GCCA+
THE GLOBAL CLIMATE CHANGE ALLIANCE PLUS INITIATIVE

Funded by the European Union

21 projects over 4 continents

- Belize
- Cambodia
- Congo (DRC)
- Ethiopia
- Gambia
- Guyana
- Jamaica
- Lower Mekong Basin
- Maldives
- Mali
- Mauritius
- Mozambique
- Nepal
- Pacific (SPC)
- Rwanda
- Senegal
- Seychelles
- Solomon Islands
- Tanzania
- Uganda
- Vanuatu

IMPACT AND SUSTAINABILITY REPORT

Building resilience against climate change

www.gcca.eu

September 2021

TABLE OF CONTENTS

ACRONYMS

AfDB	African Development Bank
CC	Climate Change
CCA	Climate Change Adaptation
CDM	Clean Development Mechanism
CSA	Climate Smart Agriculture
DRC	Democratic Republic of Congo
DRR	Disaster Risk Reduction
EU	European Union
FAO	Food and Agriculture Organisation
GCCA	Global Climate Change Alliance
GCCA+	Global Climate Change Alliance Plus
GIZ	German Institute for Development Cooperation
HH	Household
I&S	Impact & Sustainability
ICT	Information & Communication Technology
ICZM	Integrated Coastal Zone Management
IDA	International Development Association
LDC	Least Developed Country
MRC	Mekong River Commission
NR	Natural Resources
OO	Overall Objective
ROM	Results Oriented Monitoring
SIDS	Small Island Development State
SMART	Specific, Measurable, Achievable, Relevant, Time bound
SO	Specific Objective
SPC	Secretariat of the Pacific Community
SPREP	South Pacific Regional Environmental Programme
TA	Technical Assistance
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WASH	Water supply, Sanitation, Health
WB	World Bank

Tree nursery in rural Ethiopia, Tigray region © EU GCCA+ 2018 – Photo Axum

BACKGROUND

The Global Climate Change Alliance

The European Union (EU) established the Global Climate Change Alliance (GCCA) in 2007 (GCCA/GCCA+ timeline video) to strengthen dialogue and cooperation on climate change issues with vulnerable countries, in particular Small Island Development States (SIDS) and Least Developed Countries (LDCs). At its start in 2008, the programme worked in just four pilot countries. Since then, over 80 national programmes have been supported in the Africa, Asia, Caribbean, and Pacific regions as well as regional and multi-country programmes in the GCCA+ areas and sectors.

In 2014, a global evaluation of the first stage of the GCCA initiative (2007 to 2014) recognised it as a viable instrument for practical cooperation on climate actions that had made a significant contribution to formulation and implementation of national policies and dialogue on climate change. By building on lessons learned and recommendations from the GCCA evaluation, and in line with the European Commission's new Multiannual Financial Framework 2014–2020, the GCCA has grown into a new second phase: the flagship initiative Global Climate Change Alliance Plus (GCCA+) – 2014 to 2020.

The GCCA+ initiative is focused on three major priority areas, namely:

- Mainstreaming climate change into poverty reduction and development efforts;
- Increasing resilience to climate-related stresses and shocks, promoting disaster risk reduction (DRR); and
- Supporting the formulation and implementation of concrete and integrated sectoral based climate change adaptation and mitigation strategies.

The Impact & Sustainability study

While the global evaluation of the GCCA in 2014 was generally positive about the achievements of the programme, it highlighted that "the implementation of many of the projects in the partner countries and regions had started later than planned and were only coming to fruition at the time of evaluation, making a proper assessment of their results and impacts an impossible task. Similarly, many projects had focused on developing skills and institutional capacity, which tend to bring results in the medium to long term".

Based on this observation in 2018 a decision was taken to follow up the global evaluation with study focusing on assessing the generated impact and sustainability levels of all GCCA projects that at that time had been closed for at least one year. 21 projects representing € 129.61 million of GCCA funding matched this criteria.

Impact & Sustainability (I&S) studies were undertaken and completed for each of these projects between 2019 and 2021. The results of these 21 studies form the basis for this report.

QUICK OVERVIEW OF RESULTS

The cumulative results presented here are meant to illustrate some of the results achieved through the 21 GCCA country and regional projects that were assessed by the I&S studies. However, they do not provide a full picture of all consolidated results as these projects were implemented before the indicators were standardised and aggregated within the European Union Results Framework (EURF) in 2015. It means for example that not all projects reported data on "the number of individual beneficiaries" but instead report on number of community groups supported.

17,513

Hectares brought under new or improved forest and land management (including mangrove)

31,080

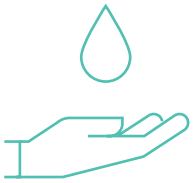
National / sub-national government staff trained in climate change related subjects

160

Local adaptation plans developed

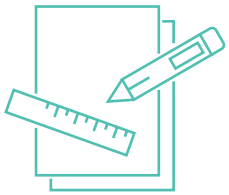
20,472

Fuel-efficient stoves installed



3,157

New or improved safe domestic water supply structures

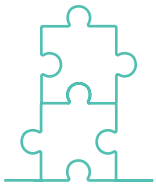


86

Demonstration projects implemented

143,492

Community members trained in climate change adaptation / mitigation / DRR



64

National policies, strategies / acts and plans formulated / improved for CC mainstreaming

9

Early warning systems installed or improved

OVERVIEW OF THE 21 PROJECTS REVIEWED

1 – BELIZE

Enhancing Belize's Resilience to Adapt to the Effects of Climate Change

OVERALL BUDGET 3.20 M€ (GCCA 2.90 M€)

2 – CAMBODIA

Cambodia Climate Change Alliance

OVERALL BUDGET GCCA 2.21 M€

3 – CONGO (DRC)

GCCA action to mainstream CC in DRC: support for training and reforestation

OVERALL BUDGET GCCA 14.0 M€

4 – ETHIOPIA

GCCA – Ethiopia: Building the national capacity and knowledge on climate change resilient actions

OVERALL BUDGET GCCA 9.70 M€

5 – GUYANA

Sustainable coastal zone protection through mangrove management in Guyana

OVERALL BUDGET GCCA 4.17 M€

6 – JAMAICA

Climate Change Adaptation and Disaster Risk Reduction Project (CCA&DRRP) in Jamaica

OVERALL BUDGET 4.48 M€ (GCCA 4.13 M€)

7 – LOWER MEKONG BASIN

Addressing Ecosystem Challenges through Support to the Climate Change and Adaptation Initiative (CCAI) of the Mekong River Commission

OVERALL BUDGET 11.55 M€ (GCCA 4.95 M€)

8 – MALDIVES

Support to Climate Change Adaptation and Mitigation in the Maldives under the Global Climate Change Alliance

OVERALL BUDGET 7.20 M€ (GCCA 3.80 M€)

9 – MALI

Global Climate Change Alliance – Mali

OVERALL BUDGET 6.22 M€ (GCCA 5.65 M€)

10 – MAURITIUS

General Budget Support – Global Climate Change Alliance Mauritius

OVERALL BUDGET GCCA 3.00 M€

11 – MOZAMBIQUE

Support Project to the Government of Mozambique for the Mainstreaming of Climate Change into Policies and Strategies and to Adapt to Climate Change Impact

OVERALL BUDGET 47.0 M€ (GCCA 10.20 M€)

12 – NEPAL

Nepal Climate Change Support Programme: Building Climate Resilience in Nepal

OVERALL BUDGET 16.50 M€ (GCCA 8.60 M€)

13 – PACIFIC (SPC)

Increasing climate resilience of Pacific Small Islands States through the Global Climate Change Alliance

OVERALL BUDGET GCCA 11.40 M€

14 – RWANDA

Sector Budget Support (SBS) for Environment and Natural Resources Global Climate Change Alliance

OVERALL BUDGET GCCA 4.56 M€

15 – SENEGAL

Integrated Coastal Zone Management: in-depth assessments and concrete measures for responding and adapting to climate change

OVERALL BUDGET GCCA 4.0 M€

16 – SEYCHELLES

Seychelles Climate Change Support Programme

OVERALL BUDGET GCCA 2.00 M€

17 – SOLOMON ISLANDS

Solomon Islands Climate Change Assistance Programme

OVERALL BUDGET GCCA 2.8 M€

18 – TANZANIA

Global Climate Change Alliance for Tanzania

OVERALL BUDGET GCCA 2.21 M€

19 – THE GAMBIA

Support to The Gambia for Integrated Coastal Zone Management (ICZM) and the Mainstreaming of Climate Change

OVERALL BUDGET GCCA 3.86 M€

20 – UGANDA

Agriculture Adaptation to Climate Change in Uganda

OVERALL BUDGET GCCA 11.00 M€

21 – VANUATU

Global Climate Change Alliance (GCCA) Thematic Support Programme

OVERALL BUDGET 5.70 M€ (GCCA 3.20 M€)

FROM BELIZE TO VANATU

1 – BELIZE

Enhancing Belize's Resilience to Adapt to the Effects of Climate Change

CRIS CODE DCI-ENV/2010/022-636

DURATION 2010–2014

OVERALL BUDGET 3.20 M€ (GCCA 2.90 M€)

AID MODALITY Project approach

SECTORS
- Agriculture and food security
- Environment and natural resources (including forestry)
- Water and sanitation

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
UN; Ministry of Natural Resources and Environment; National Emergency Management Organisation

The GCCA project in Belize comprised five adaptation and DRR pilot projects promoting ecosystems-based adaptation, coastal zone management and mangrove restoration, early warning systems, forestry, climate smart agriculture (livestock), improved governance in water supply & sanitation and overall CCA mainstreaming.

2 – CAMBODIA

Cambodia Climate Change Alliance

CRIS CODE DCI-ENV/2009/021-476

DURATION 2009–2014

OVERALL BUDGET GCCA 2.21 M€

AID MODALITY Sector policy support

SECTORS
- Agriculture and food security

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
UNDP; Min. of Environment, Climate Change Department; National Climate Change Committee

At national level the GCCA supported climate change policy development and strengthening key institutions like the National Climate Change Committee and the Climate Change Department. At the local level 19 adaptation demonstration projects were funded through a Call for Proposals, with the projects covering agriculture, water supply, aquaculture, forestry, health, DRR, energy, solid waste management. A third component focused on coastal adaptation and resilience planning.

3 – CONGO (DRC)

GCCA action to mainstream CC in DRC: support for training and reforestation

CRIS CODE DCI-ENV/2011/023-162

DURATION 2012–2017

OVERALL BUDGET GCCA 14.0 M€

AID MODALITY Project approach

SECTORS
- Education and research
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
CIFOR; Min. of Environment, Nature Conservation and Tourism / Congolese Institute for the conservation of nature.

The GCCA project in the Congo (DRC) focused on: (1) building academic and research capacity in forestry related to reducing carbon emissions and enhancing carbon stocks; and (2) reducing pressure on Virunga National Park through tree-planting projects and the restoration of degraded forest areas. Training was a key element of the project and included several short courses on climate change and forestry, as well as support for Ph.D. and M.Sc. students. The project also supported strengthening of MRV capacity.

4 – ETHIOPIA

GCCA – Ethiopia: Building the national capacity and knowledge on climate change resilient actions

CRIS CODE DCI-ENV/2010/022-456

DURATION 2012–2014

OVERALL BUDGET GCCA 9.70 M€

AID MODALITY Project approach

SECTORS
- Agriculture and food security
- Energy

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
GIZ; Ministry of Agriculture and Rural Development / Environmental Protection Authority

The GCCA project supported the piloting of innovative agricultural technologies in 34 selected micro-watersheds (measuring between 500 and 1000 ha) in 34 districts (Woredas) located within the Nile Basin in support of Ethiopia's green growth agenda. This was done within the context of an existing sustainable land management project. The interventions focused on testing a "basket of options" in climate smart agriculture, improved livestock and soil and water conservation, while also supporting renewable energy and energy efficiency options like fuel-efficient stoves and biogas.

5 – GUYANA

Sustainable coastal zone protection through mangrove management in Guyana

CRIS CODE DCI-ENV/2009/021-549

DURATION 2009–2014

OVERALL BUDGET GCCA 4.17 M€

AID MODALITY Sector Budget Support +TA

SECTORS
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
National Agricultural Research and Extension Institute of the Ministry of Agriculture

The project supported coastal protection and climate change mitigation and adaptation through sustainable management and rehabilitation of mangrove forests. This was combined with strengthening the legal framework for mangrove protection and supporting research and awareness activities related to the role of mangroves for coastal protection and biodiversity conservation.

6 – JAMAICA

Climate Change Adaptation and Disaster Risk Reduction Project (CCA&DRRP) in Jamaica

CRIS CODE DCI-ENV/2009/021-550

DURATION 2010–2013

OVERALL BUDGET 4.48 M€ (GCCA 4.13 M€)

AID MODALITY Project approach

SECTORS
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
UNEP and Planning Institute of Jamaica

The project consisted of three main components: (1) watershed management; (2) management of Marine Protected Areas; and (3) institutional development. A broad range of state and non-state actors were involved in the implementation of these components. Under the watershed management component, the focus was on reducing run-off through reforestation and agroforestry. Marine Protected Area management was improved through a mix of activities including mangrove and seagrass planting, developing alternative livelihoods and strengthen monitoring.

7 – LOWER MEKONG BASIN

Addressing Ecosystem Challenges through Support to the Climate Change and Adaptation Initiative (CCAI) of the Mekong River Commission

CRIS CODE DCI-ENV/2011/023-089

DURATION 2012–2015

OVERALL BUDGET 11.55 M€ (GCCA 4.95 M€)

AID MODALITY Project approach

SECTORS
- Agriculture and food security
- Disaster risk reduction
- Environment and natural resources (including forestry)
- Water and sanitation

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
Mekong River Commission

The support to the Mekong River Commission included institutional capacity development of member countries (Cambodia, Lao PDR, Thailand and Viet Nam) in climate change adaption, support for climate change policy and strategy development and for piloting adaptation approaches. The institutional support led to the elaboration of a regional adaptation strategy and action plan, while the nine pilots tested various techniques, methods and tools related to agriculture, flood control, drought issues, land use and water supply.

8 – MALDIVES

Support to Climate Change Adaptation and Mitigation in the Maldives under the Global Climate Change Alliance

CRIS CODE DCI-ENV/2008/163-259

DURATION 2009–2015

OVERALL BUDGET 7.20 M€ (GCCA 3.80 M€)

AID MODALITY Project approach

SECTORS
- Energy
- Solid waste management

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
IDA / WB; Ministry of Housing and Environment

The Maldives project supported overall national-level capacity building for climate change mainstreaming and DRR through three targeted interventions. The first supported the development of a solid waste management system on selected islands and establishing or strengthening integrated waste management centres. The second intervention supported solar energy development and energy efficiency solutions. The third focused on building capacity and systems for wetlands management and monitoring the state of coral reefs.

9 – MALI

Global Climate Change Alliance – Mali

CRIS CODE DCI-ENV/2009/021-551

DURATION 2010–2017

OVERALL BUDGET 6.22 M€ (GCCA 5.65 M€)

AID MODALITY Project approach

SECTORS
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
National government; Ministry of Environment, Sanitation and sustainable development

At national-level the project supported the development of Mali's climate change policy and strategy. At the more technical level the project provided capacity building support for forest inventories and GIS skills. It also supported forest regeneration and afforestation activities, with the aim of promoting carbon sequestration and the broader aim of strengthening environmental sustainability.

10 – MAURITIUS

General Budget Support – Global Climate Change Alliance Mauritius

CRIS CODE DCI-ENV/2009/021-552

DURATION 2010–2013

OVERALL BUDGET GCCA 3.00 M€

AID MODALITY General budget support (+ TA)

SECTORS
- Energy

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
Ministry of Environment and Sustainable Development / Maurice Île Durable (MID) Commission

The specific contribution and role of the GCCA support was to enhance the sustainable development dimension of the National Economic Reform Programme, with a particular focus on energy efficiency. The project supported legislation in the energy sector focusing on energy efficiency. It also supported institutionalisation of climate change at national level through support for establishing a Climate Change Division. It further supported two pilot projects on renewable energy. As such, the main contribution of the GCCA support falls under CC mitigation by limiting GHG emissions.

