was already thriving, and it failed to mainstream carbon finance within the Bank. As a vehicle for catalytic finance and technology transfer, therefore the CFU's record is mixed. It has contributed to the diffusion of some technologies, such as landfill gas, and supported first-of-kind technology investments in some countries. The BioCarbon Fund and the Community Development Carbon Fund have supported small-scale, rural and forestry projects, and learned in the process that this is difficult to do. In contrast, much of the CFU's support for energy technologies has gone to projects where its financial leverage and catalytic impact was relatively small. In addition, two-thirds of carbon fund purchase commitments have been for projects that destroy HFC-23, a highly potent, industrially generated GHG (cf project 7F-07029 on ODS recapture in Brazil - see Section 3.2). The projects tapped a Chinese low-cost GHG abatement opportunity and gave participating companies high profits, and the state high tax revenues. Although this was an allowable use of the carbon market, an alternative would have been to use international funding to pay only for the low marginal costs of destroying the gas, deploying carbon funds with higher leverage elsewhere.

Technology transfer. Technology transfer is one of the pillars of the Bali Action Plan (under UNFCCC) and of the SFDCC. The WBG has contributed to the transfer of clean technologies through projects that pilot, debug, demonstrate and diffuse innovations in engineering and finance. These have been successful when the logic of demonstration and diffusion has been well thought out. The Renewable Energy Development Project in China, for instance, used a combination of quality-contingent subsidies, research and development grants, and technical assistance to foster the growth of a competitive solar photovoltaic industry. The Energy Conservation Project supported China's first ESCOs, with a strong emphasis on knowledge sharing and diffusion. The Regional Silvopastoral Project in Latin America piloted different approaches to integrating trees with pasture, proving that some techniques were highly profitable even without counting carbon and biodiversity benefits, and was able to convince the Colombian government to scale up the project. In all these cases, GEF support was essential to mitigate risk and to pay for global benefits of the knowledge created. Conversely, technology transfer has foundered in the absence of a solid logical framework that links interventions to technological diffusion, especially in the case of advanced technologies. Early efforts to support concentrated solar power, for instance, incorrectly assumed that a few scattered projects would spur cost reductions at the global level, and that private beneficiaries of technology would share proprietary technology with competitors. Several IFC investments, pursuing multiple but conflicting objectives, faced an insurmountable combination of inexperienced entrepreneurs, unfamiliar technology, and an uninterested target market. Finally, projects tended to underestimated the difficulty of procurement when technology suppliers are few and costs are poorly known - an inherent feature of newer technologies.

Learning and incentives. Rapid feedback and learning is essential for adapting technology to new sites, for deciding which technologies to scale up, and for ensuring that they are working as planned.

Technology demonstration projects work best when it is clear what is being demonstrated, how, and to whom. Although recent demonstration projects have good plans for monitoring their direct results, they do not yet track how effectively these results are reaching their intended audience. As other IEG reports have noted, cost-benefit analysis has fallen out of fashion, impeding the WBG's ability to identify high-return investments. The lack of good impact evaluations of forest projects, for instance, has deprived the REDD+ agenda of urgently-needed guidance on how best to combine forest protection with economic development. Publicly-disclosed monitoring of carbon projects shows the gains from feedback. Landfill gas projects proliferated with the advent of the carbon market, but monitoring reports soon showed that these projects were systematically underperforming relative to their design expectations, mainly because the appraisal models were based on US experience, and newer projects have incorporated design and operational lessons. This kind of systematic feedback is missing from most projects, though IFC's monitoring system is beginning to cover it. Feedback is especially needed for renewable energy projects, where economic and carbon impacts are proportional to capacity utilisation. Many hydropower and wind projects are underperforming for reasons that are not clear. At the organisational level, the WBG has framed SFDCC goals in terms of dollars committed, rather than outcomes or impacts, which sets up poor incentive structures. For example, energy-efficiency projects are expensive in staff time and lead to only modest lending, yet can benefit clients more than cheaper-to-prepare, larger-volume generation projects.

