From Local Action to Climate Budget Support

Experiences from the Global Climate Change Alliance+

Republic of Cyprus

Republic of Ireland

Czech Republic

Republic of Estonia

Kingdom of Sweden

From Local Action to Climate Budget Support

Experiences from the Global Climate Change Alliance+

The publication *From Local Action to Climate Budget Support: Experiences from the Global Climate Change Alliance+* is available at http://www.gcca.eu.

ISBN: 978-92-79-43933-9; doi: 10.2841/1455; catalogue number: MN-AM-14-001-EN-C

Related internet sites:

http://ec.europa.eu/europeaid/index_en.htm
http://ec.europa.eu/clima/news/index_en.htm
http://www.gcca.eu

Related EU publications:

From Integrated Climate Strategies to Climate Finance Effectiveness: Experiences from the Global Climate Change Alliance, European Union 2013

European Union Climate Funding for Developing Countries in 2013, European Union 2013

Paving the Way for Climate Compatible Development: Experiences from the Global Climate Change Alliance, European Union 2012

Supporting a Climate for Change, European Union 2012

European Union Fast Start Funding for Developing Countries, 2012 Progress Report, European Union 2012

Using Innovative and Effective Approaches to Deliver Climate Change Support to Developing Countries, European Union 2011

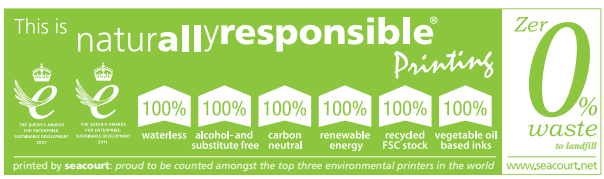
Front cover caption: Children in Ambo Woreda, Ethiopia, at a community-managed watershed west of Addis Ababa.

Images copyright:

Front cover: EuropeAid Boys smiling in Burundi; Page x: F. Lefèbvre; Page 8: EuropeAid; Page 22: Moussa Dansoko; Page 25: University of the South Pacific; Page 26: Pacindha; Page 28: Cambodia Climate Change Alliance; Page 29: Peter Brinn; Page 33: Jone Tuiipelehaki; Page 34: Peter Brinn; Page 36: Annette Arjoon-Martins; Page 38: Seychelles Ministry of Environment and Energy; Page 41: Annette Arjoon-Martins; Page 42: Tesfaye Mebratu; Page 45: GCCA; Page 47: GCCA; Page 49: Mak Remissa; Page 50: G. Barton; Page 52: Bindy Singh; Page 54: Solomon Islands National Disaster Management Office; Page 55: Guy Stubbs; Page 57: GCCA; Page 58: GCCA; Page 59: Peter Brinn; back cover, clockwise from top right: Carine Malardeau (drinking safe water in Laos), GCCA (mangrove restoration in Portland Bight, Jamaica), F. Lefèbvre (a child in Haiti), Derejeb | Dreamstime.com - Teff Field Photo (the herb 'teff' is used for cooking in Ethiopia).

Printed in United Kingdom, August 2015

Printed on 100% recycled FSC paper
Printer's accreditation
100% Waterless
100% Alcohol- and substitute-free
100% Carbon neutral
100% Renewable energy
100% Vegetable oil–based inks



Acknowledgements

This publication has been produced thanks to the contributions and experiences shared by colleagues working with the Global Climate Change Alliance (GCCA) in delegations of the European Union across the world, in particular: Emanuel Amaral (Timor-Leste), Paul Asiimwe (Uganda), Ethmane Ba (Mauritania), Joost Bakkeren (Vanuatu), Carlos Battaglini (Papua New Guinea), Baptiste Bobillier (Benin), Ivan Borisavljevic (Djibouti), Delphine Brissonneau (Mekong Basin), Jenny Brown (Malawi), Beatrice Bussi (Niger), Marta Caruda (Lao People's Democratic Republic), Thierry Catteau (Pacific), Adolfo Cires Alonso (Sierra Leone), Guglielmo Colombo (Myanmar), Jacobus Deboer (Lesotho), Lorena Elvira Ayuso (Solomon Islands), Maria-Chiara Femiano (Tanzania), Manfred Fernholz (Bangladesh), Sylvie Fontaine (Mali), Hubert Grandjean (Mauritius and Seychelles), Harshini Halangode (Maldives), Hadji-Tchere Hissein (Chad), Alain Houyoux (São Tomé and Príncipe), Andrea Janoha (OECS), Jesus Lavina (Pacific), Albert Losseau (Guyana), Chilambwe Lwao (COMESA), Élodie Maria Sube (Cambodia), Ana Monge (Mozambique), Séraphine Mukankusi (Rwanda), Karine Olislagers (Bhutan), Thomas Opperer (Jamaica/Caribbean), Rajesh Parboteeah (Comores), Alain Peigné (Burkina Faso/ECOWAS-CILSS), Steven Rault (Haiti), Filippo Saracco (Democratic Republic of Congo), Darrell Sexstone (the Gambia), Ranjan Shrestha (Nepal), Anne Simon (Senegal), John Stanley (Samoa), Pierre-Luc Van Haeverbeke (Belize/Jamaica), Cristina Vicente Ruiz (ClimDev), Abu Yadetta (Ethiopia) and Diego Zurdo (Rwanda).

Our thanks are also due to Pendo Maro and Mariata Ndiaye Sy from the Intra-ACP (Africa, Caribbean and the Pacific Group of States) Support Programme to the GCCA.

Many thanks to colleagues from the European Commission's Directorate-General for International Cooperation and Development (EuropeAid), in particular to Marina Marchetti, Daniele di Pillo and Markus Sperl. In addition, we would like to thank Simon Anderson, Emanuele Cucillato and Barry Smith for their work on monitoring and evaluation of adaptation; Thomas Theisohn on capacity development; Neil Bird and Fabrice Ferrandes on budget support; Evan Green and Raffaella Sardi on local adaptation programmes; and Katharine Mill for the preparation of stories from the field.

Nita Congress both copy-edited and designed the publication, under the coordination of Mark Futter and Catherine Paul of the GCCA Support Facility. Our thanks as well to other team members of the GCCA Support Facility, in particular Natalia Reiter for her work on GCCA+ communication.

Laura Giappichelli oversaw the content and led the writing process with Aude Charrier, Étienne Coyette, Fannie Delavelle and Bernardo Sala — all from the Climate Change, Environment and Natural Resources unit of the International Cooperation and Development Directorate-General of the European Commission (EuropeAid).

Table of contents

Resources 60

Boxes, diagrams, maps and tables

Stories from the field

Joint solutions for global climate and development challenges

The 2014 annual report of the Global Climate Change Alliance comes at a potentially historic moment. In December 2015, global leaders from around the world will gather in Paris for the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change, to agree a treaty tackling the 21st century's most pressing issue - climate change.

The GCCA is well positioned to support implementation of this climate agreement. It is one of the world's largest climate funds, with over €300 million committed to date, and after seven years of operations it has gained impressive experience on climate change issues all around the world.

2014 has been a very successful year for the initiative, which focuses on the world's most vulnerable regions, nations, and populations. Climate change will certainly affect all of us, but the poor and marginalized will be worse hit.

Indeed, these groups are already suffering the effects of drought, water shortages, crop losses, and changes to our oceans. These changes add to existing stressors such as population growth and other environmental degradation. The threat is real that these pressures will generate political and social instability.

For the European Union, climate change is more than an issue of responsibility or social justice. We also have a strong self-interest to take action. Our financial and intellectual capital obliges us to play a strong and unifying leadership role.

Time is not on our side. The window of opportunity to prevent the catastrophic consequences of climate change gets smaller by the day. Scientists tell us that global emissions must peak soon if we are to avoid the very worst.

I see reasons to be optimistic, however. Political and economic momentum is growing for meaningful change.