11 – MOZAMBIQUE

Support Project to the Government of Mozambique for the Mainstreaming of Climate Change into Policies and Strategies and to Adapt to Climate Change Impact

CRIS CODE DCI-ENV/2010/022-341

DURATION 2011–2015

OVERALL BUDGET 47.0 M€ (GCCA 10.20 M€)

AID MODALITY Sector Support

SECTORS
- Agriculture and food security
- Disaster risk reduction

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
DANIDA; Ministry of Lands, Environment and Rural Development

The GCCA support in Mozambique was integrated in a broader environmental sector support programme with DANIDA as main donor. The GCCA support focused on climate change mainstreaming, improved environmental monitoring and local adaptation planning. It supported pilot projects on adaptation and disaster risk reduction, such as cyclone-proof housing and grain silos, coastal protection, improved water supply for domestic use and for livestock and promoted aquaculture and strengthened early warning systems.

12 – NEPAL

Nepal Climate Change Support Programme: Building Climate Resilience in Nepal

CRIS CODE DCI-ENV/2010/022-504

DURATION 2013–2015

OVERALL BUDGET 16.50 M€ (GCCA 8.60 M€)

AID MODALITY Project approach

SECTORS
- Agriculture and food security
- Disaster risk reduction
- Energy
- Environment and natural resources (including forestry)
- Water and sanitation

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
DFID; Ministry of Science, Technology and Environment; UNDP

The GCCA project in Nepal mainly focused support toward local level adaptation planning and implementation. This was done through the elaboration and implementation of Local Adaptation Plans for Action. A large number of adaptation actions were undertaken in areas relating to agriculture (irrigation, crop diversification), livestock (e.g. improved breeds), forestry (community forests), alternative energy (cook stoves, solar, mini-hydro). Small infrastructure works were also implemented, for example to reduce landslide risks. At national level the project supported the elaboration of climate change policies and strategies, and improved institutional support for their implementation.

13 – PACIFIC (SPC)

Increasing climate resilience of Pacific Small Islands States through the Global Climate Change Alliance

CRIS CODE DCI-ENV/2010/022-473

DURATION 2011–2016

OVERALL BUDGET GCCA 11.40 M€

AID MODALITY Project approach

SECTORS
- Agriculture and food security
- Disaster risk reduction
- Water and sanitation

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
Secretariat of the Pacific Community (SPC); Secretariat of the Pacific Regional Environment Programme (SPREP)

The regional support covered nine Pacific Small Island States (Cook Islands, Federated States of Micronesia (FSM), Kiribati, Nauru, Niue, Palau, Republic of Marshall Islands (RMI), Tonga and Tuvalu). The project provided support to strengthen regional coordination on climate change policies and actions through the SPC. At the country level, the project supported implementation of a climate change project in each of the countries which covered aspects such as DRR mainstreaming, environmental monitoring, WASH, coastal protection and agroforestry.

14 – RWANDA

Sector Budget Support (SBS) for Environment and Natural Resources Global Climate Change Alliance

CRIS CODE DCI-ENV/2009/021-553

DURATION 2010–2012

OVERALL BUDGET GCCA 4.56 M€

AID MODALITY Sector budget support

SECTORS
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
Rwanda Natural Resources Authority; National Land Centre, Ministry of Natural Resources

The GCCA allocation was deposited (as budget support) in a multi-donor basket fund that supported the implementation of the Government's Land Tenure Regularisation (LTR) programme. Although this programme was not directly related to climate change, the rationale for GCCA support was that secure land rights would lead to investments in land like soil and water conservation which would help reduce vulnerability to climate change aspects such as increased rain intensity and longer drought periods.

15 – SENEGAL

Integrated Coastal Zone Management: in-depth assessments and concrete measures for responding and adapting to climate change

CRIS CODE DCI-ENV/2009/021-554

DURATION 2010–2016

OVERALL BUDGET GCCA 4.0 M€

AID MODALITY Project approach

SECTORS
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
National govt. / Ministry of Environment and Sustainable Development

The GCCA support in Senegal focused exclusively on integrated coastal zone management (ICZM). At national level this included support to develop policies and strategies, and coastal monitoring tools with GIS components. At the local level GCCA supported pilot projects and research related to restoration of coastal ecosystems, for example, through mangrove restoration and casuarina plantations.

16 – SEYCHELLES

Seychelles Climate Change Support Programme

CRIS CODE DCI-ENV/2009/021-555

DURATION 2010–2014

OVERALL BUDGET GCCA 2.00 M€

AID MODALITY Budget support

SECTORS
- Energy
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
National govt. / Min. of Environment & Energy

The GCCA support in Seychelles aimed to effectively mainstream CC in all sectors and to support a policy and legislative framework to promote renewable energy and energy efficiency and overall environmental protection. As a part of mainstreaming, pilot projects supported coastal (flood) protection while institutions like the National Meteorological Authority and Department for DRR were strengthened. The project also supported a broad climate change awareness raising campaign.

17 – SOLOMON ISLANDS

Solomon Islands Climate Change Assistance Programme

CRIS CODE DCI-ENV/2010/022-483

DURATION 2011–2014

OVERALL BUDGET GCCA 2.8 M€

AID MODALITY Budget support

SECTORS
- Agriculture and food security
- Disaster risk reduction
- Environment and natural resources (including forestry)
- Social protection & health
- Water and sanitation

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
National Government (various Ministries and parastatals)

The focus of the project was capacity building and effective mainstreaming of climate change within all government institutions. The project supported the development of a national climate change policy and CC mainstreaming in sector plans, national development strategies and in the government budget. It also supported implementation of the NAPA through targeted CC action in the areas of agriculture, DRR and water supply.

18 – TANZANIA

Global Climate Change Alliance for Tanzania

CRIS CODE DCI-ENV/2009/021-477

DURATION 2009–2015

OVERALL BUDGET GCCA 2.21 M€

AID MODALITY Project approach

SECTORS
- Agriculture and food security
- Energy
- Environment and natural resources (including forestry)
- Water and sanitation

MAIN IMPLEMENTERS / CO-IMPLEMENTERS Vice-President Office; 1 NGO and 2 universities for individual projects

The project comprised three climate change adaptation pilot projects in different agro-ecological zones of Tanzania (coastal, highlands, drylands), implemented on the basis of the eco-village approach. All projects worked with communities to strengthen their resilience against climate change through promotion of livelihoods adaptation technologies such as climate smart agriculture and through support for sustainable natural resources management.

19 – THE GAMBIA

Support to The Gambia for Integrated Coastal Zone Management (ICZM) and the Mainstreaming of Climate Change

CRIS CODE DCI-ENV/2010/022-527

DURATION 2012–2016

OVERALL BUDGET GCCA 3.86 M€

AID MODALITY Project approach

SECTORS
- Environment and natural resources (including forestry)

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
National Environment Agency. NGOs and other institutions for individual projects

GCCA support in The Gambia included broad technical assistance for CC mainstreaming and a grant making component. The latter provided funding to 12 small-scale projects that supported climate change adaptation for rural communities, geographically focused on coastal areas. The projects supported sustainable NRM (for mangroves in particular), water supply, waste management and a range of livelihood-diversification activities through building awareness and direct support for activities.

20 – UGANDA

Agriculture Adaptation to Climate Change in Uganda

CRIS CODE DCI-ENV/2011/023-189

DURATION 2012–2016

OVERALL BUDGET GCCA 11.00 M€

AID MODALITY Project approach

SECTORS
- Agriculture and food security

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
FAO, national and local government authorities in CC, water, agriculture and forestry

The project provided capacity building support for climate change adaptation at national and local government levels to strengthen overall climate compatible development. It supported specific activities in the water, forestry and agriculture/livestock sectors to help build the CC resilience of rural communities. The Farmer Field School approach was the main implementation strategy.

21 – VANUATU

Global Climate Change Alliance (GCCA) Thematic Support Programme

CRIS CODE DCI-ENV/2008/021-827

DURATION 2010–2016

OVERALL BUDGET 5.70 M€ (GCCA 3.20 M€)

AID MODALITY Project approach

SECTORS
- Agriculture and food security
- Disaster risk reduction
- Environment and natural resources (including forestry)
- Water and sanitation

MAIN IMPLEMENTERS / CO-IMPLEMENTERS
Climate Change Unit of the Vanuatu Meteorological and Geo-Hazards Dept. / World Bank

The GCCA project in Vanuatu had two components: (A) assisting the government in policy development on Climate Change; and (B) Strengthen resilience to climate and weather-related risks which were identified in the NAPA-Vanuatu. Component A promoted mainstreaming of climate change in key sectors and developing an overall climate change and DRR policy. The second component provided support at provincial and local level to build resilience against climate change in the water and agricultural sector. This component was integrated in the World Bank funded project "Increasing Resilience to CC and Natural Hazards".

Chea Sim Angkor Chey High School, Kampot Province, Cambodia.

© EU GCCA+ 2018 – Photo Kimlong Meng.

METHODOLOGY

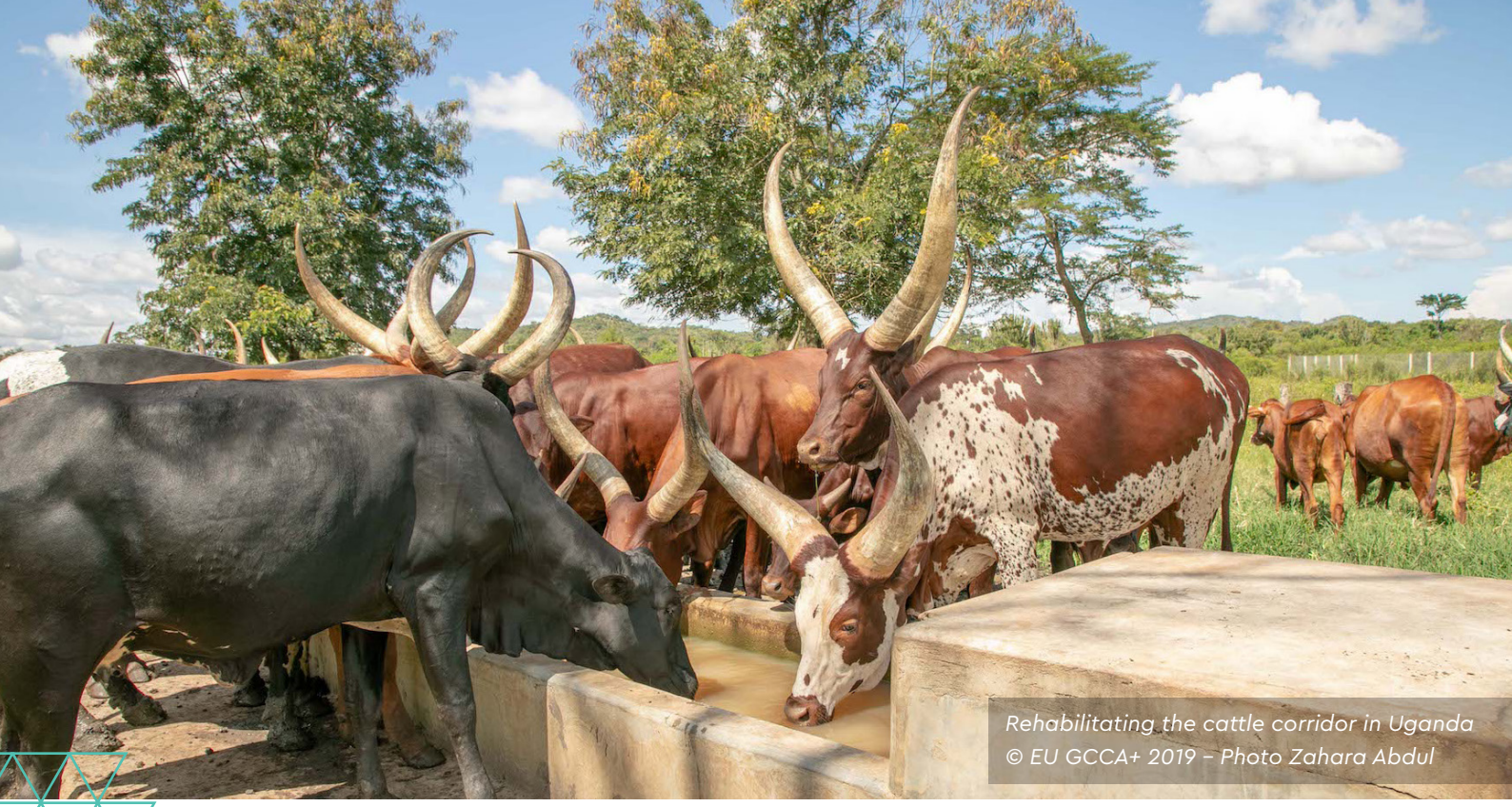
The methodology for the Impact & Sustainability (I&S) studies was developed by the EU GCCA+ Support Facility. The basic principle underpinning the methodology was the need to ensure a high level of consistency of assessments conducted across diverse projects and geographies. This aimed to promote a meaningful comparison between all the projects and a meaningful presentation of their results in an overall synthesis report.

The I&S study for each project consisted of a desk study phase and a field phase, with the desk and field phases often conducted by different experts. Detailed guidelines and reporting formats were therefore developed to guide the work of all experts contracted for the field studies. All studies were undertaken between two and six years after the end of the EU GCCA/GCCA+ financial support and therefore can be considered as ex-post studies.

The impact of the projects was assessed on the basis of the progress towards achievement of the Overall Objective(s) (OO) and Specific Objective(s) (SO) and their respective indicators. A first assessment was made during the desk study, using progress reports, ROM (Results Oriented Monitoring) reports and any other available evaluation reports. The field phase was then used to verify the information from the desk study and update the progress on OO and SO and respective indicators since the end of the EU GCCA/GCCA+ support, using a standardised scoring system combined with a narrative assessment.

The analysis of the sustainability of results achieved by the projects was based on an assessment of the level of continued use / maintenance / replication of the outputs (systems, services, infrastructure) delivered by the projects. During the desk study this list of outputs was identified in all available reports. The field phase was used to assess the level of sustainability, again based on a standardised scoring system combined with a narrative assessment.

The combined results of the desk and field phase were used to elaborate the I&S studies for each of the 21 projects included in the study. These studies, which form the basis for the information presented in this report, can be found at www.gcca.eu/resources



Rehabilitating the cattle corridor in Uganda
© EU GCCA+ 2019 – Photo Zahara Abdul

Limitations

The GCCA project in **UGANDA** has probably come closest to measuring the impact of the supported projects in terms of strengthening resilience. The highest impact level in the Uganda logframe included indicators on the increase in household assets (comprising human capital, social capital, physical capital, natural capital and financial capital) and increases in food security, as proxies for increased resilience.

One major limitation was the fact it was not possible to aggregate results across all projects as, at the time of the design of these 21 projects, there were no defined aggregate indicators to which all GCCA projects had to comply.

The assessment of both impact and sustainability was based on the logical frameworks developed for each of the GCCA country and regional projects and therefore depended strongly on the quality of logframes. General weaknesses in these logframes included: impact formulations that measured outputs rather than impacts, and indicators that were difficult to measure and/or lacked baselines and targets

Another major limitation was the fact few if any projects attempted to measure the actual impact on the climate change resilience of the recipients of the GCCA support. With most of the GCCA support focusing on climate change adaptation, increased resilience to slow-onset climate change phenomena and to climate change induced disasters should be the key long-term impact goal. Measuring an increase in resilience is a subject that many organisations are grappling with and the GCCA is no exception as the I&E studies revealed. This means that positive results on achieved impact as presented in this synthesis report should be interpreted with caution. While it is likely that many projects did contribute to increased resilience, the solid evidence to substantiate that claim is in most cases not available.

Another challenge encountered during the desk phase especially, lay in the fact that many projects did not have robust M&E and reporting systems. This made it difficult to assess the progress made on the expected results during project implementation or to identify any underlying causes for lack of progress.