Not all of the IEG's findings were wholly accepted by the World Bank management, but the overall thrust of the IEG report is consistent with the expectation that funding directed through World Bank channels is likely on average to be moderately to strongly effective.

b) The Inter-American Development Bank

The IADB's AquaFund finances water and sanitation projects for the benefit of the poor, in rural and semi-urban areas and small towns, including disaster risk reduction and monitoring. The almost-equal contributions of SDC and SECO together amount to the second largest contribution to AquaFund after the IADB itself. It is unclear, however, why the SDC grant is assigned to *RC7: adaptation capacity* and assessed as 15% CC relevant, whilst the SECO grant to the same fund is assigned to *RC4: energy efficiency* and assessed as 25% CC relevant.

In any case, the AquaFund itself seems to be a re-packaging of the IADB's Water and Sanitation Initiative, which is described in its founding document[76] as an approach that "renews the Bank's commitment to pool efforts with countries in the region and support development of the water and sanitation sector, with a view to achieving universal access to adequate services, consistent with the countries' responsibilities and wishes. The Initiative seeks to position the Bank as the financing alternative of choice for national and subnational governments in delivering on their commitment to improve these services." The AquaFund is built around four complementary programmes[77]:

- '100 Cities', to catalyse investment financing and technical assistance for Latin American and Caribbean cities of more than 50,000 people, giving priority to their poorest communities, which has actually engaged with 146 cities;
- '3,000 Rural Communities', to support communities willing to take their own financial, technical and organisational decisions and to run their local water and sanitation systems, which has so far engaged with 2,600 such communities;
- 'Water Defenders', to provide technical assistance and financing to safeguard 20 priority micro-watersheds, which has actually covered 31 of them; and
- 'Efficient and transparent utilities', to finance the strengthening of water utility management and develop a system to measure and certify their performance, which has reached its target of 90 such operators.

[76] *Water and Sanitation Initiative* (IADB, 2006)
[77] *http://www.iadb.org/en/topics/water-sanitation/programs-of-the-water-and-sanitation-initiative,2123.html?#op1*

A 2012 evaluation of the IADB's investments on climate change[78] did not mention the AquaFund, but confirmed the priority given to water issues in the context of the climate change response.

c) The United Nations Development Programme

Of the two recorded SDC contributions to UNDP, 7F-03576 is a large, long-term core grant, which was validated on the grounds that UNDP country teams work in 135 developing countries to help partners "build their capacity to integrate environmental considerations into development plans and strategies, establish effective partnerships, secure resources, and implement programmes to support sustainable, low-carbon, climate-resilient development pathways"[79]. Contribution 7F-04529 is to the UNDP-managed Crisis Prevention and Recovery Thematic Trust Fund, a flexible funding mechanism designed for quick action following a natural disaster or violent conflict, or when a unique opportunity arises to reduce disaster risk or prevent conflict.

The findings of a major evaluation of UNDP's work on environment and energy in 2008[80] are summarised as follows.

- **Project design**. The project design and in most cases the implementation work carried out by UNDP and its partners is generally of high quality. The most impressive projects often appear to be those where other donors have been encouraged to support parallel activities that complement GEF projects, leading to a more diverse set of activities responding to a range of local and national priorities.
- **GEF influence**. The availability of GEF funding has been the most important driving force determining where, how and when UNDP country-level environment and energy work was undertaken. Partly as a result, UNDP environment and energy country portfolios often appear to be a series of opportunistic projects for which funding was available. In the least developed countries (LDCs) and small island developing states (SIDS) in particular, there is almost total reliance on GEF support for environment and energy activities, as other donors have scaled back and government commitments are often miniscule. The reliance of UNDP on GEF to support its environment and energy work has caused high-priority national environmental issues - such as environmental health, water supply and sanitation and energy management - to be replaced by GEF priorities related to climate change mitigation, biodiversity and international waters.
- **Sustainability**. While many current projects appear impressive and innovative as stand-alone initiatives, sustaining gains and benefits over the longer term is a ubiquitous problem, with a fragile institutional memory of terminated initiatives that declines rapidly over time. Sustainability is clearly impaired by weak counterpart institutions with staffing and budget constraints, and limited coordination among institutions and projects, as well as cycles of political instability. Those factors are compounded by the meagre allocation of core resources, the uncertainty and unpredictability of future GEF funding and the fact that few recipient countries share the GEF environmental priorities, particularly where global issues overshadow local issues.
- **HQ role**. The UNDP headquarters' environment and energy programme has focused on studies and advocacy work. Much of this has been of high quality, although the impacts of it are unclear, and synergies with the country programmes are not easy to detect. There is virtually no sign that the global plans and strategies of UNDP have had any significant influence on the allocation of financial resources or the selection of programme priorities and activities for the decentralised country programmes. This finding appears to be systemic and UNDP-wide, rather than a particular feature of the environment and energy practice.
- **Mainstreaming**. Mainstreaming within UNDP has been limited. There has been relatively little collaboration between environment and energy and the other UNDP practice areas. There is little evidence of clearly developed or articulated strategies or practical initiatives linking or genuinely mainstreaming environmental initiatives into the UNDP core work on poverty, governance,