The European Union already allocates 20 percent of its spending to climate change. Even before December's Paris meeting, the US and China have committed

to major greenhouse gas reductions. Negotiators reached a deal on forest protection after a decade of trying and failing. And renewable energy sources are becoming more and more price competitive.

The argument is slowly being won that, while the transition to a low carbon future is certainly critical, it does not have to be painful. It can also generate economic growth, jobs, improved health, and a better way of living.

The world's eyes are set on Paris. But elsewhere, millions of people are already feeling the consequences of a warming planet. And these very people are often the ones who have done least to generate climate change.

Away from the media attention surrounding the Paris talks, the GCCA has already been doing great work. Indeed, the demand for its support is such that after just seven years of operation, the GCCA now operates in some 38 countries, 8 regions and sub-regions and at the multi-national level around the world.

There is certainly plenty to do.

Hundreds of millions of people will need to develop new farming techniques to boost productivity and protect against climate change. Agriculture is the main source of income and employment for the overwhelming majority of the rural poor. And yet this sector is likely to be hit hardest by climate change, including especially in Africa.

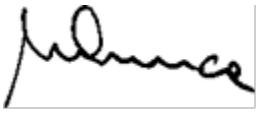
But in countries such as Ethiopia, support for farmers has had excellent results, boosting not just agricultural productivity but also national growth.

Our partners also need more energy. Indeed, a widespread lack of electricity is a major break on development, blocking health, education, and even trade. Coal was once the cheapest and easiest source of energy. But it is also one of the most polluting. Our partner countries have a history of minimal greenhouse gas emissions. But many of them also have plentiful renewable supplies of power.

Adapting to climate change should be seen as an opportunity.

And I intend to ensure that the GCCA will continue to act on climate change by supporting its partners to reduce the risks and seize the opportunities.

Neven Mimica
European Commissioner
for International Cooperation and Development



The GCCA+: pooling efforts for dialogue and cooperation on climate change

It is with great pleasure that I share this annual report for the GCCA+, which in 2014 replaced its predecessor the GCCA. The year was one of the busiest ever for the initiative, which continues to grow.

Having started in just four pilot countries, the GCCA+ now supports 51 programmes in 38 countries, 8 regions and subregions around the world. Our budget of more than €300 million means that we can proudly call ourselves one of the most significant climate initiatives in the world.

Despite this growth, the GCCA+ has maintained its focus on those countries and communities most vulnerable to climate change, especially among the small island developing states (SIDS) and least developed countries (LDCs).

Over the years, some of this remarkable work has been done against a background of political stalemate, including the failed Copenhagen treaty.

From Bhutan to the Pacific Islands, this report highlights those successes.

In Tanzania, for instance, climate change had already been affecting water supplies, forcing the villagers – mostly women and girls - to walk two hours for a bucket of water. Borehole equipment had also broken down. A GCCA project introduced a series of innovations, including rainwater collection, subsurface dams, and solar power. The project reduced the breakdowns of pumping equipment and halved the cost of water.

Several thousand miles to the west, Guyana is also at exceptional risk from a combination of rising sea levels and extreme weather events. Besides the danger to people, sea defence breaches can also render agricultural land unusable because of increased salinity. Some 90 percent of Guyana's agriculture is located in the very fertile coastal belt, and so protecting this region was a priority. The GCCA helped restore mangrove plantations, an integral – and natural – part of the country's sea defence system.

In these and other GCCA funded projects, financial support from Member States has been critical.

Besides core EU funding, Cyprus, the Czech Republic, Estonia, Ireland and Sweden provided €37 million for the GCCA and GCCA+, which have used the funds to develop programmes around the globe.

A further €37.5 million contribution from the European Development Fund (EDF) has enabled dedicated support for the African, Caribbean and Pacific (ACP) Group of States.

Today, the GCCA+ has one of the highest percentages of disbursed funds on climate adaptation. It also works on mitigation, helping partner countries participate in global discussions on climate change. Policy dialogue is a core component of our work. And we support policy maker efforts to build common positions that will build their common influence.

We are always keen to improve our work.

A recent evaluation highlighted the strong involvement of government institutions and NGOs in the GCCA+ programme, but argued private sector engagement is still weak. The evaluation also found that more must be done to increase buy-in from member states. We will certainly work to correct these gaps and report back on progress in the future.

Finally, it remains to use this opportunity to thank the GCCA+ team and all its partners around the world for their invaluable contribution to tackling one of mankind's greatest challenges. We hope that political processes, including the Paris negotiations, will provide an important boost to our work. We are looking forward to the future.

Please do enjoy this report.

Fernando Frutuoso de Melo
DG DEVCO Director-General
International Cooperation and Development - EuropeAid

Haitian woman on dusty road

'We already know that climate change impacts are likely to be greatest in developing countries, which have the fewest resources to prepare for and adapt to climate change.'

1

From the GCCA to the GCCA+

A proven platform for dialogue and technical and financial support

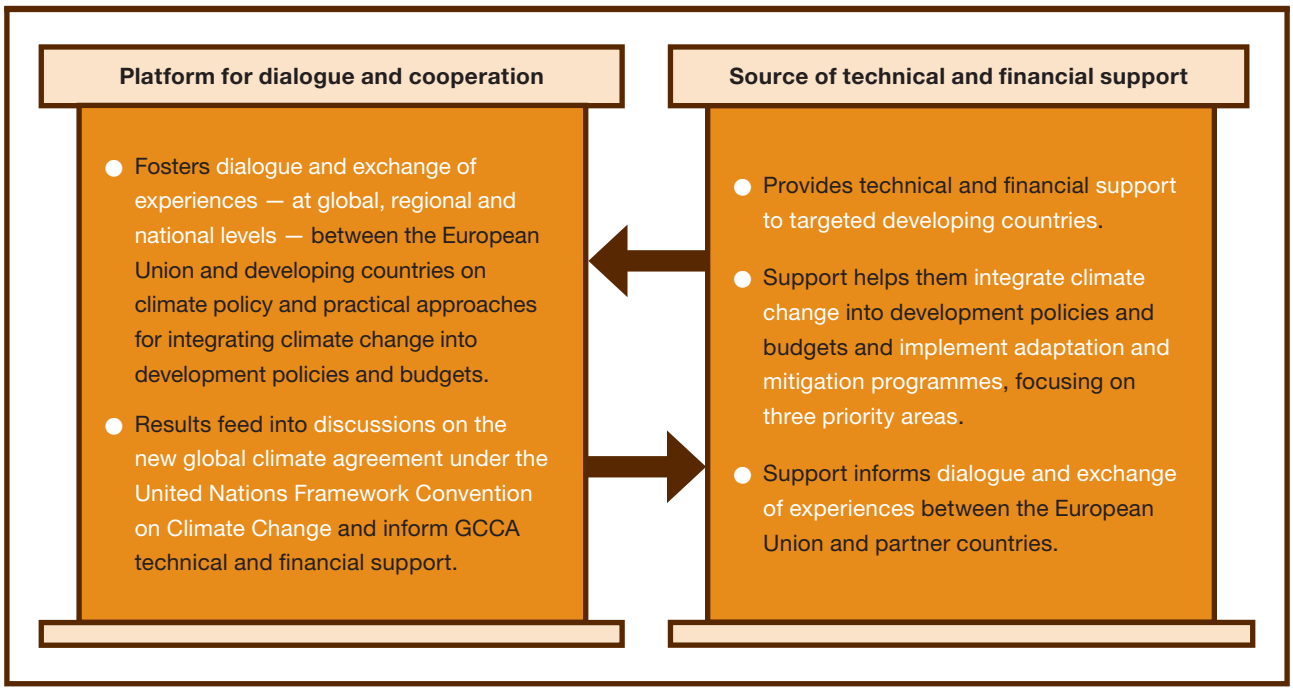
Climate change represents an enormous threat for least developed countries (LDCs) and small island developing states (SIDS) all around the world. Projections by the Intergovernmental Panel on Climate Change (IPCC) have consistently shown that these nations will be hit hardest and earliest by climate change. Most of them are already feeling the effects.