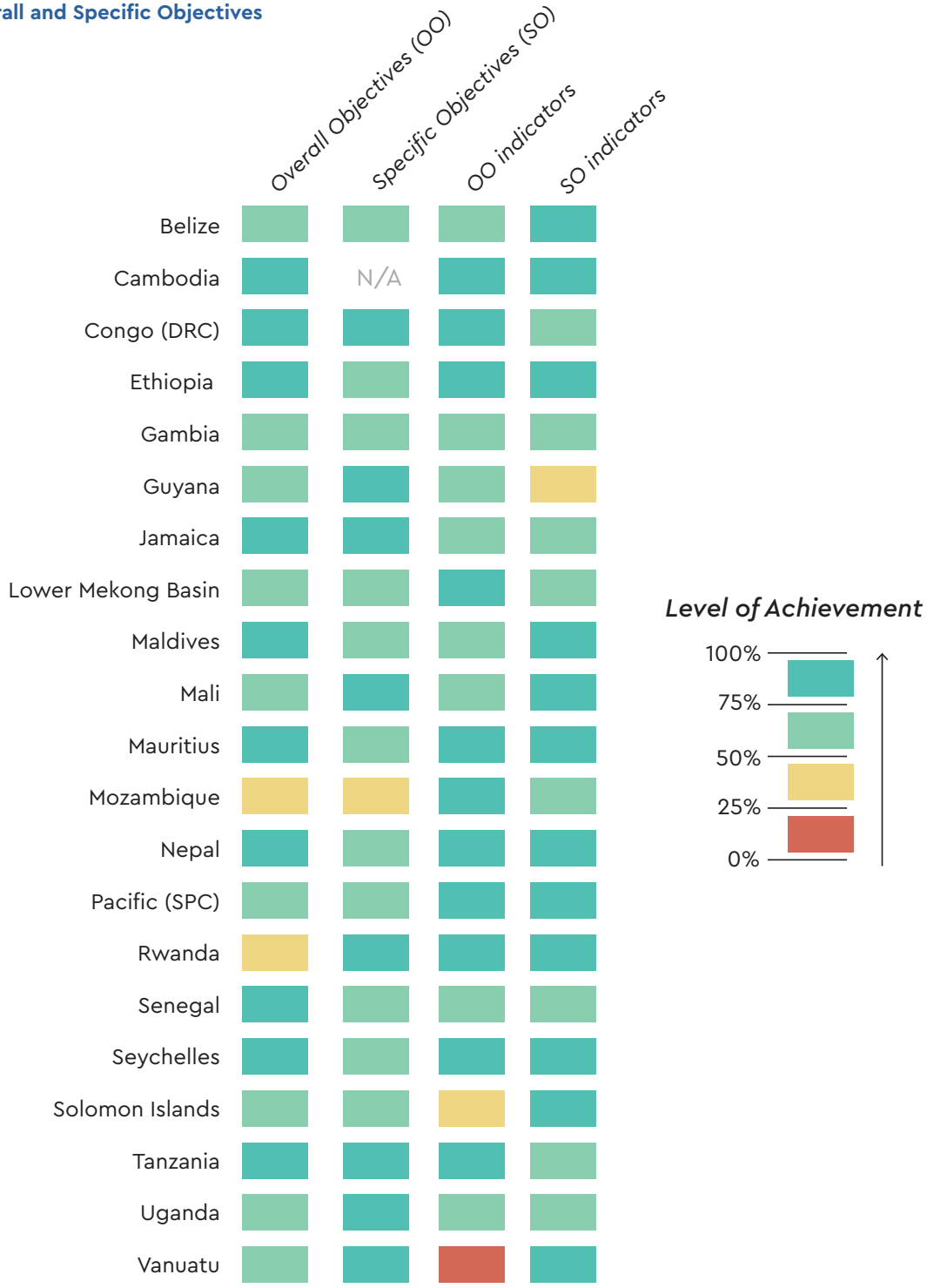
A specific limitation for the field phase was the difficulty accessing key project implementation stakeholders, many of whom had long since moved to other projects or other positions in government.

OVERALL IMPACT ANALYSIS

As indicated in the Methodology section, the overall level of success in achieving impact was measured through a system scoring the achievement of objectives and indicators within four ranges. For the Overall Objectives (OO) and the Specific Objectives (SO) of each project, a colour score measuring the level of achievement was used:

Figure 1

Scoring of Overall and Specific Objectives

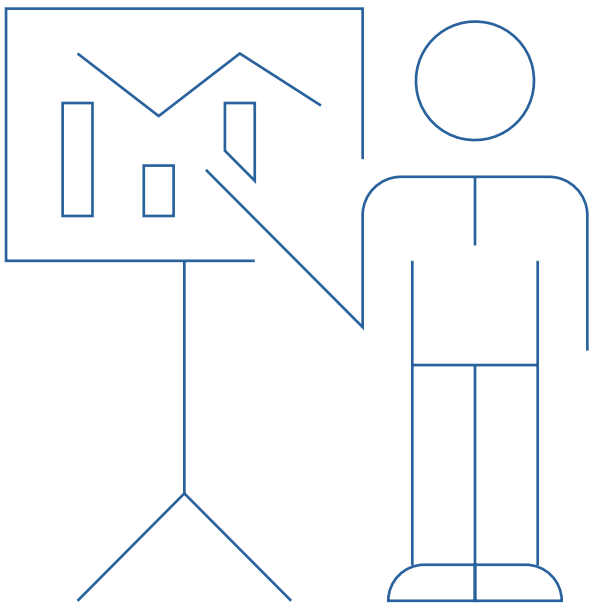


As the results show, the reviewed GCCA projects have in general achieved at least 50% of what they set out to achieve, as defined in the OOs, SOs and related indicators. Several objectives and indicators scored below 50% but only one project (*Vanuatu*) includes an indicator that scored below 25%.

Across most projects the scores for objectives and indicators were fairly consistent. The most notable exceptions were *Jamaica*, *Mozambique*, *Rwanda* and *Tanzania*. In most cases when objectives were scored markedly lower than the corresponding indicators, it was found that the objectives had been formulated as impact while the indicators measured outputs/outcomes and had no or very modest targets. This is the case for example for *Mozambique* and *Rwanda*. In cases where the objectives were scored higher than the corresponding indicators, the main causes were over-ambitious indicator targets (e.g. in the case of *Jamaica*) or very strict indicator formulations with less strict formulation of objectives (*Tanzania*).

Other important aspects that should be considered when interpreting the scores:

- There was no real opportunity within the timeframes of the studies to undertake a clear contribution analysis, while in many cases the GCCA support was in fact part of a larger programme or was complemented by other programmes with similar impact objectives. This may have led to some inflation of the scores given for achievement of the objectives.
- Scores for indicators are often based on assessing achieved quantitative targets against expected quantitative targets. Where targets were very modest or non-existent, high scores tended to follow. This however does not capture the quality of the achievement. For example, an indicator on replication may simply measure the number of replications of a piloted technology, but not check whether the technology is relevant in the context where it is replicated, nor whether the technology was applied correctly.
- For aid modalities such as general budget support and sector budget support, full logical frameworks may not be available. Progress is also monitored through "disbursement conditions". However, these are often more activity/output oriented than impact oriented. While an attempt was made during the I&S studies to identify more impact-type indicators this was not always possible. It has led for example to scores of 100% for the indicators for the Mauritius GCCA project.

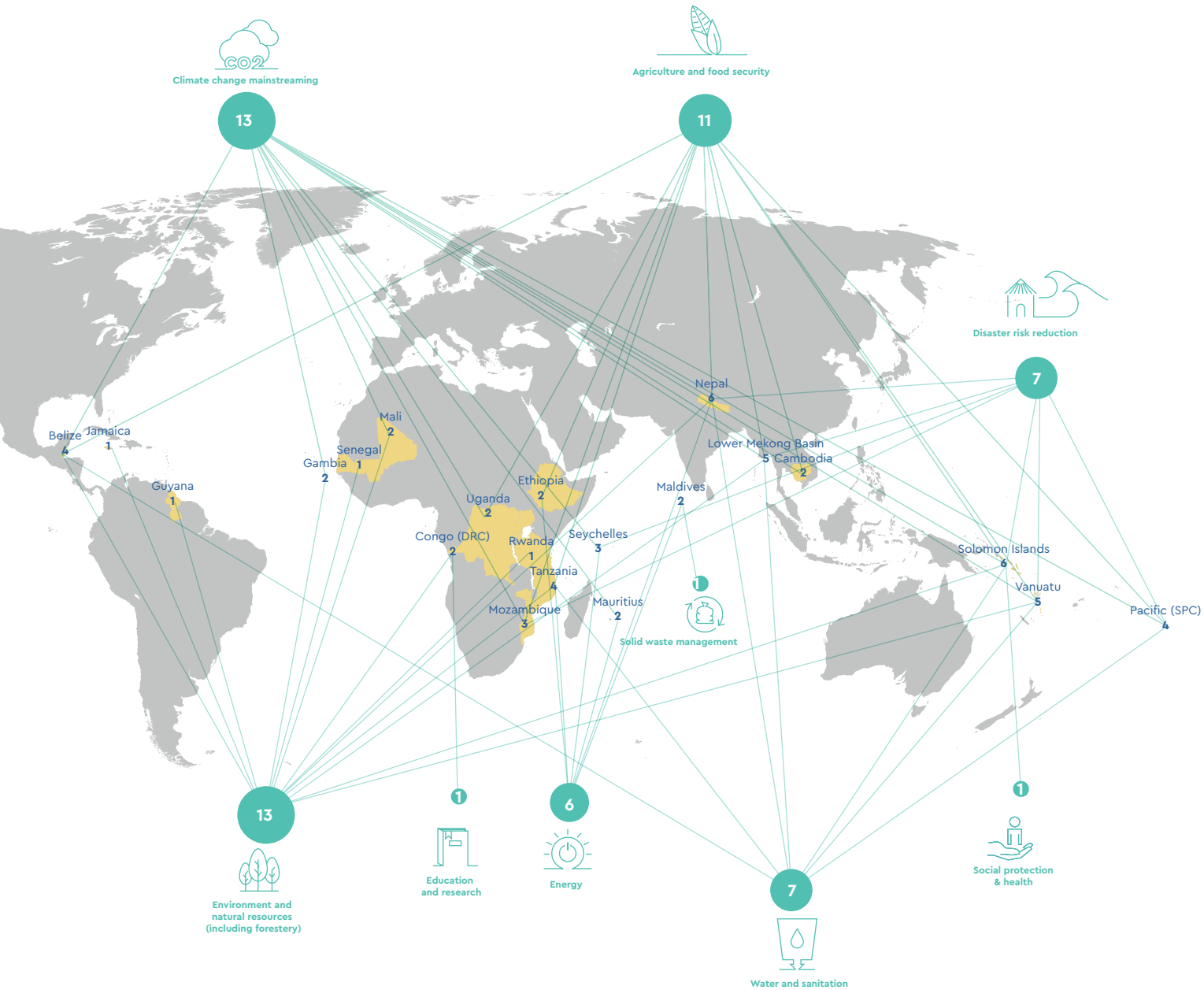


IMPACT ANALYSIS PER SECTOR

Most of the reviewed projects worked in more than one sector, as can be deduced from **Figure 2**. The list of sectors used for this analysis is available on the GCCA+ website. *Climate change mainstreaming* was added to this list and treated as a separate "sector".

Figure 2

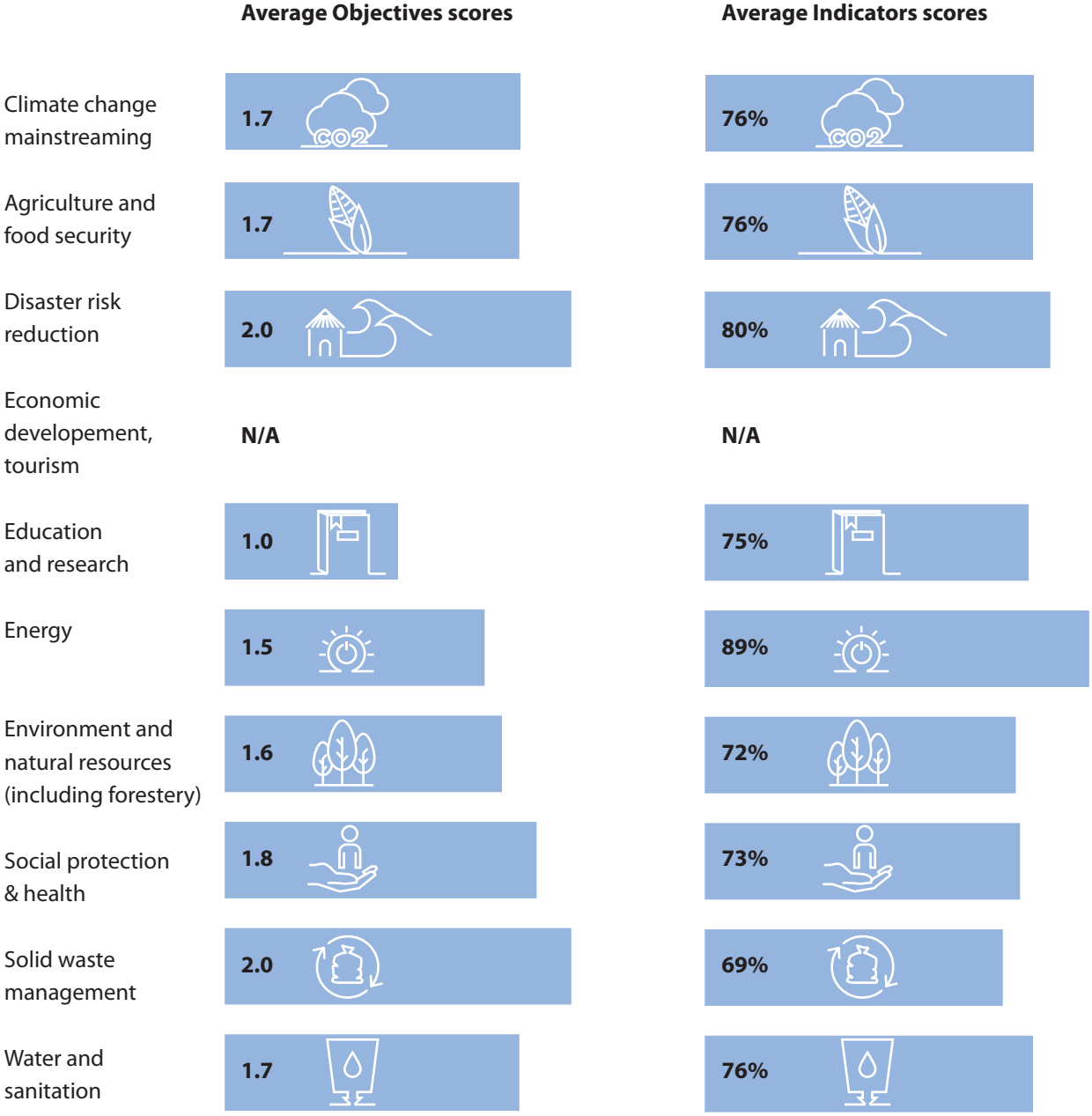
Projects per sector (and number of sectors per project).



Apart from *Climate change mainstreaming*, *Agriculture and food security* and *Environment and natural resources (including forestry)* were the most targeted sectors across all 21 projects. Given the overall initial focus of GCCA on adaptation this comes as no surprise. Quite a few projects worked on coastal management and protection issues, but since this is not a separate sector in the GCCA+ sector classifications these activities are included in the *Environment and natural resources (including forestry)* sector (when relating to natural assets) or the *Disaster risk reduction* sector (when relating to physical assets and early warning systems).

When mapping the scores for objectives and indicators against the sectors in **Figure 3** it can be concluded that there are no major differences between the sectors in terms of levels of achievement. The biggest outlier is the very good score for achievements in energy. Note that the sector *Economic development, tourism* was not covered by any of the country projects.

Figure 3
Average scores per sector



CLIMATE CHANGE MAINSTREAMING

In **thirteen** of the 21 countries/regions climate change mainstreaming was included in the project. In all these projects the mainstreaming interventions were combined with field level activities to pilot different adaptation activities. Climate change mainstreaming support usually included the following elements:

- support for overall national (and in some cases regional) CC policy and strategy development;
- support for CC mainstreaming in national sector policies and plans;
- support for strengthening CC aspects in the legal framework (acts, regulations) and in budgets;
- institutional support including awareness raising, capacity building and strengthening CC coordination mechanisms.