[78] *Background Paper: IDB Integrated Strategy for Climate Change Adaptation and Mitigation, and Sustainable and Renewable Energy*, Office of Evaluation and Oversight (IADB, 2012).
[79] http://www.undp.org/content/undp/en/home/ourwork/environmentandenergy/overview1/
[80] *Evaluation of the Role and Contribution of UNDP in Environment and Energy* (UNDP Evaluation Office, 2008)

human rights or sustainable livelihoods. At the country level, too, mainstreaming has been limited. Systemic barriers to country-level mainstreaming include the often weak position of ministries of environment with which UNDP mainly works and the dominance of GEF-funded portfolios that focus on global, rather than national, environmental problems.

- **UNDP-country relations**. At the country level, UNDP is valued by national governments as a long-term trusted partner, supporting national planning and contributing to capacity development. UNDP has also been a major avenue to GEF funding. The relevance and effectiveness of UNDP's environmental programming is, of course, directly influenced by the commitment and capacity of recipient governments, and UNDP has long struggled with how to build and retain capacity in partner countries. Even so, long-term capacity gains in the areas of environment and energy are seldom apparent, especially in LDCs and SIDS.
- **UNDP capacity**. In environment and energy, UNDP capacity leaves much to be desired. While staff at headquarters and in the regional centres are recognised for their expertise and the results they achieve, most are funded through extra-budgetary sources, which is not conducive to long-term capacity or career development. With a few notable and impressive exceptions, the environment and energy teams in country offices are few in number and often lack relevant technical expertise. These teams are often stretched to the limit, especially in the smaller country offices. Lacking the capacity to engage in policy dialogue with the governments, their main role is usually limited to administrative management tasks.

An evaluation in 2013 of the UNDP Strategic Plan 2008-2013[81] found that:

- **Effectiveness**. In terms of effectiveness of contributions at the country level, UNDP is likely to have made, or to make, a significant contribution to the intended outcomes in most of its country programmes and across all four focus areas of Poverty and MDGs, including democratic governance, crisis prevention and recovery, and environment and energy.
- **Results Oriented Annual Report (ROAR)**. Country office self-reporting through the ROAR suggests that the majority of outcomes were either achieved (15%, or 14% for crisis prevention and recovery) or on track (78%, or 83% for crisis prevention and recovery) at the time of reporting over the period 2008-2012.
- **Assessments of Development Results (ADRs)**. The evidence from a meta-synthesis of ADRs is less positive than the ROARs. While it indicates that, in most cases, outputs of projects and programmes are delivered, in terms of effectiveness of contribution, the overall rating suggests that UNDP is likely to have made, or to make, a significant contribution to the intended outcome only in just over half of its country programmes.
- **Lack of non-earmarked contributions**. A major reason for non-delivery of planned outputs is under-resourcing of projects due to the earmarked nature of funds, since when an organisation relies on core resources for only 11% of its programme expenditure, programming itself becomes a major challenge.
- **Lack of institutional learning**. The contribution of UNDP interventions to national poverty outcomes is seriously compromised by the absence of adequate support to learning about what works and why. This in turn is caused in large part by the absence of a structure of incentives that would encourage systematic collection, monitoring and evaluation of evidence on the actual changes in people's lives as a result of interventions.
- **Weak knowledge management**. The evaluation of the global programme concluded that knowledge production and sharing is not considered a strategic programming priority and is not internalised as part of programming. Most regional programme evaluations find that, despite their potential, regional programmes have not effectively promoted knowledge management.