The European Union (EU) established the Global Climate Change Alliance (GCCA) in 2007 to strengthen dialogue and cooperation on climate change issues with vulnerable countries, in particular SIDS and LDCs. When it started in 2008, the GCCA was working in just four pilot countries. Today, it supports 51 programmes in 38 countries, 8 regions and subregions and at the global level. Map 1-1 shows the countries and regional programmes supported to date, and Tables 1-1 and 1-2 at the end of this chapter provide an at-a-glance summary of support by country and region/subregion.

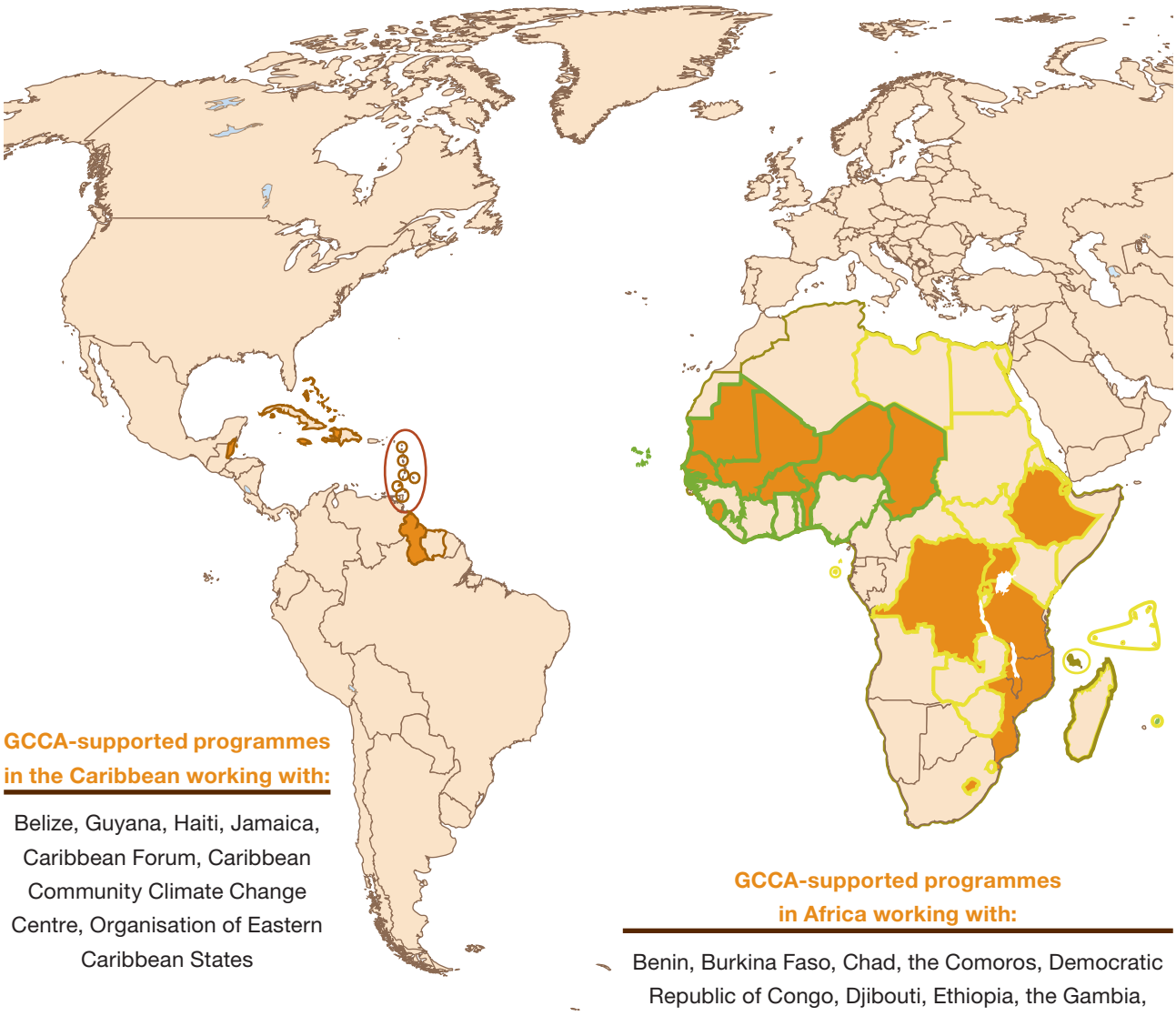
In 2014, a new phase of the GCCA, the GCCA+ flagship initiative, began aligned with the European Commission's new Multiannual Financial Framework (2014–2020). The GCCA+ continues to support those countries most vulnerable to climate change through two mutually reinforcing pillars (diagram 1-1):

- Under the first pillar, the GCCA+ serves as a **platform for dialogue and cooperation** between the EU and developing countries. The results of this exchange feed

Diagram 1-1 The two pillars of the GCCA+



Map 1-1 Overview of GCCA-supported programmes



GCCA-supported programmes in the Caribbean working with:

Belize, Guyana, Haiti, Jamaica, Caribbean Forum, Caribbean Community Climate Change Centre, Organisation of Eastern Caribbean States

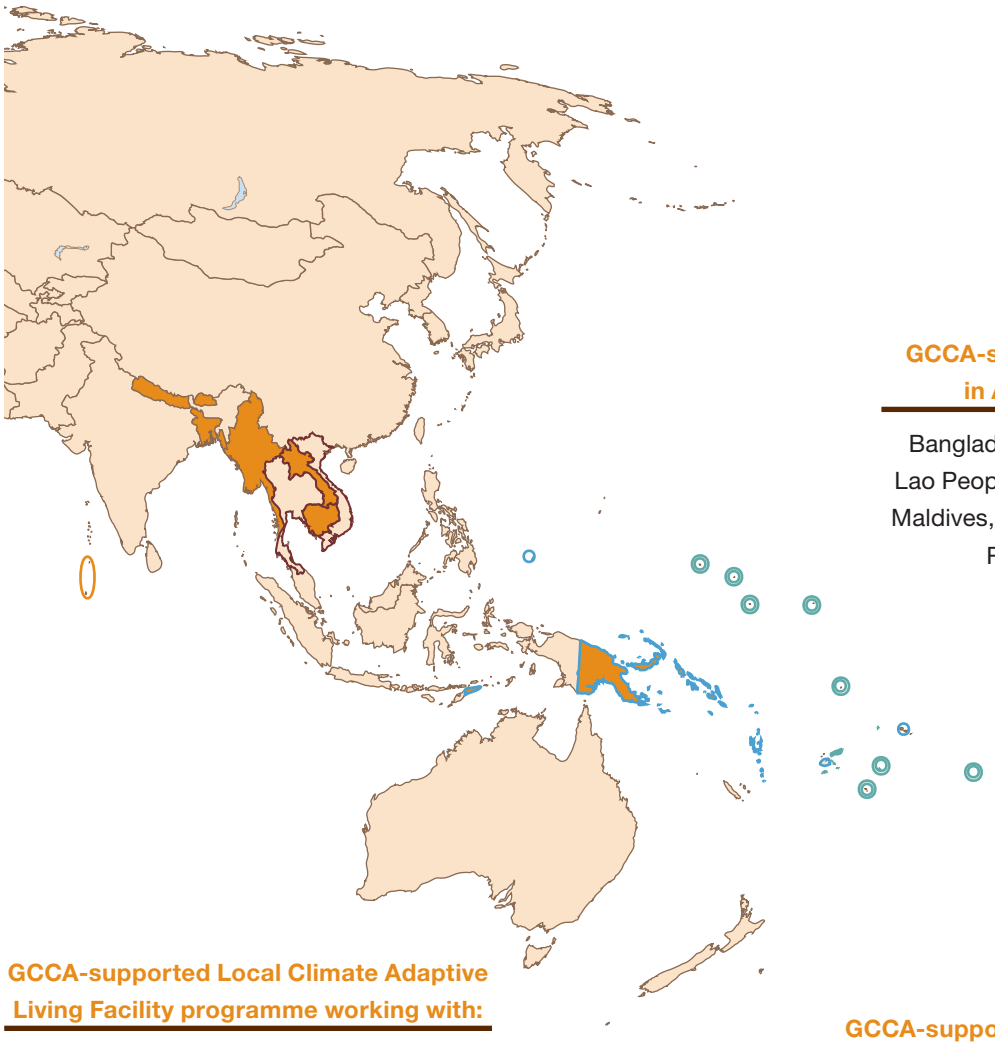
GCCA-supported programmes in Africa working with:

Benin, Burkina Faso, Chad, the Comoros, Democratic Republic of Congo, Djibouti, Ethiopia, the Gambia, Lesotho, Malawi, Mali, Mauritania, Mauritius, Mozambique, Niger, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, Tanzania, Uganda, African Union, African Development Bank, United Nations Economic Commission for Africa, Common Market for Eastern and Southern Africa, Permanent Inter-State Committee for Drought Control in the Sahel, Economic Community of West African States

GCCA partner country

Regional programmes:

- Lower Mekong Basin
- Africa
- Eastern and Southern Africa
- Western Africa
- Pacific
- South Pacific
- Caribbean
- Eastern Caribbean



GCCA-supported programmes in Asia working with:

Bangladesh, Bhutan, Cambodia, Lao People's Democratic Republic, Maldives, Myanmar, Nepal, Mekong River Commission

GCCA-supported Local Climate Adaptive Living Facility programme working with:

Bangladesh, Benin, Mali, Mozambique, Nepal, Niger, Solomon Islands

GCCA-supported programmes in the Pacific working with:

Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Vanuatu, Secretariat of the Pacific Community, Secretariat of the Pacific Regional Environment Programme, University of the South Pacific

into discussions for a new climate agreement under the United Nations Framework Convention on Climate Change (UNFCCC) and other international processes.

- Under the second pillar, the GCCA+ acts as a source of **technical and financial support** for climate-vulnerable developing countries and regions, especially LDCs and SIDS. This support is delivered in the three GCCA+ priority areas presented in box 1-1.

Diagram 1-2 shows the distribution of GCCA support across priority areas and sectors to date. Based on countries' and regional needs, the GCCA+ intends to keep providing technical assistance in these areas and strengthen activities in the field of community resilience, climate finance, adaptation and mitigation synergies, ecosystem-based adaptation, gender issues, urban development, climate-induced migration and more, as these topics become increasingly significant for development and policy agendas.

The EU was one of the first donors to make SIDS priority partners. Bilateral programmes with 14 SIDS and regional programmes benefiting 25 SIDS account for 30 per cent of GCCA funding — around €95 million.

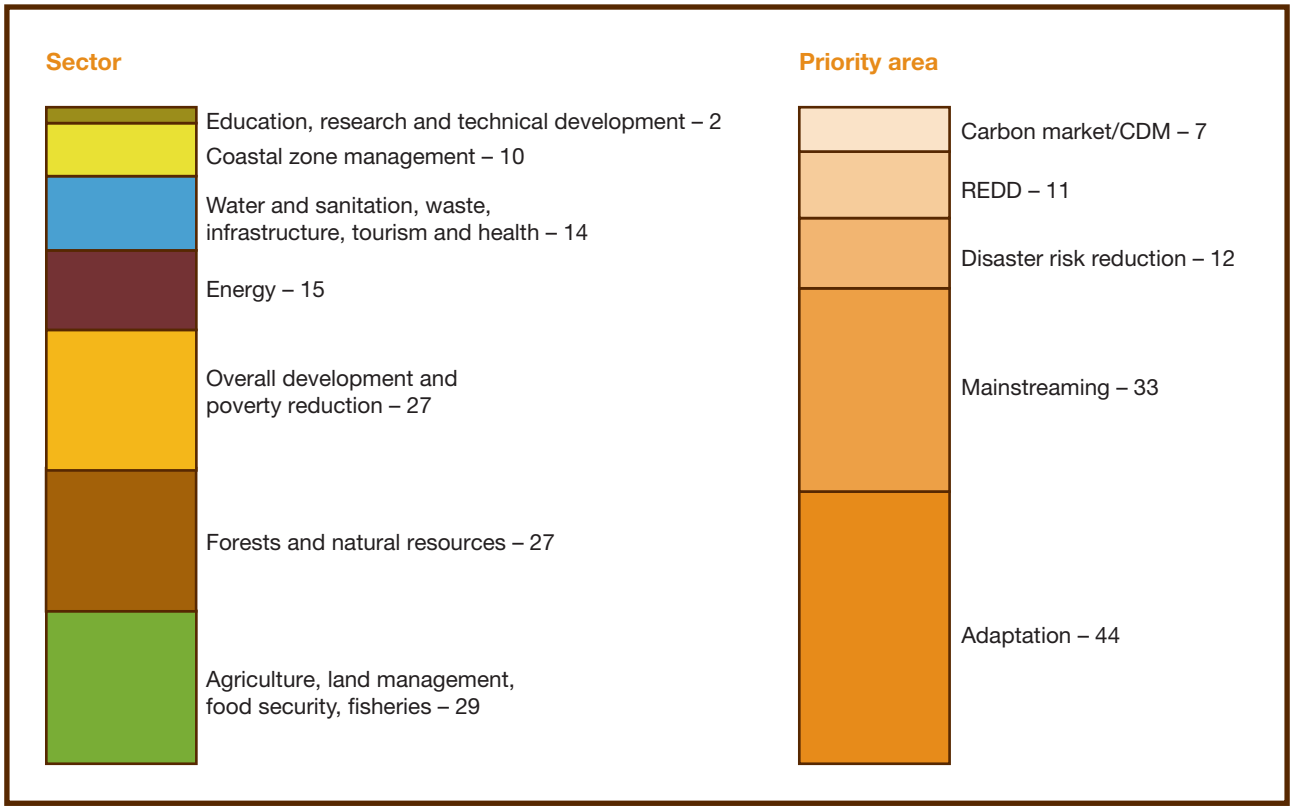
An expanding and catalytic initiative

With a budget of more than €300 million, the GCCA is one of the largest climate change initiatives in the world (diagram 1-3). It is also one of the initiatives with the highest percentage of disbursed funds on climate adaptation (Schalatek et al. 2012). In addition to EU funding, the GCCA has received €37 million from **Cyprus**, the **Czech Republic**, **Estonia**, **Ireland** and **Sweden**. These funds have helped develop programmes in Bhutan, Cambodia, the Eastern Caribbean, Lesotho, the Lower Mekong Basin, Mozambique, Nepal, Sierra Leone, Timor-Leste, Uganda and Tanzania. A further contribution from the European Development Fund (EDF) has enabled dedicated support for the African, Caribbean and Pacific (ACP) Group of States. This 'GCCA Intra-ACP Programme' has an allocated budget of €37.5 million (diagram 1-4). With

Box 1-1 The three priority areas of the GCCA+

1. **Climate change mainstreaming and poverty reduction.** Climate change is pervasive: it affects, and is affected by, all spheres of public life and is closely linked to poverty. This is why climate must be an integral consideration in national development plans, policies and budgets. Two processes intended to facilitate climate mainstreaming will be presented at the UNFCCC COP 21: Intended Nationally Determined Contributions (INDCs) processes that include National Adaptation Planning (NAP). GCCA+ will channel support to partner countries for preparation and implementation of national adaptation strategies and to help them meet their INDC obligations.
2. **Increasing resilience to climate-related stresses and shocks.** Resilience is the ability of an individual, household, community, country or region to withstand, adapt to, and quickly recover from, stresses and shocks. Building resilience lies at the interface of humanitarian and development assistance and in the context of climate change is linked to disaster risk reduction and management. The GCCA+ will help vulnerable countries to prepare for climate-related natural hazards, reduce risks and minimise impacts by integrating multi-sector risk management approaches in national development planning. It will also support local, national and regional strategies that integrate climate adaptation and disaster risk management and promote more informed decision-making on recovery and reconstruction.
3. **Sector-based climate change adaptation and mitigation strategies.** The GCCA+ aims at increasing understanding about the specific consequences of climate change in the short, medium and long term. With this understanding, as it relates to their own environments, partner countries can design and implement adaptation and mitigation actions. National Adaptation Planning (NAP) focuses on responding to negative climate change impacts. Intended Nationally Determined Contributions (INDCs) primarily address mitigating or controlling emissions of greenhouse gases but may include adaptation. GCCA+ will assist partners in identifying win-win approaches, developing coherent national strategies and ensuring their proper implementation in line with UNFCCC commitments.