In *Nepal* and *Mozambique* mainstreaming was also promoted at the local level through local adaptation plans.

Impact summary

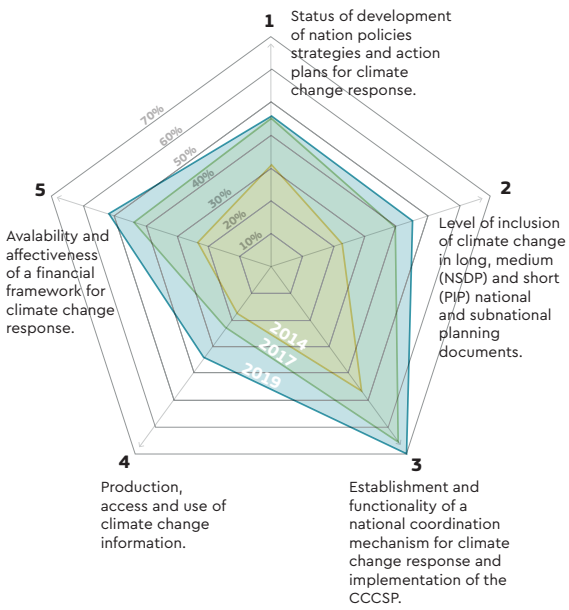
In most of the project logframes, impact is defined in terms of the formulation of new climate change policies, strategies and plans, inclusion of climate change in existing national and sector policies, strategies and plans and improved institutional coordination. As discussed, these are actually outputs and not indicators of impact. However as the logframes were designed, climate mainstreaming impact was largely achieved across the 13 countries where it was supported. A total of 64 national and regional policies, strategies and plans were improved or formulated for climate change action.

To achieve real impact it is necessary for the mainstreaming elements in policies and plans to be operationalised through budgetary allocations for CC action and ultimately, to be implemented as concrete climate change adaptation and mitigation actions. Progress in these aspects has been mixed. The I&S studies, in most cases undertaken several years after completion of the GCCA support, found scant evidence of these crucial steps having been achieved, although one should keep in mind that not all climate change related investments will be explicitly tagged as such in government budgets. The two positive exceptions are the projects in *Solomon Islands* and *Cambodia*.

EXAMPLES OF PROJECTS

CAMBODIA - GCCA supported the elaboration of a CC strategic plan and integration of CC in the National Strategic Development Plan 2014–2018. It also supported a CC financing network, with the I&S study confirming this was approved and has led to government co-funding CC interventions implemented by 15 ministries. A national M&E system was also developed to measure progress on CC mainstreaming (see spider diagram).

Chart of the trends of the 5 institutional readiness indicators.
Source: NCSD Data portal.



In **MOZAMBIQUE**, 39 local plans were developed. Although only 11 of these plans were (partly) funded during the project, the approach for local adaptation plans developed with GCCA support was later taken up by many other donors, with the I&S study confirming a total of 95 plans developed, with 35 of these (partly) implemented with funding from a range of donors.

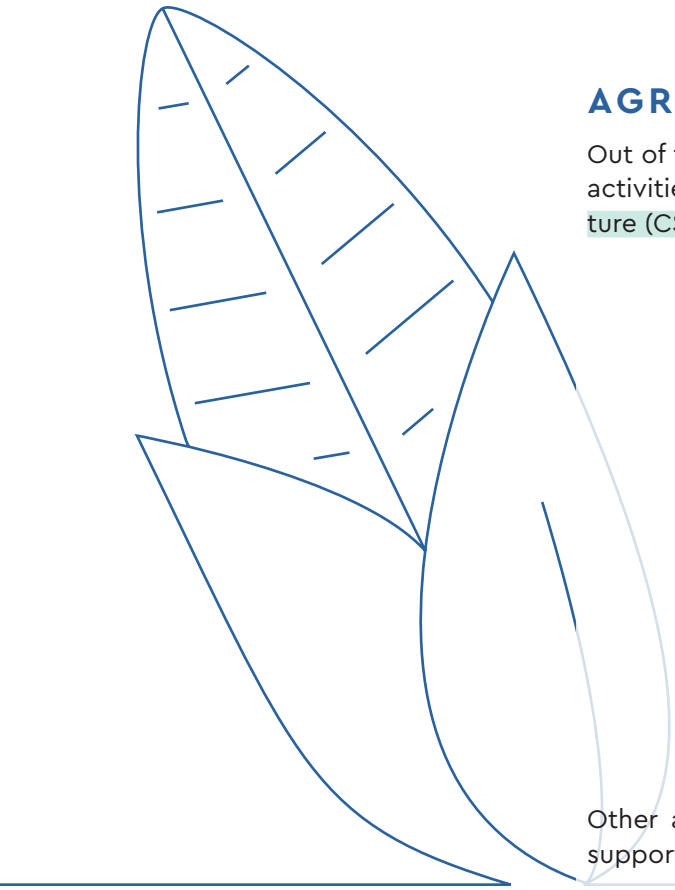
In **NEPAL,** GCCA support was part of a multi-donor support programme that elaborated over a 100 local adaptation plans that were for a large part also implemented. It has led to increased incomes from labour (for small infrastructure constructions) and from increased agricultural production (in particular through increased irrigation) and has led to reduced vulnerability for disasters such as landslides.

In Mozambique and Nepal the focus was on mainstreaming CC at the local level through local adaptation plans.

In the **SOLOMON ISLANDS** GCCA provided budget support for CC mainstreaming. It has led to integration of CC in major development and sector plans and, importantly, to leveraging government funding for implementation of CC activities (water supply, renewable energy, early warning systems, agriculture) in line with the National Adaptation Programme of Action. The I&S study found that the government allocated around USD 10.5 for NAPA interventions during project implementation and that budgets had since been further increased (although no quantification was provided).

A quote from the Director of the Climate Change Division confirmed this: "SICAP [Solomon Islands Climate Change Assistance Programme – GCCA] is now one of the CCD's development programmes and each year an allocation is made to allow the implementation of adaptation actions. All activity lines that were initiated under the EU-funded SICAP are more or less ongoing."

One main objective of the GCCA support for the **LOWER MEKONG BASIN** was to promote CC mainstreaming in each of the member states, with such mainstreaming based on best practices from field level projects. This was not achieved. Although a regional adaptation plan and strategy was developed that was to inform national CC policies and strategies, the I&S study found very little evidence that this downscaling to national level occurred. One reason cited for this limited uptake is the focus of the project on engagement with technical staff for the field projects, and only limited engagement with policy / strategy developers and decision makers.



AGRICULTURE AND FOOD SECURITY

Out of the 21 projects, **eleven** supported activities in this sector. Most activities promoted at field level fell within the Climate Smart Agriculture (CSA) approach and include, inter alia:

- Drought tolerant seeds
- Intercropping
- Improved livestock breeds, improved animal feed and improved veterinary services
- Water-efficient irrigation, often combined with solar energy for pumping water
- Horticulture / kitchen gardens
- Soil and water conservation (grass strips, terraces, check dams, trenches, retaining walls, etc.)
- Manure and composting
- Agro-forestry (often using trees with high value like fruit trees or spice trees)
- Improved post-harvest technologies such as better grain storage facilities.

Other activities in this sector include aquaculture, beekeeping and support for agro-financing.

Impact summary

The implicit assumption underlying the objectives and related indicators for most pilot projects at field level is that increases in agricultural/ livestock production as well as diversification within these sectors will contribute to food security which in turn will strengthen resilience.

All 11 projects working in this sector promoted increased production of existing agricultural practices through one or more of the climate smart agriculture technologies listed above. They also promoted a wide range of diversification options that included new crops (like mushrooms and sweet potato), beekeeping, small horticultural gardens, productive tree species (fruits, spices, coffee) and aquaculture. The main approach used for these interventions was the use of demonstration plots in combination with Farmer Field Schools and training of agricultural staff at local and national levels.

Only the project in *Rwanda* followed a fundamentally different approach by supporting the national land tenure reform programme instead of implementing direct agricultural and food security interventions).

Increased agricultural production through the interventions were reported in *Tanzania*, *Ethiopia* and *Uganda*, while the I&S study in *Belize* found indirect evidence of improved livestock. It does not mean the projects in other countries were not successful in this respect but rather that no clear evidence was found in the studies to confirm this. For example the project in *Nepal* did not monitor increased production but instead monitored increased income from agricultural activities.

While increased and diversified production and income is likely to lead to improved food security, only *Uganda* actually measured changes in food security.

Projects like those in *Tanzania* that reported increased rainfed crop yields assume this is a direct result of adopting CSA practices. However, variations in rainfall from one year to the next are the main deciding factor for rainfed crop yields and are not necessarily a climate change

phenomenon. Long term monitoring of differences in crop yields between traditional and CSA fields in the same year would be required to be able to assess the actual contribution of the CSA measures to improve rainfed agricultural productivity.

In *Nepal*, *Uganda* and *Ethiopia*, the work at field level on climate smart agriculture and diversification was used to inform mainstreaming climate change into national agricultural policies, strategies and programmes. This has led to the replication of best practices in other areas thereby considerably increasing the impact that was (indirectly) achieved through the GCCA support.

EXAMPLES OF PROJECTS

BELIZE - GCCA supported improved water supply and fodder for livestock, using the Farmer Field School approach to train farmers. The positive impact of these interventions became evident in 2019 (five years after project closure) when a drought period of eight - nine months hit the region. During this period, cattle became lean, but survived, where according to the farmers, many would normally have perished.

The project in **ETHIOPIA** reported increases in yields of teff (23%) and wheat (88%) based on a sample of areas where the project had intervened. The I&S field visit, undertaken in 2020 learned from visited communities that their maize production had increased from 16 to 36 quintal per ha; and teff from 12 to 20 quintal per ha since the end of the project in 2015.

Field level pilot projects in agriculture / livestock were supported in 34 micro-watersheds (woredas), with farmers successfully encouraged to participate by providing a risk insurance / compensation scheme in case the pilots failed. 10 best practices from the pilots were documented and integrated in the Ministry's climate resilient sustainable land management and agriculture strategy and in the Climate Smart Agriculture field manual (under preparation at the time of the field mission). The fact that the GCCA support was integrated in the national Sustainable Land Management programme helped ensure this effective mainstreaming.

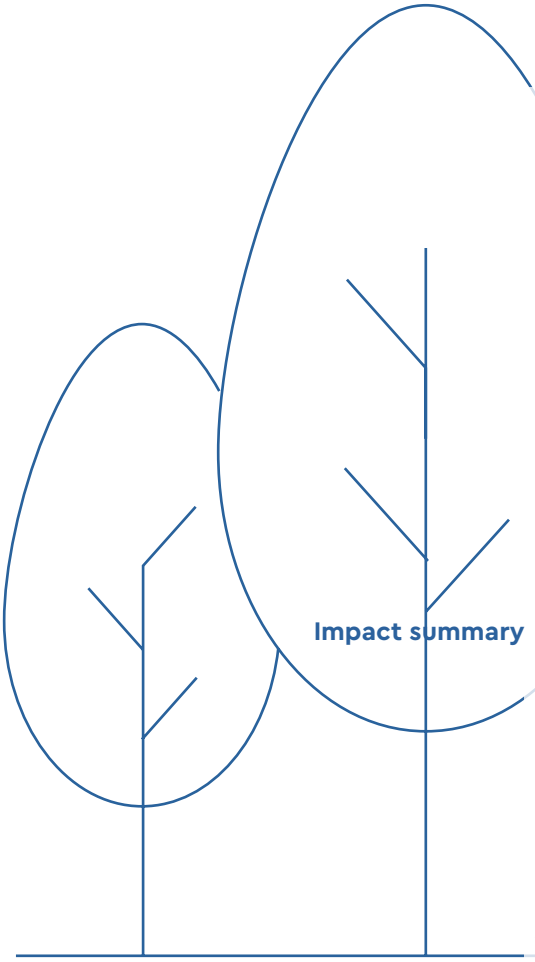
The **UGANDA** project did not report exact increases in agricultural production per unit area, but at overall volume level for the project area. It reported that for maize and beans the target of 5% increase in volume was achieved. It also reported a decrease in production volume for groundnut linked to a decrease in area planted (reasons for this were not provided). At the impact level, the project monitored improved food security through six food access factors. The I&S study reported an 83% success rate for this impact indicator.

The project in **NEPAL** supported increase in production of rainfed agriculture as well as agricultural production through construction of small irrigation schemes, with 76 ha brought under irrigation. The project reported that 5,976 farmers increased their income from agriculture through all different measures.

The pilot projects in **TANZANIA** based on the eco-village approach reported rainfed agriculture yield increases between 25 and 100%, largely attributed to the adoption of CSA practices. Improved livestock breeds and crop diversification provided increased incomes. More than 50% of beneficiary households reported that they could afford three meals per day at the end of the project, with these improvements still confirmed during the I&S study around five years after project closure. Exchange visits between communities were an important tool in promoting replication of best CSA practices.

RWANDA - GCCA co-funded the national land tenure reform programme, based on the assumption that increased land rights would lead to increased investments in adaptation actions such as soil and water conservation. However, the global GCCA evaluation of 2014 could not find any evidence that resilience improved as a result.

Also, the land reform most benefitted those who already had resources. They could register their lands and use it as collateral for loans. Many of the poorest households however could neither afford to register their parcels due to high fees (around USD 30, irrespective of plot-size), nor use them as collateral due to their small size.



NATURAL RESOURCES MANAGEMENT, INCLUDING FORESTRY

Out of the 21 projects, **thirteen** undertook interventions in this sector. In terms of field level projects, the main activities revolved around:

- Forest protection / Afforestation / Forest regeneration, in support of watershed management, sustainable firewood production and climate change mitigation;
- Coastal management through nature-based solutions such as mangroves protection/expansion
- The protection of coral reefs and valuable marine areas;
- Livelihood activities based on sustainable use of natural resources.

Impact summary

Projects in countries / regions with vulnerable coastal areas all worked on coastal protection. In *Belize*, Tonga (one of the *Pacific Small Island States*), *Jamaica*, *Guyana* and *Mozambique* this work focused primarily on mangrove protection with varying degrees of success. While all projects except in Tonga succeeded in protecting existing or planting new mangrove stands, the areas protected were generally small, with around 1,200 ha in total protected and restored. Mainstreaming mangrove protection into national policies and plans was and aim of the projects, but was only successful in *Guyana* and *Jamaica*. In *Belize* and The *Gambia* the link between the field projects and the national level institutions was weak and not conducive for effective mainstreaming. In Tonga the I&S study found that most of the mangrove planted by the project had died, likely due to wrong site selection.

In *Cambodia*, the *Solomon Islands*, the *Lower Mekong Basin*, *Senegal* and *The Gambia* the activities in this sector focused on research, planning and monitoring of coastal management, combined with small pilot projects. In *Cambodia* and *Solomon Islands* the information from the research and pilot projects was used to inform effective mainstreaming efforts at the strategic level. In the *Lower Mekong* the results were aimed to inform national strategies, but this has had limited success with the I&S study singling out the failure to engage high level decision makers as one of the main culprits. In *Senegal* and *The Gambia* the support was meant to elaborate and adopt Integrated Coastal Zone Management (ICZM) Plans. In *The Gambia* only a draft plan was ever developed, and the I&S study found that no progress has since been made (see also under the DRR section). In *Senegal* the planned ICZM action was transformed into different initiatives, including local plans and a national "coastal law" that were supported by the World Bank.

The two countries where the projects focused mainly on forestry interventions were the *Congo (DRC)* and *Mali*. These projects had a direct positive impact on carbon sequestration while also providing other benefits, such as building a supply of firewood in *Congo (DRC)*. In Nepal some community forestry interventions were undertaken that included afforestation for river-bank protection and bush fire control measures. The extent to which these are still functional and have had impact in terms of e.g. reduced fires and reduced landslides could not be established by the I&S study.