[81] *Evaluation of the UNDP Strategic Plan 2008–2013* (UNDP Evaluation Office 2013)

Annex 10: Data quality and management of data constraints

During the assessment, based on available data and the quality of data some amendments to our approach were introduced, as well as corrections to the preliminary data were proposed to improve the consistency and quality of assessment.

Mitigation and/or adaptation

In some cases the classification suggested by SDC/SECO in the spreadsheet excel provided to Gaia consortium was erroneous and we suggested changes to the provided info. E.g. for SECO UR-00289.02.01 Commodity Risk Management, the project was assessed by SECO as 75% relevant to mitigation (and principal CC project, according to OECD/DAC/Rio Marker guidelines) while grouped by SDC/SECO simultaneously into Result Chain 7. The 75 % relevance estimate should refer to adaptation, as in our Gaia review we classified it as meeting validation criteria Resilience for adaptation (RFA), and our analysis further confirmed the relevance for adaptation and accordingly assessed the project for its CC adaptation effectiveness.

In another case SECO assessed the first phase of the project (UR-00171 Allanblackia standard setting and sustainable supply chain management) as 50% relevant to adaptation but at the same time classified the project as a mitigation project. The second phase was assessed as 50% relevant to mitigation (and significant in Rio Marker terms) and identified as a mitigation project. With regards to another project (UR-00174.03.01 TJ: Khujand Water Supply Project II), the project was assessed as 25% relevant to mitigation and 25 % relevant for adaptation (and significant CC project, according to OECD/DAC/Rio Marker guidelines). It can be noted that the previous phases were classified as 25% relevant for adaptation but still classified as mitigation projects (with no Rio Marker classification significant/principal attached to them).

Time lines

For a number of projects the time lines provided in the SDC/SECO spreadsheet (excel) were not reliable, and could in some cases suggest end dates in 2020 or 2040, whereas in-depth reviews revealed different realized end dates or more realistic dates in the near future. For example for SDC (7F-07572) The Mongolia Disaster Relief and Prevention Project (MONDIREP), Mongolia, the spreadsheet provides an end-date in 2020, whereas the project was a focused and targeted disaster relief project implemented and completed in 2010. Subsequently, in any analyses referring to time perspectives, we have relied on project start dates (e.g. in grouping projects into pre/post 2007 portfolios when doing the time perspective comparisons) and for any other time-related analyses rely on projects that have been reviewed in-depth (and for which time lines have been confirmed).

Relevance % estimates (and classification in principal/significant categories)

One case in point is the estimated CC relevance of each project offered by SDC/SECO, which the team initially approached with caution but later came to the view that these estimates were mostly reasonable enough to accept. Based on stakeholder consultations with SDC and SECO representatives during the evalution, several noted that the relevance estimation (and use of Rio Markers in general) had only in recent years become more systematic and guided. While generally the relevance scoring could be considered reasonable, in a few cases where contradictions were too egregious to ignore; the review team revised percentages and therefore used, where relevant, the amended scores in this report.. These exceptions are included in Table A10.1. Assuming a continued systematisation of the use of Rio Markers and further guidance of the CC classification systems, a removal of any major errors could be expected in SDC/SECO.

Project identifier	SDC/SECO estimate of CC relevance	Review team's estimate of CC relevance
UR-00340.03.01, CPC ID (Indonesia)	75%	50%
UZ-00982.02.01, CPC BR Paraiba (Brazil)	75%	50%
UR-00091.01.01, EFTA: EG: CPC Aegypten (Egypt)	75%	50%
UZ-00990.03.01, CPC MA II (Morocco)	75%	50%
UR-00340.01.02, ONUDI: PPPT+, Phase B (RKVII) (Tunisia)	100%	50%
UZ-00987.03.01, CPC VN II, USD (Vietnam)	75%	50%
UZ-00988.01.03, CPC PE II (Perú)	75%	50%
UZ-00861.01.02, CPC: Kolumbien (Phase II) (EMPA) (Colombia)	75%	50%
UR-00089.01.01, CPC JO (Jordan)	75%	50%
UR-00093.02.01, CPC Rumänien EURO (Romania)	25%	50%
UR-00093.03.01, CPC Bulgarien EURO (Bulgaria)	25%	50%
UR-00050.03.01, Green Credit Trust Fund VN, USD (Vietnam)	100%	50%
UR-00419.01.01, Triodos Trade Fund, EUR	50%	25%
7F-08402, Suizagua Andina, a Water Footprint project for Perú and Chile	10%	50%

Table A10.1: Differences in estimated CC budget by SDC/SECO and the review team.