Diagram 1-2 Distribution of GCCA support by sector and by priority area (number of programmes 2008–2014)



Note: Each GCCA-supported programme can comprise more than one priority area and sector.

Diagram 1-3 Cumulative committed GCCA funding 2008–2014

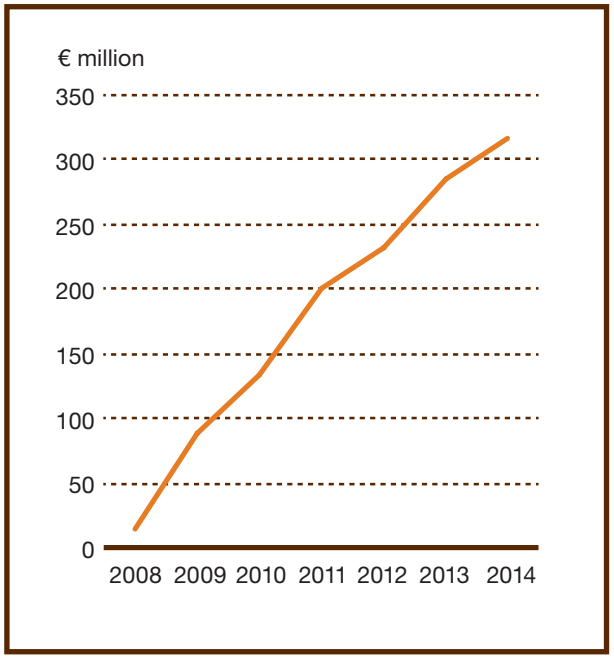
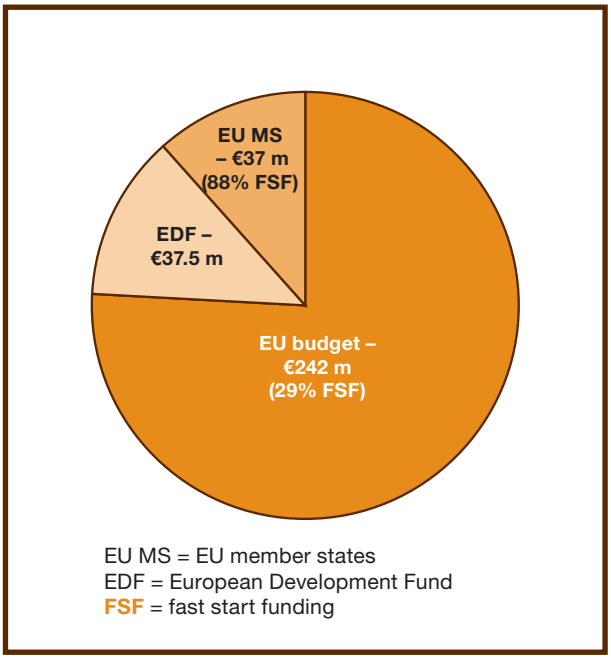


Diagram 1-4 Origin of funding committed 2008–2014



allocations from the EU, EU member states and EDF, the number of beneficiaries has increased more than tenfold since the beginning of the initiative.

A growing network of practitioners

The GCCA works with a wide network of individuals and organisations in 38 countries and 8 regions and subregions. These actors include partner countries, regional organisations, governments, local authorities, private sector and civil society organisations (diagram 1-5).

The European Commission's Directorate-General for International Cooperation and Development (EuropeAid) leads the GCCA and its successor the GCCA+. It has two dedicated support facilities, which provide on-demand technical assistance. The first, managed by the European Commission, has a global reach and is available to all programmes. The second supports ACP stakeholders and is available through the GCCA's Intra-ACP Programme (box 1-2).

In the years since its establishment, the GCCA has amassed a wealth of knowledge and experience relating to climate change adaptation and mitigation. Building on this, the GCCA+ will continue to serve as a platform for learning and exchange.

A renewed focus on creating and sharing knowledge

Experience is only valuable if it is applied and shared, so an important function of the GCCA is to ensure that the wealth of experience it has accumulated is imparted through lesson learning and that knowledge generated

Diagram 1-5 GCCA+ partners

Box 1-2 Supporting ACP regions and countries

The GCCA Intra-ACP Programme supports the ACP Group of States in tackling climate change. Specifically, the programme supports lesson learning and knowledge sharing on the effects of climate change, as well as adaptation and mitigation responses in ACP countries.

The programme provides institutional and technical support across five regional subgroups. It coordinates services and information flow between the five regions and exchanges with other GCCA programmes and initiatives in ACP member states. The programme provides technical assistance on demand to ACP missions, embassies and countries. From project formulation through to studies and training, ACP countries can apply for short-term, customised technical assistance through the intra-ACP section of the GCCA website. Each year, the GCCA+ Intra-ACP Programme organises regional technical meetings to strengthen cooperation, exchange information and improve coordination. These meetings have been instrumental in identifying synergies and facilitating implementation.

from implementation is shared between countries, regions and development partners.

In 2012, the GCCA developed a comprehensive strategy on knowledge management and communication. It is continuously updated and focuses on engaging with partners and on sharing knowledge in a consistent and effective manner.

High-level meetings organised by the GCCA to facilitate the exchange of views and experiences have included regional conferences, national policy dialogues, technical workshops and global policy and networking events. The GCCA+ will keep promoting policy dialogue and lesson learning through continued implementation of its knowledge management and communication strategy. This information exchange will help inform the positions of the EU and developing countries in the context of the UNFCCC and related processes.

Every year, the GCCA shares its experience through a side event at the UNFCCC Conference of the Parties. In December 2013, in Warsaw, the GCCA event enabled numerous stakeholders to discuss the conclusions of the GCCA Global Policy Event, held in Brussels in September 2013, and to hear the experiences of countries that have received GCCA support. The GCCA Intra-ACP Programme also makes efforts to inform the UNFCCC process (box 1-3).

Box 1-3 Building capacity for climate change negotiations

Most countries in the West Africa region have had little experience in dealing with international climate change negotiations, due in part to the limited capacity of their country representatives. Between 2011 and 2013, the GCCA's Intra-ACP Programme provided valuable training to West African climate change negotiators to reinforce their participation in international negotiations. For the 19th UNFCCC Conference of the Parties (COP19) held in 2013 in Warsaw, the Permanent Inter-State Committee for Drought Control in the Sahel (CILSS), which manages the GCCA's regional programme for Western Africa, prepared a bulletin on negotiations and organised preparatory workshops for participants to deepen their understanding of technical issues and enhance their writing skills on related topics. A key achievement, presented by Senegal, was the CILSS prepared technical paper supporting the inclusion of agroforestry in the context of LULUCF (land use, land use change and forestry)-related activities.