GCCA action to mainstream climate change in Congo (DRC): support for training and reforestation
© EU GCCA+ 2019 – Photo Catherine Paul

EXAMPLES OF PROJECTS

CONGO (DRC) - The GCCA supported firewood plantations around Virunga (a total of 3,152 ha planted) with the double aim of reducing pressure on natural forests while providing income to nearby communities through firewood production and sales to cities like Goma. Thanks to a good value chain analysis, strong implementing partners and the effective use of the financing to fund the initial investments (rather than the operational costs), the project achieved both objectives and more plantations (at least an additional 2,000 ha) have been established since the project closure.

GUYANA – The GCCA support in Guyana for mangrove protection had yielded somewhat disappointing results by the end of the project, with less area secured than targeted. However, the I&S study found that a few years down the line the mangrove protection actions had expanded well beyond the project targets, which can be at least partly attributed to the impetus provided by the GCCA project, which promoted a highly participatory model (with local mangrove "rangers"), careful site selection based on good research and strong alignment with the national mangrove

JAMAICA – With GCCA funding, Jamaica worked on the "ridge to reef" approach, which is based on the concept that protecting hillsides from degradation will help protect the coastal and marine ecosystems. Through a strong cross-sectoral approach, the project achieved good hillside protection through reforestation, thereby reducing sediment deposits in the coastal areas. Permanent monitoring systems for the hillsides and for coastal ecosystems allow for timely identification of problems and deciding on corrective measures. All lessons learnt have been documented in high quality guidelines and audio-visual material. The I&S study found all these systems still fully functional.

MALI – The reforestation / forest regeneration component of the GCCA support was well below its target (14,800 ha target – 9,788 ha achieved), with the I&S study noting that this achievement was only a drop in the ocean compared with the ongoing high level of deforestation in the country. A further issue noted during the I&S field visit is the fact that most planted trees were exotic species which could undermine local ecosystems/ biodiversity. The lack of a value chain analysis also meant that species planted for commercial use may not be viable. The I&S study also found very little evidence of increased awareness on the importance of sustainable forest management.

WATER SUPPLY AND SANITATION

Of the 21 countries/regions, **seven** undertook interventions in this sector, primarily through the multi-country Pacific Small Island States project which focused on water supply interventions. This should come as no surprise since freshwater resources are limited in many of SIDS and are threatened by increased saltwater intrusion due to sea level rise. Water supply is also often disrupted due to damage from cyclones. The approach used to improve safe water supply in these countries was through the promotion of various rainwater harvesting technologies. In other countries rainwater harvesting was also supported but complemented through support for more "traditional" water supply technologies such as boreholes, wells and gravity systems.

Impact summary

Overall, access to secure water supply in the Pacific SIDS has been improved through the introduction of rainwater harvesting technologies. The scale of impact in terms of the number of benefiting households has been rather modest with around 400 households across three small island states (Micronesia, Niue, Palau). This low number of beneficiaries can be explained by the fact that the projects were implemented in outlying islands with low population densities. However, the depth of impact for the benefitting households can be considered as very high given the difficulty of ensuring access to a safe water source in those areas (Micronesia). Except for in Niue, replication has been low due to the high cost of the rainwater harvesting technology.

In other projects where water supply interventions were implemented (*Belize*, *Nepal*, *Vanuatu*, *Tanzania*, *Solomon Islands*), the technologies used included rainwater harvesting but also boreholes, shallow wells and gravity systems. The number of beneficiary households are only reported in the I&S reports for *Belize*, *Vanuatu* and *Tanzania* and totalled around 5,600. The project in Vanuatu reported further anecdotal evidence that suggested a reduction in water borne diseases in beneficiary communities due to the improved access to safe water. While the interventions led to direct positive impacts on water security for the beneficiary households, the I&S studies found that construction issues as well as lack of maintenance have, over time, led to the loss of functionality of a number of these supply systems (*Belize*). Long term impact prospects are therefore not very favourable. The high initial cost of construction also means that replication is highly dependent on donor funding, a general challenge of water supply projects.

The projects in the *Lower Mekong Basin* project and in *Belize* undertook hydrological studies, as input for national / regional water supply planning, but in both cases the I&S studies did not find any evidence that the study results were effectively used for this.

Apart from water supply interventions, *Nepal* also supported sanitation through construction of 306 toilets. However, the I&S study concludes that, based on anecdotal evidence, the toilets are not being maintained due to unclear arrangements on ownership and responsibilities for maintenance.

In Igunga, central Tanzania an eco-village improves climate change resilience
© EU GCCA+ 2018 – Photo Imani Nsamila

EXAMPLES OF PROJECTS

PACIFIC (SPC) – GCCA support for rainwater harvesting in Niue included a facility for local moulding of rainwater harvesting tanks. While the target of households with operational rainwater capture systems (60% of all households) was not achieved by the end of the project (mostly because households needed more time to organise the required financial contribution), the moulding facility and related capacity building efforts have led to continued installation of rainwater harvesting system and the I&S study (undertaken around four years after the intervention) concluded that the target has since been surpassed.

In the Federated States of Micronesia the project supported the installation of rainwater collection tanks at household level on Fais Island, and training in the application of flush converters and regular maintenance of the systems. The impact in terms of reduced vulnerability to disasters was clearly demonstrated during typhoon Wutip in February 2019 when beneficiary households had sufficient good quality water, and even provided water to communities on nearby islets that did not have recourse to harvested rainwater.

VANUATU – GCCA support for water supply was channelled through a World Bank project. The support for gravity fed systems in particular was successful with systems continuing to provide water for several villages with a total population of 350 HHs. Monitoring data indicate that it has led to a reduction of water borne diseases in these villages.

The I&S study also found that the approach employed by the Project in the water security component, using the Department of Water Resources' National Implementation Plan (NIP), has enhanced the Department's efforts in rolling out of Drinking Water Safety and Security Plans (DWSSPs) in other island sites outside of the GCCA locations.

Water supply interventions in **BELIZE** included rainwater harvesting as well as borehole construction. Respecting the boreholes, the I&S study (undertaken around five years after the project closure) found that of the 12 boreholes drilled only eight were still functioning. The others were abandoned because they no longer provided sufficient water volumes. This indicates that the siting for the boreholes did not sufficiently consider the groundwater situation. The I&S study indicated that it is becoming increasingly difficult in Belize to find aquifers with good water reserves because groundwater levels are decreasing, a trend that climate change is likely contributing to.

DISASTER RISK REDUCTION

Disaster risk reduction interventions were undertaken in **seven** of the 21 countries/regions.

The main types of interventions in this sector included:

- Early warning systems;
- Construction of flood protection infrastructure.

Note that some DRR measures are directly sector related and are discussed under those sectors:

- Nature-based coastal protection through mangroves is covered under the NRM sector;
- Interventions in the water supply sector that also help vulnerability in case of disasters like cyclones and droughts are covered under the Water and sanitation sector.

Impact summary

The ultimate impact of DRR support is only in evidence in the case of disasters. Except for in the Seychelles, none of the I&S studies made any reference to disasters having occurred between the time of the intervention and the studies' field phases so the actual effectiveness of the DRR measures in reducing the impact of disasters could not be assessed.

In the *Seychelles* several DRR measures were piloted including tree planting, beach nourishment, constructing, culverts, desilting rivers and rock armouring. The latter three were found to be effective to reduce (local) disasters: culverts and desilting have reduced flooding risks in several areas, with no floods recorded in those areas since their construction in 2013. Rock armouring has been shown to protect beaches and even reclaim land (some of which is now used as a picnic area by locals). This measure is now being replicated at other beaches threatened by high seas.

Physical DRR infrastructure was also constructed in *Mozambique*, the *Marshall Islands* and *The Gambia*. In *Mozambique* the project constructed beach protection walls, storm-proof houses and grain storage cylinders as pilot projects. At the time of the I&S study (undertaken before a major cyclone hit the area where they were constructed) the protection walls and houses were still in use, but there were signs of damage indicating a lack of maintenance and no replication of these pilots had taken place. The grain cylinders no longer had a roof and were not being used. On the *Marshall Islands* (one of the *Pacific Island States*) the project constructed a causeway to allow people better access to essential services like clinics and schools, but impact was limited. The project in *Gambia* constructed one dyke against salt intrusion, which had some small-scale direct impact by providing women the opportunity to start small horticultural gardens behind it but it was not replicated. Also in *Gambia* the project undertook several feasibility studies for coastal protection but the results have so far not been used to improve coastal management.

In *Mozambique*, the *Solomon Islands* and the *Seychelles* the projects supported early warning systems through support for infrastructure, capacity building and institutional support. While the I&S studies found the supported infrastructure and systems and structures still intact,

these had not yet been put to the test at the time of the I&S studies so actual effectiveness during major disasters could not be assessed.

In the *Lower Mekong Basin* the project did not implement DRR measures but undertook basin-wide assessments of the impact of CC on flooding and droughts. The results of these studies have helped built capacity of technical staff of membership states, but the I&S study did not find any evidence that the results have been used effectively to inform national CC strategies and programmes.

EXAMPLES OF PROJECTS

SEYCHELLES – The project trained staff of the Department for Disaster Risk Management in disaster preparedness and early warning. The Department has used these skills to develop 26 District Disaster Risk Management and Contingency Plans in 2018, one for each of the 25 districts of the Seychelles and an additional one for Silhouette Island These contingency plans provide important tools to guide quick action at district level in case of major natural hazards, although they haven't been put to the test yet so their ultimate impact is still unknown. At national level, the automated weather stations procured with GCCA support have supported the overall national early warning system.

SOLOMON ISLANDS – One of the pilot projects supported by GCCA led to the establishment of an Early Warning System for Natural Disasters with the construction of a Provincial Emergency Centre. The Centre now keeps people in the communities informed in a timely way about approaching disasters such as frequent cyclones. This for example, allows farmers to take precautionary actions to ensure their crops are not destroyed.

GAMBIA – The GCCA project undertook feasibility studies for coastal protection options including detailed costing. However, the I&S study (undertaken 4 years after the project closure) found that no progress was made in determining specific options, let alone implementing them.

An Integrated Coastal Zone Management Plan was also developed but has so far not been formally approved by Cabinet. The I&S study also noted that it is not addressing a key aspect of coastal zone management in The Gambia, namely the need for conflict resolution mechanisms.

MARSHALL ISLANDS – An elevated causeway was constructed with the objective of allowing coastal communities access to essential services without the need for a boat crossing, which at times can be dangerous. However, a second causeway was needed to reach that objective, but was never constructed. Also the causeway was supposed to be protected through coastal replanting which was never properly done. While people are happy with this causeway, real impact in terms of permanent access to essential services and a permanent escape route in case of disaster was not achieved.

ENERGY

In **three** countries, all SIDS located in the Indian Ocean (*Maldives*, *Seychelles*, *Mauritius*) the development of the renewable energy and energy efficiency sector was (one of) the main focus areas of the GCCA projects, while in **three** other countries (*Tanzania*, *Nepal* and *Ethiopia*) energy interventions were included at the more local level as part of broader set of community (pilot) projects. This included for example promoting fuel-efficient stoves, biogas, and solar energy for households and communities and the development of mini-hydropower schemes.

Impact summary

In *Mauritius* and *Seychelles*, the GCCA project supported strengthening policy, legal and institutional frameworks in the energy sector. The I&S studies for these projects found that this improved framework has spurred the development of the renewable energy sector. The studies for these two projects did not find any concrete data on actual impact in terms of increased use of renewable energy, or on the implementation of energy efficiency measures and reduced CO2 emissions.

In the *Maldives* the project supported the installation of a solar-diesel hybrid system on one of the islands. It led to 589 tCO2 in emission reductions by the end of the project. The positive experience with this new system laid the groundwork for scaling up investments in the renewable energy sector with support from other donors (the World Bank and the African Development Bank).

Support for local level renewable energy and energy efficiency in *Tanzania*, *Nepal* and *Ethiopia* has led to a high number of outputs – such as large number (over 20,000) of fuel-efficient stoves and solar household micro-systems (over 3,000) being installed. The actual impact of these outputs in terms of changes in energy consumption and possible livelihoods impacts shows a mixed picture, depending on the actual adoption and use of these technologies.

The project in *Nepal* also supported mini-hydropower schemes, and 1,315 were constructed. Although the level of functionality of these schemes could not be directly verified during the I&S study, stakeholder feedback indicates that maintenance of the schemes is a challenge due to the limited availability and costs of spare parts.

EXAMPLES OF PROJECTS

The GCCA project in **MAURITIUS** supported the implementation of the long-term national energy strategy. Support has catalysed production of renewable energy by funding feasibility studies for a windfarm and a gas-to-energy project, both of which are now operational. More broadly, the I&S study concluded that the support and outputs of the GCCA project have boosted innovations and behavioural changes in Mauritius' energy sector. The strong focus on energy efficiency and greater use of renewable energy in the project have encouraged the Government of Mauritius to undertake/seek partners for other projects for energy efficiency and renewable energy.

SEYCHELLES – With GCCA support a new policy framework was developed for the energy sector with a clear focus on renewable energy, energy efficiency and better involvement of the private sector. Crucially, the policy was also translated into legislation through a new Energy Bill. This bill established an effective institutional framework for the energy sector and allowed the country to participate in the Clean Development Mechanism (CDM). The legislation also promotes and regulates the role of private sector in the energy sector, and this has led to the implementation of several new renewable energy projects

Efficient biogas stoves in Arusha district, Tanzania © EU GCCA+ 2018 – Photo Imani Nsamila

EXAMPLES OF PROJECTS

In **ETHIOPIA** and **NEPAL** on the other hand, the I&S studies found that most of the installed fuel-efficient stoves were still in use. In Nepal this was especially the case in areas where no LPG alternative was available. In Ethiopia the fuel-efficient stoves had good adoption rates because of reduced smoke production and for economic reasons: the project measured a 40% reduction of charcoal use for these stoves.

The I&S study in **TANZANIA** found that many of the fuel-efficient stoves that were installed during project support were no longer being used. It was reported that the stoves were not responding to an urgently felt need, which would imply that fuelwood supply is not a major issue in the areas where the stoves were introduced.

In Ethiopia, Nepal and Tanzania, the GCCA project supported the introduction of fuel efficient stoves (for firewood in Tanzania and Nepal; for charcoal in Ethiopia).

Other sectors

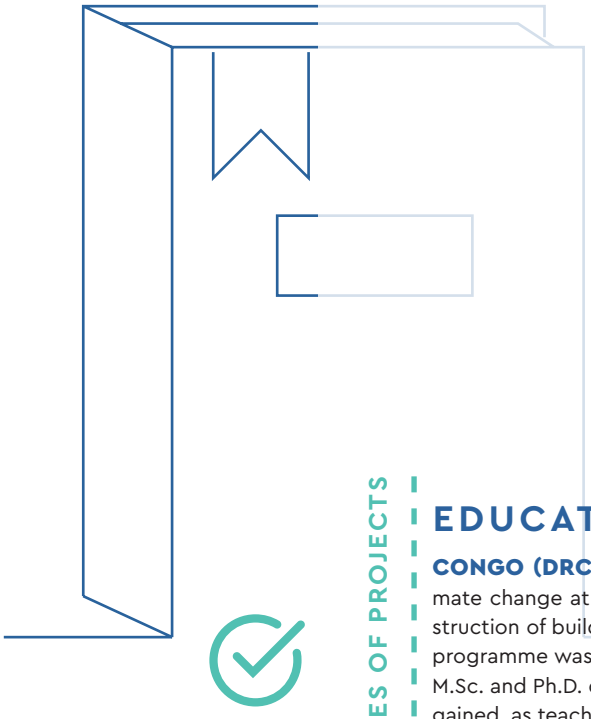
One project undertook interventions in the *Solid waste management* sector (*Maldives*) with another supporting action in the *Education and research* sector (*Congo DRC*).

(Note: *Social protection and health* was included in the GCCA *Solomon Islands* project but only as it directly related to mainstreaming and *DRR* so is not discussed separately).

EXAMPLES OF PROJECTS

SOLID WASTE MANAGEMENT

MALDIVES - With GCCA support a pilot project on solid waste management was implemented on five islands. The I&S study found that the intervention was highly successful with clear environmental impact. At project closure three of the five islands had a fully functional Solid Waste Management system, with a fourth island completing its system after project closure. On all five islands, composting, recycling and storage of residual waste is taking place at regular intervals, after being transported to a regional processing facility. Over 90% of households on the islands are now segregating their solid waste, and many are paying user fees (on 2 islands 100% of households are paying these). There is no longer any noticeable spillage of waste on any of the five islands.