Annex 11: People involved in interviews, focus group discussions or the questionnaire survey

I. People interviewed during the evalution

Jean-Bernhard Dubois	SDC
Hans-Peter Egler	SECO
Myriam Steinemann	INFRAS
Benjamin Lang	Swisscontact
Mikko Ollikainen	Adaptation Fund
Stefan Denzler	World Bank
Peter Schierl	World Bank
Anton Hilber	SDC

II. Focus group meeting participants, Bern 20.1.2014

Jean-Bernard Dubois	GP Klima
Anton Hilber	GP Klima
Frank Bertelsbeck	HH Köniz
Martin Fässler	Senior Policy Advisor
Willi Graf	Stv. RZ
Barbara Böni	Latin America (previously Laos, Vietnam)
Philippe Monteil	East Africa/South Africa
Daniel Birchmeier	WEMF
Hans-Peter Egler	WEHU
Guy Bonvin	WEIN
Roman Windisch	SECO
Monika Egger-Kissling	DEZA

III. Open Questionnaire respondents

In addition to the research approaches and analysis presented in this report, a simple questionnaire to a small number (ca 20) of selected international observers in the areas of climate change, environment and development was conducted. This approach relies on correspondents being encouraged to answer freely (and anonymously) up to three general questions without guidance or constraint. It was successfully used by the Gaia consortium in a synthesis evaluation of the Finnish aid programme, as a supplement to more quantitative and structured forms of analysis, and proved effective in eliciting interesting and often quote-worthy comments.

The questions for international observers were fine-tuned based on preliminary findings of this assessment, and were as follows

- **Q1. What is your opinion of Swiss Climate Change (CC) related development aid[82] -is it effective**? Do you know anything about Swiss interventions that could shed light on their climate change effectiveness, their strongest and weakest features, and how they manifest any feature that make them specifically Swiss in character?
- **Q2. What are in your views the world's best initiatives or projects leading to climate-compatible development**? *W*hat kinds of success stories are you aware of, have any particular obstacles or challenges struck your eyes?
- **Q3. What would you suggest the world community and Switzerland should do to mainstream climate change into sustainable development and poverty reduction?** How do you see the relative priority of CC, and the best ways for Switzerland to target its contributions, considering other serious challenges to sustainable development and poverty reduction?

List of international observers that provided their replies (excluding those who requested anonymity):

Saleemul Huq	IIED (International Institute for Environment and Development)
Srinivas Krishnaswamy	Vasudha Foundation
Svein Tveitdal	Klima 2020
Markku Kanninen	University of Helsinki
Ari Huhtala	Climate and Development Knowledge Network
Matti Nummelin	Ministry for Foreign Affairs, Finland
Josef Haider	KfW
Anne Hammill	IISD
Sam Bickersteth	Climate and Development Knowledge Network
Axel Michelowa	University of Zurich / CIS
Cameron Hupburn	University of Oxford
John Ward	Vivid Economics
Caroline van der Sluys	Independent consultant
Remco Fischer	UNEP Finance Initiative
Janos Pasztor	WWF Policy Director

[82] Switzerland provides aid through a multitude of instruments and channels, including bilateral programmes, core funding for multilateral institutions such as the UN organisations, the EU, and the World Bank, development-oriented research, and efforts implemented in partnership with NGOs. The overriding goal of Swiss aid is to reduce poverty in line with the Millennium Development Goals (MDGs).

Annex 12: Gaia consortium Inception Report

Provided as separate pdf. document

Annex 13: Terms of Reference

Provided as separate pdf. document

Annex 14: Fact sheets

Fact sheets for 36 projects (covered in Annexes 5 and 6) provided as separate pdf documents.