Ahead of COP20, held in Lima in December 2014, the GCCA Intra-ACP Programme also organised a number of meetings to allow coordinated participation of ACP countries and regions. The programme provided technical assistance to the ACP Secretariat for its preparatory meetings with the objective of drafting a common ACP Issues Paper on the Lima Climate Change Conference. All ACP regional programmes also held special sessions and high-level preparatory meetings for COP20.

Upholding aid effectiveness commitments

The GCCA+ strongly supports the five principles of the 2005 Paris Declaration on Aid Effectiveness. These relate to ownership of development policies and strategies by developing country governments, alignment of donor interventions with national strategies and country systems, harmonisation of donor operations, a greater focus on results and development outcomes, and transformation of the aid relationship into a partnership based on mutual accountability.

The GCCA+ is also committed to the recommendations of the 2008 Accra Agenda for Action on supporting country ownership and inclusive partnerships, and the 2011 Busan Partnership for Effective Development Cooperation, particularly Article 34 which highlights the need to promote enhanced coherence, transparency and predictability across approaches for effective climate change finance and broader development cooperation.

The GCCA+ translates these commitments into practice through a variety of actions:

- The GCCA+ ensures the alignment of its programmes with national strategies and programmes, as summarised in table 1-3, including efforts to mainstream climate change issues into national development processes.
- The GCCA+ supports capacity development at the local, institutional and community levels to address climate challenges. Support for capacity development is discussed in **chapter 2**. Table 1-4 presents an overview of aid modalities used for GCCA national programmes, including budget support (discussed in **chapter 3**) and sector approaches. Where the project modality is used, management by the partner government is promoted whenever possible.
- The GCCA+ works with development partners through multidonor funds and initiatives (table 1-5), as well as joint management, programming and financing (table 1-6).
- The GCCA+ strengthens monitoring and evaluation (M&E) systems in partner countries to improve design of climate change plans and policies, and enhance participation in international negotiations. **Chapter 4** describes the GCCA's challenges, opportunities and best practices in climate change adaptation M&E.
- The GCCA+ emphasises knowledge sharing and lesson learning at the national, regional and global levels, as described above.
- The GCCA+ identifies changing needs and priorities in order to concentrate on areas where it can bring the most added value. This issue is discussed in **chapter 5**.

Smiling boys in Burundi

Table 1-1 Overview of GCCA-supported country programmes

Country	Partners	GCCA priority areas	Sectors	Budget	Duration
Bangladesh	World Bank; Ministry of Environment and Forests	Adaptation, disaster risk reduction	Overall development and poverty reduction, agriculture, coastal zone management, infrastructure, land and natural resource management	Total value: €140.6 million (EC: €28.5 m, of which GCCA: €8.5 m; UK: €71 m; Sweden: €15.2 m; USA: €10 m; Switzerland: €9.3 m; Australia: €5.3 m; Denmark: €1.3 m)	2011–2017
Belize	UNDP; Ministry of Natural Resources and Environment; National Emergency Management Organisation	Mainstreaming, adaptation	Overall development and poverty reduction, coastal zone management, food security, forests, water	Total value: €3.2 million (GCCA: €2.9 m; Government of Belize and UNDP: €0.3 m)	2012–2014
Benin	UNDP; Ministry of Environment in charge of climate change, reforestation and natural resource protection; National Geographical Institute (IGN)	Adaptation, REDD, disaster risk reduction	Forests	Total value: €8.3 million (GCCA: €8 m; UNDP: €0.3 m)	2012–2017
Bhutan	Ministry of Agriculture and Forests; Gross National Happiness Commission	Mainstreaming, adaptation	Overall development and poverty reduction, agriculture, natural resource management	Total value: €4.40 million (GCCA, including €0.8 m FSF from Estonia)	2013–2016
Burkina Faso	World Bank; Ministry of Environment and Sustainable Development; National Council for Environment and Sustainable Development	Mainstreaming, adaptation, REDD	Agriculture, forests and land management	Total value €21 million (GCCA: €8 m; World Bank/ Forest Investment Program: US$16.5 m)	2014–2018
Cambodia	UNDP; Ministry of Environment; National Climate Change Committee	Mainstreaming	Overall development and poverty reduction	Total value: €8.35 million (GCCA, contribution from Sweden: €2.21 m; Sweden: €3.4 m; Denmark: €0.43 m; UNDP: €2.31 m)	2009–2014

Table 1-1 Overview of GCCA-supported country programmes (continued)

Country	Partners	GCCA priority areas	Sectors	Budget	Duration
Cambodia II	UNDP; Ministry of Environment; National Climate Change Committee; Climate Change Technical Team	Mainstreaming	Overall development and poverty reduction	Total value: €9.4 million (GCCA+ contribution: €6 m; Sweden: €2.8 m; UNDP: €0.6 m)	2015–2021
Chad	Ministry of Agriculture and Environment; Ministry of Energy and Oil	Mainstreaming, adaptation, carbon market/ CDM	Agriculture, energy and forests	Total value: €8 million (GCCA)	2014–2018
Comoros	Ministry of Production, Environment, Energy, Industry and Handicrafts; Vice-President's Office in Charge of Finance, Economy, Budget, Investment and External Trade	Mainstreaming, adaptation, disaster risk reduction	Overall development and poverty reduction	Total value: €3 million (GCCA)	2014–2019
Democratic Republic of Congo	Ministry of Environment, Nature Conservation and Tourism; Congolese Institute for Nature Conservation; Centre for International Forestry Research	Adaptation, REDD	Forests and energy	Total value: €14 million (GCCA)	2012–2017
Djibouti	Ministry of Housing, Town Planning, Environment and Land Use Planning; Ministry of Energy; Djibouti Agency for Energy Efficiency; Ministry of Agriculture, Fisheries and Livestock in charge of Water Resources	Adaptation, carbon market/ CDM	Agriculture, energy, natural resource management, water and sanitation	Total value: €3 million (GCCA)	2013–2017
Ethiopia	GIZ; Environmental Protection Authority; Ministry of Agriculture and Rural Development	Adaptation	Agriculture, energy, land and natural resource management	Total value: €10 million (GCCA, including €8 m EC FSF; Germany: €0.3 m)	2012–2016
Gambia	Ministry of Finance and Economic Affairs; National Environment Agency; Department of Water Resources; Ministry of Forestry and the Environment	Mainstreaming, adaptation	Overall development and poverty reduction, coastal zone management	Total value: €3.86 million (GCCA)	2012–2016

Table 1-1 Overview of GCCA-supported country programmes (continued)

Country	Partners	GCCA priority areas	Sectors	Budget	Duration
Guyana	Ministry of Agriculture through the National Agriculture Research and Extension Institute	Adaptation, REDD	Coastal zone management and forests	Total value: €4.165 million (GCCA)	2009–2014
Haiti	Ministry of Environment	Mainstreaming, adaptation	Overall development and poverty reduction, agriculture, coastal zone management, energy, natural resource management	Total value: €6 million (GCCA)	2014–2019
Jamaica	UNEP; Planning Institute of Jamaica; Forestry Department; National Environment and Planning Agency; Ministry of Water, Land, Environment and Climate Change	Adaptation, REDD, disaster risk reduction	Coastal zone management, forests and natural resource management	Total value: €4.48 million (GCCA: €4.13 m; Government of Jamaica and UNEP: €0.35 m)	2010–2013
Lao PDR	Ministry of Natural Resources and Environment; Ministry of Agriculture and Forestry; IUCN; CIRAD; CARE Denmark	Mainstreaming, adaptation	Overall development and poverty reduction, agriculture, food security, land and natural resource management	Total value: €6.2 million (GCCA: €5 m; co-financing by grantees: €1.2 m)	2013–2018
Lesotho	Ministry of Finance and Development Planning; Ministry of Meteorology, Energy and Water Affairs	Mainstreaming, adaptation	Overall development and poverty reduction, energy, agriculture and food security	Total value: €4 million (GCCA, FSF from Ireland)	2013–2016
Malawi	Ministry of Agriculture and Irrigation; Ministry of Local Government and Rural Development	Mainstreaming, adaptation	Agriculture, land and natural resource management	Total value: €8 million (GCCA)	2014–2019
Maldives	World Bank; Ministry of Housing and Environment	Adaptation	Overall development and poverty reduction, energy and waste management	Total value: €11.9 million (GCCA: €3.8 m; other EU funding: €6.7 m; AusAID: AU$2 m)	2009–2015