EXAMPLES OF PROJECTS

EDUCATION AND RESEARCH

CONGO (DRC) – GCCA supported the development of a training programme on climate change at the University of Kisangani. The support included renovation and construction of buildings suitable to host the training. The I&S study found that the training programme was still active four years after project closure, allowing students to obtain M.Sc. and Ph.D. qualifications. These graduates also actively disseminate the knowledge gained, as teachers and in other capacities The I&S study provides the example of one of these graduatesd who himself is now a lecturer at the University of Kisangani and at an international forestry college, teaching around 70 students annually on climate change and sustainable forest management.

GENDER ASPECTS

The formulations in the project logical frameworks did not pay much attention to gender aspect. Only one project (*Vanuatu*) had a specific gender indicator, although most others did report data disaggregated by gender for beneficiaries.

Although largely missing in the logframes, the I&S studies found that gender issues were addressed in most projects, with the exception of *Belize*, *Jamaica*, the *Seychelles*, *Mozambique* and *Maldives*, where the studies found no evidence of attention for gender aspects.

In projects where gender issues were considered, the I&S studies found considerable positive impacts. In particular, these included:

- A good balance between men and women among all project beneficiaries, with women making up between 40–60% of reported beneficiaries;
- Women's empowerment through more women in decision-making positions, NRM and income generating activities focusing specifically on women (*Senegal*, *Tanzania* and *Uganda*);
- Health and time benefits resulting to women related to use of fuel-efficient stoves and better access to a safe water supply source.

Projects that impacted on land rights and land use reported positive impacts in terms of increased land security for women and an increased role of women in decision-making relating to land use, while *Rwanda* also reported negative impacts on women access to land.

EXAMPLES OF PROJECTS

CONGO (DRC) – The I&S study found clear signs that women were more involved in decision making at the household level through the GCCA support for afforestation for firewood. An example is the fact that some male planters requested their wives' agreement to carry out a plantation as they are in charge of farming the agricultural area to feed the family, and the planted area replace or encroach upon this agricultural area.

RWANDA – The I&S study found that the GCCA support for registration of land tiles has been especially successful in promoting social inclusion and gender equity. More than half of all privately held land is now held singly or jointly by women. The proportion of women who accessed land titles singly or jointly as a result of the programme increased from 23.8% in 2012 to 63% in 2017.

SENEGAL – The I&S study found that women were still strongly involved in mangrove protection. They are the primary direct beneficiaries of improved mangrove stands because they directly contribute to improved fish stocks. Interviewed women indicated they were now (at four years after project closure) catching four times more fish than before the intervention.

In **TANZANIA**, the project promoted improved goats and chicken breeds, types of livestock that women are traditionally in charge of. The project reported a 64% increase in income for the women involved in these activities, although the I&S study could not verify in how far these activities were continuing still.

In **UGANDA** the project promoted mushroom production, which only requires small areas and can be done near the homestead. This favoured involvement of women in this activity who confirmed during the I&S study (3 years after project closure) that they were still making good income from this activity.

In Tanzania and Uganda the projects developed income generating activities specifically targeting women.

However, the study also noted that there is evidence that women in de facto and polygamous marriages do not have the same protections. One study claimed that the gender provisions of the land law actually discouraged some men from entering formal marriages. With this last issue increasing in trend, the Rwandan government has recognized the need to address this through policy solutions. However, the I&S found no evidence of this being addressed in the 2019 National Land Policy update

INDIRECT IMPACTS

The I&S studies also looked at any signs of indirect impacts that is, impacts that were not anticipated and not included in the logical framework. Several indirect impacts were identified, most of them positive. These are listed belox.

The main negative indirect impact noted in the I&S studies is possible increase in inequality at the community level, due to financial and cultural barriers for the poorest quintiles in these communities to participate in climate change interventions.

Figure 4

Main positive indirect impacts reported by the I&S studies

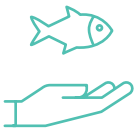
Increase in income from diversification helps households pay for school fees and other essential goods and services.

More reliable access to markets through flood protection measures means better income from selling produce.

Strengthened inter-sectoral coordination mechanisms, as a spin-off from support for CC policies and strategies.

Increased external (private sector and donor) funding for climate change interventions thanks to GCCA supported CC policy and legislative frameworks.

Increased income generating and recreational opportunities in coastal areas for example through protection of beaches, mangrove-tourism, increased fish stocks.



Increase in biodiversity values through protection of wetlands, forests and marine areas.

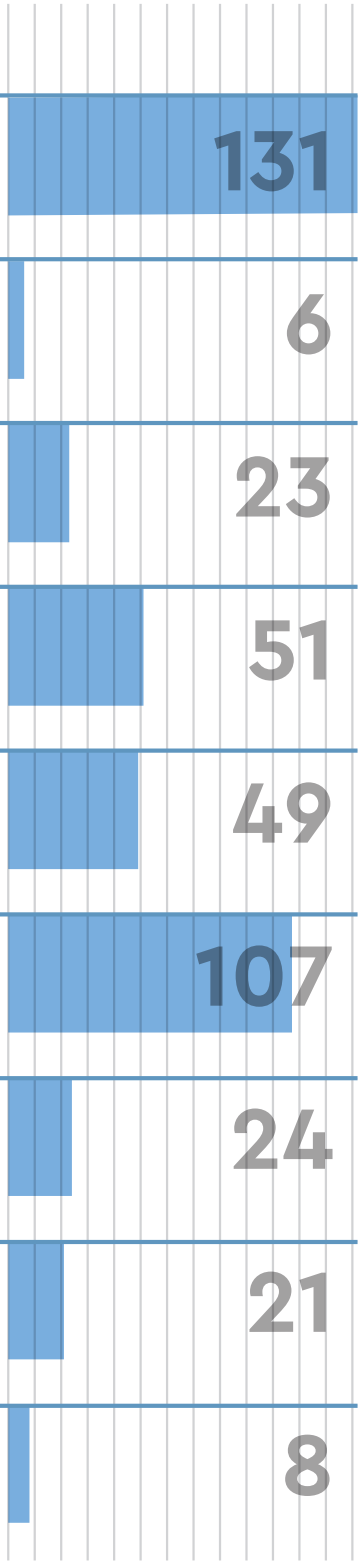
SUSTAINABILITY ANALYSIS

To assess sustainability aspects, the I&S field studies verified the extent to which outputs (systems, services, infrastructure) delivered by the projects were still functional.

A total of 420 outputs (systems, services and infrastructure developments delivered by the projects) were identified for analysis during the I&S studies. For 85 of these it was not possible to find any information (and they are therefore ignored in the analysis). All of the remaining ones were scored.

Figure 5

Total number of systems / services per category



Adaptation measures – all field level activities implemented to strengthen the adaptive capacity of the population. It includes activities such as livelihood diversification, climate smart agriculture and forestry (when mitigation was not the main objective).

Awareness raising – includes for example support for school clubs and regular awareness campaigns.

Capacity development – Capacity development is an important cross-cutting element in most other categories. It is only counted separately when it relates explicitly and exclusively to the continued use of skills / knowledge acquired.

Climate change mainstreaming – all mainstreaming results at national and local level.

DRR measures – all field level measures implemented to reduce vulnerability to disasters. Includes for example coastal management (including nature-based solutions like mangroves) and early warning systems.

Institutional strengthening – All activities that support institutional development at regional, national and local level, including systems development, equipment, and infrastructure. It also includes all support for strengthened inter-institutional coordination / collaboration.

Knowledge management – all activities in support of collecting, analysing and sharing information in support of CC adaptation and mitigation.

Mitigation measures – all field level measures that contribute directly to CC mitigation. Includes renewable energy and energy efficiency as well as forestry activities were mitigation was the main objective.

Other – all results not covered under any of the above categories. Includes activities such as solid waste management, as well as cross-cutting issues such as gender / social inclusion.

The quantitative assessment was based on the following scoring scale:

1	2	3	4
Disappeared or functionality lost	*Still existing but with quality and coverage issues*	*Status quo (fully sustained)*	*Fully sustained and expanded / improved*

Figure 6

Average sustainability score per category

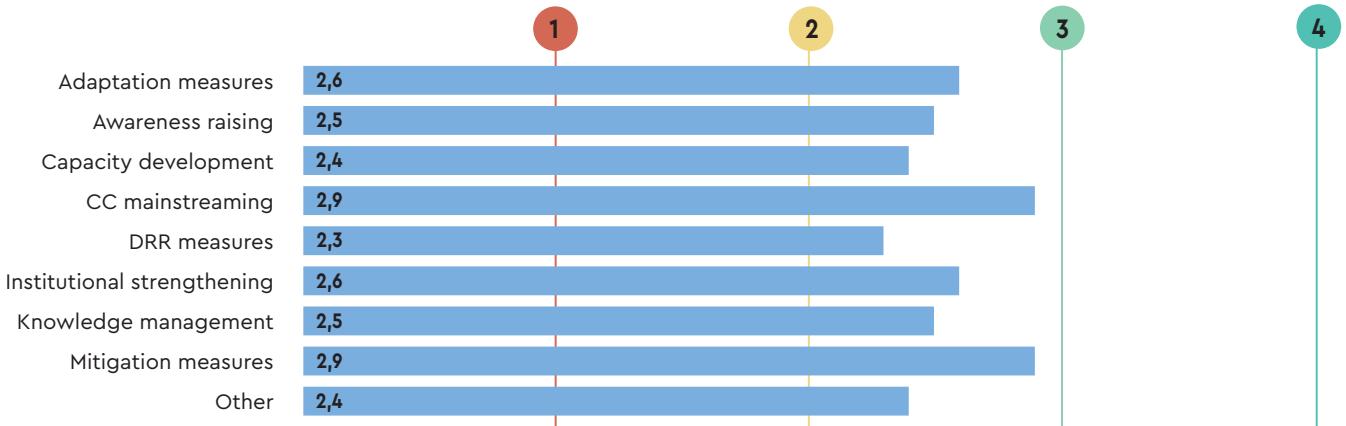
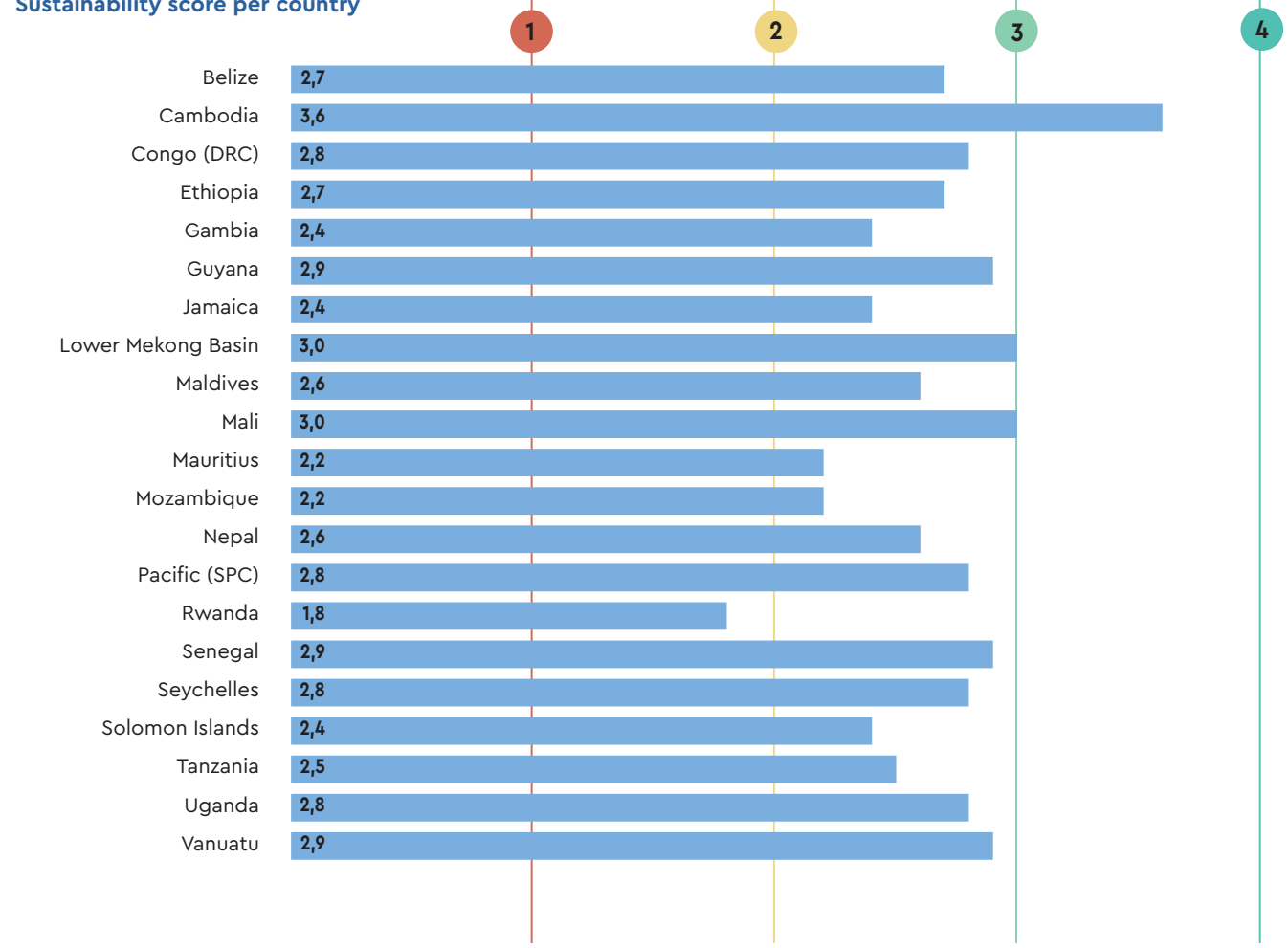


Figure 7

Sustainability score per country



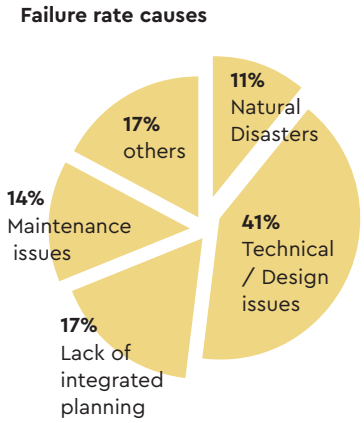
The overall average score across all categories and all projects is 2.6, indicating that the supported systems, services and infrastructure have a reasonable level of sustainability but that signs of replication are rare. Because these are output level results, the score does not imply that it has also led to sustainable impacts, although sustainability of outputs is an important contributing factor to sustainable impact.

The results per category show that the level of sustainability is similar across all categories, with the scores ranging between 2.3 and 2.9 (with standard deviation of around 0.9 for all categories). The results per project show more significant differences, with *Cambodia* in particular showing very good sustainability scores and Senegal scoring significantly below most other projects.

EXAMPLES OF PROJECTS

In discussing the high sustainability score for **CAMBODIA**, the I&S study emphasised that a follow-up GCCA phase had been implemented and completed prior to the I&S. Interviewees were unanimous in acknowledging that Phase 1 laid the foundations, but noted that phase 2 had been indispensable to consolidate the results and ensure sustainability. So, it is most likely that without a second phase the levels of sustainability would have been substantially lower.

The GCCA support in **NEPAL** was embedded in a larger multi-donor funded programme on climate change. The lead donor at the time, the UK Department for International Development (DFID), undertook a detailed learning study on the sustainability of supported small scale infrastructure. From the 247 sites that were visited infrastructures were still functional in 207 locations. This represents an average failure rate of 16.1% after less than 3 years from construction. The chart is extracted from the report and illustrates the main causes for loss of functionality and their relative importance. In about 71% of the cases, the loss of functionality was due to causes 'under human control', meaning that failure could have been prevented through appropriate design, planning and maintenance measures.