Table 1-1 Overview of GCCA-supported country programmes (continued)

Country	Partners	GCCA priority areas	Sectors	Budget	Duration
Mali	Ministry of Environment, Water and Sanitation; Ministry of Foreign Affairs and International Cooperation	Mainstreaming, REDD	Forests	Total value: €6.485 million (GCCA and GCCA+: €5.92 m; Mali: €0.565 m)	2010–2017
Mauritania	GIZ; UNDP; Ministry of Economic Affairs and Development; Ministry of Environment and Sustainable Development; Ministry of Rural Development; National Meteorological Office	Mainstreaming, adaptation	Agriculture, food security and land management	Total value: €4 million (GCCA)	2014–2017
Mauritius	Maurice Île Durable Commission; Ministry of Environment and Sustainable Development	Mainstreaming	Overall development and poverty reduction, energy	Total value: €3 million (GCCA)	2010–2013
Mozambique	Danida; Ministry for the Coordination of Environmental Action	Mainstreaming, adaptation, disaster risk reduction	Overall development and poverty reduction, agriculture, coastal zone management	Total value: €47 million (GCCA: €15.2 m, including €5 m FSF from Ireland; Danida: €31.5 m; Government of Mozambique: €0.3 m)	2011–2015
Myanmar	UN-Habitat; UNEP; Ministry of Environmental Conservation and Forestry; Department of Meteorology and Hydrology of the Ministry of Transport; Ministry of Planning and Economic Development	Mainstreaming, adaptation	Overall development and poverty reduction	Total value: €4.065 million (GCCA: €4 m; UN-Habitat/ UNEP: €0.065 m)	2013–2018
Nepal	DFID; UNDP; Ministry of Science, Technology and Environment	Mainstreaming, adaptation	Overall development and poverty reduction	Total value €16.5 million (GCCA: €8.6 m including €0.6 m FSF from Cyprus; DFID: €7.9 m)	2012–2015

Table 1-1 Overview of GCCA-supported country programmes (continued)

Country	Partners	GCCA priority areas	Sectors	Budget	Duration
Niger	Ministry of Finance; Ministry of Environment, Sanitation and Urban Development; High Commissioner's Office for the 3N Initiative; National Council for Environment and Sustainable Development; governorates of the Dosso and Zinder regions	Mainstreaming, adaptation	Agriculture, food security, land and natural resource management	Total value: €11 million (GCCA+)	2015–2020
Papua New Guinea	FAO; Papua New Guinea Forest Authority; Office of Climate Change and Development	REDD	Forests	Total value: €8 million (GCCA: €6 m; UN-REDD: €2 m)	2013–2017
Rwanda	Rwanda Natural Resources Authority; Ministry of Natural Resources	Adaptation	Land management	Total value: €4.555 million (GCCA)	2010–2012
Rwanda II	Ministry of Environment and Natural Resources; Ministry of Local Government; Ministry of Finance and Economic Planning	Adaptation	Land management	Total value : €4 million (GCCA+)	2015–2017
Samoa	Ministry of Finance; Ministry of Natural Resources and Environment	Mainstreaming, adaptation, disaster risk reduction	Water and sanitation	Total value: €3 million (GCCA)	2012–2015
São Tomé and Príncipe	Ministry of Foreign Affairs, Cooperation and Communities; Ministry of Public Works, Infrastructure and Natural Resources; Ministry of Agriculture, Fisheries and Rural Development	Mainstreaming, adaptation	Agriculture, food security, forests and water	Total value: €3 million (GCCA)	2014–2019
Senegal	Ministry of Environment and Nature Protection	Adaptation, disaster risk reduction	Coastal zone management	Total value: €4 million (GCCA)	2011–2015

Table 1-1 Overview of GCCA-supported country programmes (continued)

Country	Partners	GCCA priority areas	Sectors	Budget	Duration
Seychelles	National Climate Change Committee; Ministry of Home Affairs, Environment, Transport and Energy; Seychelles Energy Commission	Mainstreaming, carbon market/ CDM	Overall development and poverty reduction, energy	Total value: €2 million (GCCA)	2010–2014
Seychelles II	UNDP; Ministry of Environment and Energy; Ministry of Foreign Affairs	Mainstreaming, adaptation	Overall development and poverty reduction, coastal zone management	Total value: €3 million (GCCA+)	2015–2019
Sierra Leone	Ministry of Agriculture, Forestry and Food Security	REDD	Forests and energy	Total value: €5 million (GCCA, FSF from Ireland)	2012–2016
Solomon Islands	Ministry of Environment, Climate Change, Disaster Management and Meteorology; Ministry of National Planning and Aid Coordination	Mainstreaming, adaptation, disaster risk reduction	Overall development and poverty reduction	Total value: €2.8 million (GCCA)	2011–2014
Tanzania	Ministry of Finance; Vice-President's Office, Division of Environment; Community Forests Pemba; Institute of Rural Development Planning; Sokoine University of Agriculture	Adaptation, REDD	Overall development and poverty reduction, agriculture, forests, land and natural resource management, water and sanitation	Total value: €2.21 million (GCCA, contribution from Sweden)	2010–2013
Tanzania II	Ministry of Finance; Vice-President's Office, Division of Environment	Mainstreaming, adaptation	Agriculture, energy, food security, forests, natural resource management, water	Total value: €8 million (GCCA+)	2014–2019
Timor-Leste	GIZ; Camões; Ministry of Agriculture, Forestry and Fisheries; Ministry of State Administration	Mainstreaming, adaptation	Overall development and poverty reduction, forests, agriculture and natural resource management	Total value: €4 million (GCCA, FSF from Ireland)	2014–2018

Table 1-1 Overview of GCCA-supported country programmes (continued)

Country	Partners	GCCA priority areas	Sectors	Budget	Duration
Uganda	FAO; Ministry of Water and Environment; Ministry of Agriculture, Animal Industry and Fisheries	Mainstreaming, adaptation	Agriculture	Total value: €11 million (GCCA, FSF from Ireland)	2012–2016
Vanuatu	World Bank; Vanuatu Meteorology and Geohazards Department; National Advisory Board on Climate Change and Disaster Risk Reduction	Mainstreaming, adaptation, disaster risk reduction	Overall development and poverty reduction, agriculture and food security, natural resource management, water	Total value: €5.7 million (GCCA: €3.2 m; World Bank: €2.5 m)	2010–2014

Note: Camões = Institute for Cooperation and Language, Portugal; CDM = Clean Development Mechanism; CIRAD = Centre de coopération internationale en recherche agronomique pour le développement; Danida = Danish International Development Agency (Ministry of Foreign Affairs); DFID = UK Department for International Development; EC = European Commission; FAO = Food and Agriculture Organization of the United Nations; FSF = fast start funding; GIZ = German International Cooperation Agency; IUCN = International Union for the Conservation of Nature; REDD = reducing emissions from deforestation and forest degradation; UNDP = United Nations Development Programme; UNEP = United Nations Environment Programme.