In **SENEGAL** the low score is caused by the fact that both at field level (concrete coastal management measures) and at higher political level there were few signs of continuation or of the replication of activities. Of the six areas planted with "filao" and mangroves only two were still in good condition at the time of the I&S study (four years after project closure). Lack of involvement of local government staff and the local population is cited as a cause for this low sustainability. At the national level, the coastal monitoring with GIS was not continued due to financial constraints, while the I&S study found that the ICZM strategy lacked recognition at national level because of limited consultation processes with government institutions that were not directly involved in its elaboration.

Children and youth learning to protect the forest in Yangambi, Congo DRC © Axel Fassio/CIFOR

MAIN DRIVERS OF SUCCESS

Since the scoring for impact and sustainability had to be justified with a qualitative explanations, the 21 studies provide a wealth of information about the reasons behind successful interventions and the causes of failed or less successful ones. It is these explanations that form the basis for this section on the main drivers of success, challenges and failure.

One overall conclusion that can be drawn from the studies is, success and failure for impact and sustainability are largely determined by the same drivers. Where good impact was achieved, sustainability has generally been good; where impact was low, sustainability challenges usually contributed to it. The converse also applies: where sustainability is good, there is generally good impact and where sustainability is low, impact is low or absent.

OWNERSHIP AND COMMITMENT FROM STAKEHOLDERS

Strong ownership and commitment from key stakeholders is one of the key drivers for successful interventions that can lead to sustainable impact. This principle applies at all levels, from national climate change institutions to local level climate change committees and individual households.

Specifically at the local level, strong ownership and commitment was found if the project:

- addressed issues that the population saw as priority issues for their own livelihoods;
- followed a strong participatory approach,
- combined interventions that provided short term (livelihood) benefits with long term (adaptation) benefits;
- had a good understanding the social and cultural dynamics in the communities

EXAMPLES OF PROJECTS

In **CAMBODIA** the project was delivered through budget support. It was coordinated through the main national climate change coordination committee, which showed a strong commitment throughout the project's two phases. This contributed to effective mainstreaming at national policy level and in sector ministries.

In **GUYANA** the project engaged people from the local communities to act as mangrove rangers. This strengthened their sense of ownership over these mangroves.

In **NEPAL** and **TANZANIA** highly-participatory approaches were followed in designing and implementing local adaptation plans and interventions. These combined short-term livelihood benefits with interventions that delivered longer term benefits (DRR and NRM measures). It has led to good adoption and sustainability for both types of interventions.

ALIGNMENT/INTEGRATION WITH GOVERNMENT POLICIES & PROGRAMMES

In countries like *Ethiopia*, *Maldives* and *Seychelles*, where climate change relevant policies and programmes already existed, the sustainability and impact of the GCCA support was generally strong if it was aligned with those existing policies and programmes. Impact was also strong when the project mainstreamed CC within government plans and programmes that formed the basis for annual budgeting exercises as in the *Solomon Islands*, *Cambodia* and *Ethiopia*. Mainstreaming CC interventions in such plans will almost guarantee national budget allocations to these interventions.

EXAMPLES OF PROJECTS

In **ETHIOPIA** the GCCA support was integrated in the national Sustainable Land Management programme and its related administrative and implementation structures. It has led to effective project implementation and to continuation/replication of best practices piloted under the GCCA.

In the **SOLOMON ISLANDS** the GCCA supported mainstreaming in the National Development Strategy, a key guiding document for the government's planning and budgeting processes. It has contributed to increasing budget allocations for climate change interventions for line ministries, and to better integration of CC issues in provincial plans, which aim to be fully aligned with the national development strategy.

WORKING WITH THE RIGHT IMPLEMENTING AGENCIES

It will not come as a surprise that prospects for effective project implementation were helped if the projects were implemented by organisations with commitment and resources to provide a high level of effort and control.

The choice of delivering GCCA resources through the general and sector budget support modality in countries like *Guyana*, *Solomon Islands*, *Seychelles*, *Rwanda*, *Mauritius* and *Cambodia* was based on the assessment that these countries have relatively strong government institutions. This has been largely confirmed by the overall high effectiveness of project implementation in these countries.

The project approach adopted in most of the other countries/regions can also be implemented effectively by government institutions, for example by combining project funding with a TA component and embedding a project management unit within a relevant government institution. Where government institutions are weak this approach becomes more challenging (as illustrated under "Challenges and failure factors"). Alternatives such as working through other strong project management partners (e.g. multilateral organisations and international NGOs) can then provide the best pathway towards sustainable impact. In that case it is important that these implementing partners have a long-term presence in the country with a good understanding of the context. This increases the prospects for continued support beyond the GCCA funding.

EXAMPLES OF PROJECTS

In **CONGO (DRC)**, the component on afforestation (meant to provide firewood and thereby reduce the pressure on natural forests) was outsourced to international non-government organisation the World Wildlife Fund (WWF). The I&S study concluded that this was a key factor in the success of the intervention, with WWF having a good understanding of the difficult context in the area as well as a long term and continuing in-country presence. This also contributed to the replication of the intervention in other locations after the project's closure.

In **RWANDA**, the GCCA funding was part of a multi-donor funded government-led land reform programme. The programme was implemented with efficiency and significantly surpassed its targets on plots to be registered and thus had a higher-than-expected impact on land security (although it should be added that this does not mean it lead to significant climate change adaptation impacts, as explained in the section on the impact analysis for the Agriculture and Food Security sector).

COMBINING HIGHER LEVEL POLICY / INSTITUTIONAL WORK WITH FIELD LEVEL PILOT PROJECTS

Combining the promotion of CC mainstreaming at the national level with field level pilots of CC adaptation (and in some cases mitigation) measures has helped ensure impact by using the experiences of the pilot projects to inform the climate change mainstreaming process. Best practices from the field level pilots can be integrated into national policies and strategies while pilot projects that have largely failed can highlight elements to be avoided in the mainstreaming efforts.

EXAMPLES OF PROJECTS

In **ETHIOPIA**, the GCCA supported an array of field level pilots to test different climate smart agriculture and soil & water conservation measures. Best practices from these field trials were used to develop a "basket of options" for the national Sustainable Land Management programme and this is now used to replicate the best practices elsewhere.

In the **SEYCHELLES**, GCCA supported pilot projects for coastal protection. The results were documented and inform the mainstreaming of CC in the national sustainable development strategy. Successful coastal protection approaches such as rock armouring have been replicated whereas unsuccessful ones such as beach nourishment have been discontinued.

A similar approach was followed in **UGANDA**, where 25 best practices for climate smart agriculture were identified through GCCA supported pilots. This information was shared in building the awareness and capacity of government staff at national and local levels, and with other development partners. It has led to widespread replication of the best practices.

HIGH QUALITY INTERVENTION DESIGN THROUGH RESEARCH AND ANALYSIS

The level of impact of supported interventions is directly correlated to the quality of the intervention, which in turn is very much a function of good design based on research and analysis. This involves for example building a good understanding of the vulnerability of target beneficiaries, undertaking comprehensive value chain analysis for economic activities, building on experiences elsewhere with specific interventions, and selecting and using appropriate technology.

In the **CONGO (DRC)**, a detailed value chain analysis was undertaken to get a better understanding of the timber and fuelwood economies in the project area. The results were used to successfully develop an afforestation project for fuelwood production that provides income to beneficiaries and reduces pressure on the natural forests.

In the **SOLOMON ISLANDS**, vulnerability assessments have been (and still are being) undertaken. These assessments are stored centrally and are the basis for the design of CC interventions in the different regions in the country.

STRONG KNOWLEDGE MANAGEMENT AND LEARNING PROCESSES

The country projects have generally been good in documenting and sharing knowledge gained through the interventions, both internally and with a broader audience. Successful approaches include exchange visits between communities, developing high quality communication material and developing tools and toolkits for adaptation interventions. All these approaches have helped increase impact through the replication of successful adaptation interventions. `

EXAMPLES OF PROJECTS

In **ETHIOPIA** and **TANZANIA** exchange visits were organised between communities. It has led to replication of successful climate smart agriculture measures such as use of drought tolerant seeds.

In **JAMAICA**, the GCCA supported the development of a high-quality audio-visual educational toolkit on climate change. These toolkits were widely distributed and highly appreciated, contributing to a broad sense of awareness on the importance of climate change adaptation and mitigation.

In the **LOWER MEKONG BASIN**, high quality datasets, tools and guides were developed with GCCA support and are now being used by the member states, for example to make CC projections and to study the impact of CC on existing irrigation schemes.

SUPPORT FOR LEGAL FRAMEWORK FOR IMPLEMENTATION OF CC INTERVENTIONS

In most projects the results of mainstreaming led to improved government policies and strategies, but the support often fell short of translating such policies into rules and regulations into support for effective implementation of climate change adaptation and mitigation interventions on the ground. In a few countries the step from policies to legal framework was made and contributed directly to strong impact.

In **MAURITIUS**, GCCA supported a new Energy Efficiency Act and Building Control Act, both of which are now being enforced, contributing to climate change mitigation (as well as to broader safety and health impacts related to the construction and use of buildings).

In the **SEYCHELLES** GCCA supported institutional strengthening in the energy sector. Apart from a new Energy policy and Energy Commission, this support also led to the adoption of a new Energy Act which regulates the role of private sector in the energy sector. The I&S study found that the entering into force of this new Energy Act has resulted in the private sector (local and international) now having the confidence to invest in renewable energy projects, with several projects being implemented.

KEY CHALLENGES AND FAILURE FACTORS

SHORT PROJECT DURATION

Work to mainstream climate change into policies, strategies and legal frameworks requires systemic change and behavioural shifts from involved stakeholders. They need to start considering climate change considerations in all aspects of their work across social, economic and environmental dimensions. Effective mainstreaming also requires several steps in most cases: first, support for the development of overall climate change policies / strategies, then embedding these within sector strategies, and ultimately ensuring effective implementation of the mainstreaming approaches through budgets for interventions with legislative support where necessary and/or appropriate.

While most projects were quite successful in supporting the development of mainstreaming policies and strategies during the project implementation period, few managed to achieve the systemic (including legal) and behavioural changes required to see CC mainstreaming begin delivering real impact through implemented actions on the ground. The same challenge also plays at the local level, where promoted CC adaptation measures often requires systemic and behavioural changes of the target beneficiaries, such as a fundamental overhaul of their (traditional) farming systems. Such changes usually require more time than the three to five years that most GCCA projects typically spanned (with exception of those that had follow-up phases like in *Cambodia*).

More time (and more resources) will also help to diversify activities and give more attention to aspects such as communication of knowledge about the impacts of action and the benefits generated, compared with growing economic, social and environmental costs of inaction.

EXAMPLES OF PROJECTS

The GCCA support in **SENEGAL** for coastal zone management was designed to develop an Integrated Coastal Zone Management Plan, have it approved, and then support implementation. However, the short project duration only allowed for the elaboration of a draft ICZM. (Note: although this draft ICZM was not further developed it was transformed into other initiatives including a national coastal law).

The GCCA **TANZANIA** first phase project supported three projects implemented by NGOs, with two of these then receiving further funding for a second phase. The I&S study noted that "[A]s indicated several times, the short duration of the sub-projects has affected their outcomes and impact. This also explains why the project in the Uluguru Mountains, where no follow-up phase could be organised, demonstrates less favourable results than the other two sub-projects".

The support to the **LOWER MEKONG BASIN** was designed on the basis of a 15-year project period. The GCCA support however was only for five years. The I&S study notes that the project achieved some behavioural changes and use of CC tools at the technical level, but that 5 years was not sufficient time to achieve such changes at the strategic (high policy) levels in the member countries. It has led to failure to mainstreaming CC effectively in the member countries

CHOICE OF TECHNOLOGIES

All GCCA projects supported pilot adaptation or mitigation projects. These interventions often involved the introduction of new technologies, such as rainwater harvesting tanks, climate smart agriculture techniques, solar equipment, early warning monitoring devices, etc. Several I&S studies found that some technologies introduced at the

household level (such as biogas installations and rainwater harvesting, as well as at the national level (Shorelock beach protection in Jamaica, require initial investments that are not affordable for either individual households or for the government, while other technologies were supplied by the project but were no longer available once the project closed (seeds in Ethiopia). It means that replication is severely limited, even for technologies that effectively contribute to resilience building. Projects also largely failed to involve the commercial private sector in identifying appropriate technologies and promoting the private sector's role in supplying such technologies.

It is critical to note that an intervention that pilots a new technology that results in a failure does not automatically make the intervention itself a failure, as long as the lessons learnt from the pilot are used to inform climate change policies, strategies and programmes.

EXAMPLES OF PROJECTS

In **JAMAICA**, the GCCA project introduced the Shorelock technology, which helps to reduce beach erosion through a chemical process that holds sand particles in place. Although the pilot was successful, the cost of this technology was prohibitive and its further use was discontinued.

In **ETHIOPIA**, GCCA supplied improved seeds as part of piloting climate smart agriculture. While there was good adoption of these seeds, their use was discontinued after project closure because they could not be procured locally.

The GCCA support through the **PACIFIC (SPC)** project to the nine Pacific SIDS focused on rainwater harvesting technologies for outlying islands. While the direct resilience impact on the beneficiaries was considered high, the high cost of installing such technologies on remote islands with low population numbers (especially through a project managed by a regional organisation located thousands of kilometres away) means this technology has not been replicated (with as positive exception Niue, where a local storage tank production facility was installed, which is still functional).

PROJECT DESIGN AND MANAGEMENT CHALLENGES

Several weaknesses were identified during the I&S studies that relate to the design and management of the GCCA projects. These include:

- Objectives that are too ambitious in relation to the project duration and available funding;
- Logical frameworks that often do not always have very clear formulations of results and related indicators, frequently mixing up different result levels (outputs, outcomes, impact);
- Wrong assumptions underpinning the pathways towards CC adaptation and/or mitigation outcomes and impact, such as the Rwanda example;
- Little attention and resources for M&E, thereby undermining internal learning and adaptive management processes.

The I&S studies also found multiple cases of long delays in starting the actual activities often because of to bureaucratic bottlenecks, integration into marginal or weak government institutions and the lack of someone (a "champion" or project manager) to ensure that momentum for implementation is maintained.

The I&S studies for **SENEGAL** and the Solomon Islands concluded that the project design had been overly ambitious in its planning of activities and its budgeting. It led to many planned activities not being implemented by the time the project closed.

The GCCA support in **RWANDA** was integrated in a multi-donor funded Land Reform Programme. It was assumed that strengthened land rights would lead to increased investments by land-owners in measures like soil and water conservation that would strengthen resilience against climate change. However, the I&S study found no evidence of such increased investments. While the project was successful in terms of strengthening land rights, it did not directly contribute to reduced vulnerability to climate change.

INADEQUATE CAPACITY BUILDING AT THE NATIONAL LEVEL

Although almost all GCCA country programmes provided capacity building and institutional strengthening support for CC mainstreaming within national governments, this was often not sufficient to ensure continuation of activities beyond the GCCA support.

The capacity building strategies applied by projects often did not lead to a sufficiently high or sustainable capacity increase in supported government institutions. Projects also underestimated the capacity building efforts needed to promote effective inter-sectoral coordination. Apart from the capacity needs, the challenge for inter-sectoral coordination also lies in the fact that sector ministries are often reluctant to freely share information with other government institutions and so were not very receptive to the support for more effective inter-sectoral coordination.

A further complicating factor mentioned is the high levels of staff turnover in many governments, with staff trained with GCCA support transferred to positions where the acquired skills cannot be applied.

EXAMPLES OF PROJECTS

In the **SEYCHELLES**, the GCCA support was successful at sector level (energy in particular). However, the project design did not fully recognize the challenge of inter-sector coordination to mainstream climate change and the capacity constraints of the institutions involved. It means there is no coordinated effort for CC mainstreaming across all sectors.

The I&S study on GCCA support through the **PACIFIC (SPC)** project to the nine Pacific SIDS noted that "all nine countries have serious issues concerning developing, and certainly maintaining, adequate national technical skills and levels of institutional and financial resources that would enable long term sustainability of the outputs, and the impacts. In other words: all countries will to a considerable degree remain dependent on development assistance support not only to maintain many of the services provided by the project outputs, but also in wider rolling out over the country of the pilot initiatives started by the project."

EQUITY CHALLENGES

Although many of the GCCA projects were expected to have a poverty reduction impact through building the resilience of vulnerable households, this often did not materialise and in fact there is evidence from the I&S studies that some projects have, unintentionally, contributed to further marginalisation of the poorest households. One main reason is the prohibitive cost of participating in newly introduced technologies. Poor households are also under-represented in pilots because they do not have the "luxury" to take the risk of trying out new technologies of when they don't know how effective these will be (Ethiopia introduced a risk insurance to mitigate this aspect, as detailed under the Impact section on Agriculture and Food Security).

The I&S studies in **NEPAL**, Pacific, Cambodia and Tanzania found that the introduced adaptation interventions had an associated cost that made them unaffordable for poorer households.

In **UGANDA,** the GCCA support through the Farmer Field School was considered successful, partly because the project focused on the more entrepreneurial farmers. It follows that the poorer farmers were largely excluded.

10 RECOMMENDATIONS

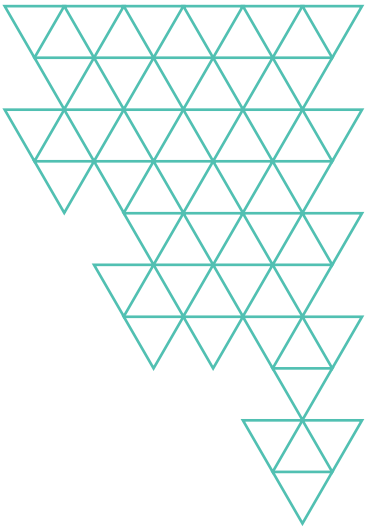
1. Pay more attention to deliver well-designed logical frameworks

More attention should be given to the intervention logic of climate change adaptation (and mitigation) projects. The analysis of the log-frames during the I&S studies has shown that this is not getting enough attention, with the logframes having both general design issues and GCCA specific issues related to the challenge of measuring climate change adaptation/mitigation results.

General design of logical frameworks

The main generic flaws found in many of the logical frameworks of the 21 projects that were part of the I&S study relate to:

- Wrong formulation of results and indicators at the different levels in the logical frameworks, most often by formulating outcomes and impacts in terms of outputs;
- Formulation of indicators that are not specific enough to be measurable;
- Issues with the targets for the indicators: either no targets at all, or targets way too modest or way too ambitious;
- Lack of baselines.



The EU format for logical frameworks provides clear guidance on the formulation of the different result levels:

Result level	*Intervention logic*
Overall Objective / impact	The broader, long-term change which will stem from the project and a number of interventions by other partners.
Specific Objective(s) / Outcomes	The direct effects of the project which will be obtained at medium term and which tend to focus on the changes in behaviour resulting from project.
Outputs	The direct/tangible outputs (infrastructure, goods and services) delivered by the project.

The format also provides guidance on the formulation of indicators and targets, and of formulation of the assumptions that may impact the linkages from outputs to outcomes and from outcomes to impact.

By closely following the guidance provided in the EU format, projects should be able to develop rational and realistic logical frameworks. INTPA/D4 (Performance, Results and Evaluation; Internal Communication, Knowledge Management and Collaborative Methods) can support EU Delegations in preparing or finalising a logframe matrix.

GCCA specific design aspects

The project logframes for GCCA projects should, especially at the highest impact level, clearly articulate how the project expects to have impact on climate change adaptation and/or mitigation. This could be achieved by:

- Developing a clear conceptual approach for CC resilience and how to measure it. This is further elaborated under a separate recommendation below;
- Developing examples of Theories of Change at sector level for climate action and make these available for EU Delegations as references for GCCA supported action;
- Ensure that a GCCA project develops logical frameworks that are aligned with the Theories of Change at the EU Delegation responsible for overseeing the project.

UGANDA

2. Give more attention to M&E and reporting

Apart from flaws in the design of the project logframes, the I&S studies also found that actual monitoring of and reporting on progress of activities and the expected results was often not done in a very consistent manner. The desk study phase of the I&S studies often found progress reports missing, or only available in draft form. Where progress reports were available they did not always report progress against the logframe results and indicators.

More attention for M&E and reporting is important not only for accountability, but also for learning purposes. Projects should include in their design and budgets ample time and resources for effective M&E, ensuring timely and complete reporting with good attention to aspects such as context analysis, evidence-based reporting on progress on all logframe results, analysis of assumptions (i.e. whether they are still holding) and clear recommendations to address any challenges (with the next progress report then required to indicate how far these recommendations have been implemented and their effect on performance).

BELIZE, JAMAICA, MOZAMBIQUE, RWANDA, UGANDA

3. Develop comprehensive exit strategies

The I&S studies did not make any reference to clear exit strategies of the GCCA projects, and it seems this has not received much attention in general. Good exit strategies are a key contributing factor for the

achievement of sustainable impacts and should be developed timely by project staff in collaboration with key stakeholders. Approaches to consider when developing an exit strategy include, inter alia:

- Undertaking a sustainability gap analysis, looking at technical, financial, institutional, environmental and social aspects. This can form the basis for a comprehensive exit strategy.
- Development of MoUs with project stakeholders in which their roles and responsibilities beyond the project closure are defined, as well as the support the project will provide until the project closure to support them in this.
- Scaling down direct support for activities during the latter stages of a project, allowing others to take over while continuing monitoring and providing strategic advice.
- Linking project activities to larger programmes / frameworks that can count on continued support of government and/or private sector and/or other donors.
- Identifying key gaps in capacities of key partners and narrowing project focus on addressing these gaps.
- Development of communication material to document lessons learnt with a view of promoting replication of best practices from the project.

The GCCA projects in Nepal and Uganda are the projects that have results and indicators that come closest to measuring CC resilience, although neither of them has defined a clear concept of what climate change resilience exactly means in the project context.

4. Develop a clear conceptual approach to measure resilience

The I&S studies have made clear that the GCCA projects have all struggled with the question of how to measure resilience, which is ultimately the key long term expected impact of GCCA support.

Many of the GCCA projects that were included in the I&S studies have failed to come up with an approach to measure their impact on resilience. Some have tried but all fall short in different ways because of the lack of overall guidance on how to measure resilience. This challenge is being faced universally by implementers of climate change project and the GCCA is not alone*. For the GCCA or its successors, it will be important to come up with a clear conceptual approach on how increased resilience to climate change should be measured.

* Other complex and sensitive issues such as malnutrition also face similar problems, yet solutions do exist. The Integrated Food Security Phase Classification (IPC) provides information for decision makers to help them determine short to long term objectives. This is based on rigorous and methodical reviews and convergence of evidence available against set thresholds, consensus building, and strategic communication for action and quality assurance.

NEPAL, UGANDA

5. Combine higher level and field level interventions

The most successful GCCA projects were those that combined high level support for CC mainstreaming with field level pilot projects. This was especially evident where best practices from pilot field projects informed the higher level policy work which in turn then facilitated

replication of best practices. This approach should be promoted in CC projects, especially projects with a national-level scope like most of the GCCA projects included in the I&S studies, and which require implementation locally.

BELIZE, CAMBODIA, CONGO (DRC), JAMAICA, MALDIVES, MOZAMBIQUE, NEPAL, PACIFIC (SPC), SENEGAL, SEYCHELLES, UGANDA, VANUATU

6. Allocate sufficient time and resources for research and analysis

The most successful field level interventions of the evaluated GCCA projects were those that were designed on the basis of good research and analysis. Examples include research on most appropriate technologies for adaptation interventions like rainwater harvesting and climate smart agriculture, good site selection for mangrove plantations and comprehensive value chain analysis for income generating activities in support of livelihoods diversification. The research should also consider how possible interventions will affect the poorer households in the target communities and should aim to actively mitigate any negative impacts (see the Ethiopia example of providing a "participation risk insurance" to allow any household to participate in activities).

It is important for projects to allocate enough time and resources for this research and analysis before the actual implementation of an intervention.

CONGO (DRC), ETHIOPIA, GAMBIA, GUYANA, JAMAICA, LOWER MEKONG BASIN, MAURITIUS, NEPAL, SOLOMON ISLANDS, VANUATU

7. Deliver a mix of short and long-term benefits and promote the overall business case for CC

Climate change adaptation projects at field level need to find a balance between interventions with long term resilience benefits, and those with short-term benefits, even if those short-term benefits have only a limited adaptation impact. The I&S studies show interventions that directly respond to need identified by target beneficiaries as a priority can act as important catalysts of community mobilisation and commitment. This helps increase the prospects for sustainability and for realising long-term impact of adaptation interventions that may take years to deliver tangible benefits. These typically include interventions related to sustainable natural resources management like afforestation, watershed and coastal protection, and soil and water conservation.

More broadly it would also be good to build a stronger business case for climate change action at all levels to create awareness of the fact that CC relevant approaches can provide economic benefits rather than being an economic cost.

BELIZE, ETHIOPIA, LOWER MEKONG BASIN, MALDIVES, NEPAL, PACIFIC (SPC), TANZANIA, UGANDA

8. Strengthen the coordination and learning mechanisms at national level

Several GCCA projects underestimated the extent to which key ministries in many governments work in silos. This limited the impact of mainstreaming efforts in many cases. CC mainstreaming projects should not only work on the policy and strategy side of interventions but should also aim to support inter-sectoral coordination mechanisms with a clear mandate to support CC mainstreaming in all sectors. This mechanism should also have an explicit learning objective so that key sector ministries share lessons on CC mainstreaming with all other sectors.

BELIZE, CAMBODIA, ETHIOPIA, SOLOMON ISLANDS

9. Support effective mainstreaming through strengthened CC budgets and legal frameworks

In many of the evaluated GCCA country projects, mainstreaming efforts were not taken forward after the projects ended. However, in the countries were the GCCA supported the inclusion of CC aspects in legal documents, or where CC was successfully incorporated into government budget processes, mainstreaming was successfully continued beyond the GCCA support. Whenever feasible, CC projects should go beyond CC policy and strategy support and promote the translation of these policies and strategies into budgets and legally binding acts and regulations mandating action.

CAMBODIA, MALDIVES, MAURITIUS, MOZAMBIQUE, SENEGAL, SEYCHELLES, SOLOMON ISLANDS

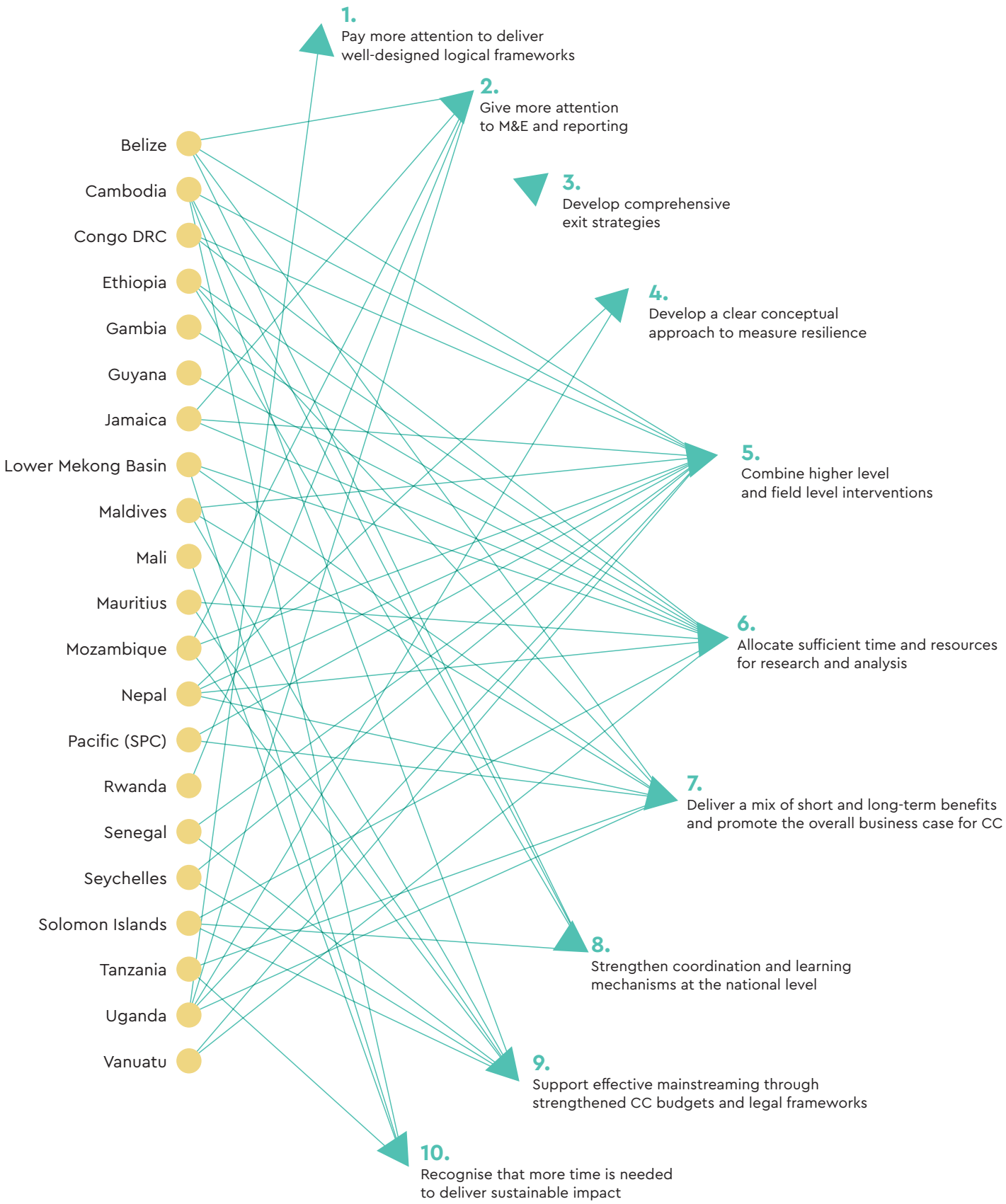
10. Recognise that more time is needed to deliver sustainable impact

Successful climate change mainstreaming requires systemic and behavioural changes at all levels. Such changes often take more time than a typical three to five year project cycle allows. CC support projects should where possible have a longer-term horizon, for example through a phased approach that allows for long term (e.g. 7 to 10 years) support, but conditional on certain milestones to be achieved along the way for support to be continued. This better corresponds to country-level programming periods, for instance at EU programming level or within NDC periods.

CAMBODIA, LOWER MEKONG BASIN, MALI, TANZANIA

Figure 8

Examples of projects that can serve as good practice for each recommendation



A farmer checks the lights using biogas power generator for his pig farm in Kompong Speu province, Cambodia. @GCCA+ EU 2019 Photo Kimlong Meng

AFTERWORD

Build on the experience gained with this round of I&S studies by building on the methodology to conduct future impact and sustainability assessments.

The I&S studies have provided a wealth of information on the results achieved by the 21 projects included in the study. The approach adopted for the studies, through a detailed template to be used across all projects, has made it possible to draw overall conclusions with regard to the achievements in terms of impact and sustainability, as presented in this report. To further strengthen the possibilities to synthesise information across all projects, it is recommended that the methodology for future I&S studies defines a standard list of categories that covers (for example) outputs and drivers of success and failure. This would not only simplify the synthetisation process, but would also allow for a better comparison between projects.

EU GCCA/GCCA+
Impact and Sustainability Report

This first Impact and Sustainability Report describes direct and indirect impacts achieved by 21 projects supported between 2009 and 2017 by the **Global Climate Change Alliance Plus (EU GCCA+)**. It provides a comparison of actual and expected impacts, a description of the levels of sustainability as well as drivers of successes and failures in terms of impact and sustainability.

A useful tool for managers and implementers it also contains recommendations for design and implementation of future projects.

#GCCAPlus #EUClimateAction #EUGreenDeal

READ THE 21 COUNTRY REPORTS
www.gcca.eu/resources

THE ALLIANCE FOR A CHANGING WORLD

The **Global Climate Change Alliance Plus (EU GCCA+)** is a European Union flagship initiative helping most vulnerable countries respond to climate change. It started in 2007 and has become a major climate initiative with over 80 programmes in Africa, Asia, the Caribbean and Pacific region.

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