Table 1-2 Overview of GCCA-supported regional and multi-country programmes

Region	Partners	GCCA priority areas	Sectors	Budget	Duration
Africa	African Union Commission; African Development Bank; UNECA; ACP Secretariat	Adaptation, carbon market/ CDM	Overall development and poverty reduction, agriculture, energy, food security, health and water	Total value: €170 million (est.) (GCCA contribution: €8 m)	2012–2015
Western Africa	Economic Community of West African States; CILSS; ACP Secretariat	Mainstreaming, adaptation, carbon market/ CDM	Overall development and poverty reduction, agriculture, forests, energy, infrastructure and land management	Total value: €4 million (GCCA)	2011–2015
Eastern and Southern Africa	Common Market for Eastern and Southern Africa; ACP Secretariat	Mainstreaming, adaptation, REDD, carbon market/ CDM	Overall development and poverty reduction, agriculture, energy, forests and land management	Total value: €105 million (GCCA contribution: €4 m)	2010–2014
Caribbean	Caribbean Forum; Caribbean Community Climate Change Centre; ACP Secretariat	Adaptation, REDD, carbon market/CDM, disaster risk reduction	Agriculture, education, energy, fisheries, forests, health, tourism and water	Total value: €8 million (GCCA)	2011–2014
Eastern Caribbean	Organisation of Eastern Caribbean States	Adaptation	Land management	Total value: €10.6 million (GCCA with €7 m FSF from EC and €0.6 m FSF from Cyprus)	2014–2018
Lower Mekong Basin	Mekong River Commission	Mainstreaming, adaptation	Overall development and poverty reduction, agriculture, natural resources, water and sanitation	Total value: €11.7 million GCCA contribution €4.95 m (of which €1.54 m FSF each from EU and Ireland) Other contributors: Australia (€1.64 m); Denmark (€0.65 m); Germany (€1.35 m); Luxembourg (€1.89 m); Sweden (€0.39 m); Sweden and Finland (€0.83 m) through other MRC sources	2012–2015

Table 1-2 Overview of GCCA-supported regional and multi-country programmes (continued)

Region	Partners	GCCA priority areas	Sectors	Budget	Duration
Pacific	University of the South Pacific; ACP Secretariat	Adaptation, disaster risk reduction	Education, research and technological development	Total value: €9.9 million (GCCA and GCCA+)	2011–2016
South Pacific	Secretariat of the Pacific Community; Secretariat of the Pacific Regional Environment Programme	Mainstreaming, adaptation	Overall development and poverty reduction, agriculture, coastal zone management, health, infrastructure, water and sanitation	Total value: €11.4 million (GCCA including €10 m EC FSF)	2011–2016
Multi-country (Bangladesh, Nepal, Solomon Islands, Benin, Mali, Mozambique and Niger)	United Nations Capital Development Fund	Mainstreaming, adaptation	Overall development and poverty reduction	Total value: €6.32 million (GCCA: €4 m; SIDA: €1.74 m; UNCDF: €0.58 m)	2014–2018

Note: ACP = Africa, Caribbean, Pacific; CDM = Clean Development Mechanism; CILSS = Permanent Inter-State Committee for Drought Control in the Sahel; EC = European Commission; FSF = fast start funding; REDD = reducing emissions from deforestation and forest degradation; SIDA = Swedish International Development Agency; UNECA = United Nations Economic Commission for Africa.

Table 1-3 GCCA programme contributions to existing national programmes or strategies

GCCA programme	Contributes to the implementation of
Bangladesh	The Bangladesh Climate Change Strategy and Action Plan
Belize	The National Adaptation Strategy to Address Climate Change in the Water Sector
Bhutan	The Renewable Natural Resources sector programme/five-year plan
Burkina Faso	The National Rural Sector Programme and national REDD+ strategy
Cambodia	The Cambodia Climate Change Strategic Plan 2014-2023 and corresponding strategic plans and actions plans in nine priority ministries and agencies
Chad	A number of NAPA priorities and the National Development Plan 2015–2020
Comoros	The national poverty reduction and growth strategy
Ethiopia	The Climate Resilient Green Economy strategy, the national Climate Change Adaptation programme, and the Sustainable Land Management programme
Guyana	The National Mangrove Action plan
Lesotho	The environment and climate change priorities of the National Strategic Development Plan
Malawi	A number of NAPA priorities
Mauritania	A number of NAPA priorities
Mauritius	The Maurice Île Durable sustainable development strategy
Nepal	Mainstreaming of NAPA-prioritised activities through the national framework of Local Adaptation Plans for Action
Niger	The Economic and Social Development Plan 2012-2015, the National Climate Change Policy and the '3N' Initiative for Food Security and Sustainable Agricultural Development
Papua New Guinea	The national REDD readiness plan
Rwanda	The Strategic Road Map for Land Reform, the Strategic Plan for Environment and Natural Resources and the National Strategy on Climate Change and Low Carbon Development
Samoa	The Water for Life sector plan
São Tomé and Príncipe	The National Programme for Food and Nutritional Security
Seychelles	The Seychelles Climate Change Strategy and the Seychelles Sustainable Development Strategy 2012-2020
Solomon Islands	A number of NAPA priorities and the National Disaster Risk Management Plan
Uganda	The NAPA and the operationalisation of two climate–related objectives of the 2010 National Development Plan
Vanuatu	Measures identified in the NAPA

Table 1-4 Overview of aid modalities used for GCCA country programmes

Project approach		Sector approach and sector budget support	General budget support
Belize	Mali	Bangladesh	Lesotho
Benin	Mauritania	Bhutan	Mauritius
Burkina Faso	Myanmar	Cambodia	Seychelles
Cambodia II	Nepal	Guyana	Solomon Islands
Chad	Niger	Mozambique	
Comoros	Papua New Guinea	Rwanda I and II	
Dem. Rep. of the Congo	São Tomé and Príncipe	Samoa	
Djibouti	Senegal	Seychelles II	
Ethiopia	Sierra Leone		
Gambia	Tanzania		
Haiti	Timor-Leste		
Jamaica	Uganda		
Lao PDR	Vanuatu		
Malawi			
Maldives			

- Direct contribution to the implementation of an existing national programme or strategy
- Multidonor initiative: joint financing and/or management arrangements
- Multidonor initiative: Contribution to a multidonor pool or trust fund
- Budget support

Table 1-5 GCCA contributions to multidonor funds or initiatives

GCCA programme	Contributes to	Managed with or by	Co-financed by
Africa	Pan-African Climate for Development (ClimDev) initiative	African Union, African Development Bank, UNECA	UK, Sweden, Norway
Bangladesh	Bangladesh Climate Change Resilience Fund	World Bank	World Bank, Denmark, Sweden, UK, Switzerland, USAID and Australia
Cambodia	Cambodia Climate Change Alliance Trust Fund	UNDP	UNDP, Denmark, Sweden
Eastern and Southern Africa	Tripartite climate change adaptation and mitigation programme (COMESA-EAC-SADC)	COMESA	UK, Norway, the Rockefeller Foundation and USAID
Lower Mekong Basin	Mekong River Commission's Climate Change and Adaptation Initiative	Mekong River Commission	Australia, Germany, Denmark, Luxembourg, Sweden, Finland
Maldives	Climate Change Trust Fund	World Bank	World Bank, AusAID
Uganda	Joint donor basket fund for the water sector	FAO	Various donors

Note: COMESA = Common Market for Eastern and Southern Africa; EAC = East African Community; FAO = Food and Agriculture Organization of the United Nations; SADC = Southern African Development Community; UNDP = United Nations Development Programme; UNECA = United Nations Economic Commission for Africa; USAID = U.S. Agency for International Development.

Table 1-6 Joint management, programming and financing under the GCCA

GCCA programme	Managed with or by	Co-financed by
Belize	UNDP	UNDP
Benin	UNDP	UNDP
Burkina Faso	World Bank	Forest Investment Programme
Democratic Republic of Congo	CIFOR	Not applicable
Ethiopia	GIZ	Germany
Jamaica	UNEP	UNEP
Maldives	World Bank	World Bank and AusAID
Mauritania	GIZ and UNDP	Not applicable
Mozambique	Danida	Denmark
Myanmar	UN-Habitat and UNEP	UN-Habitat and UNEP
Nepal	DFID	DFID
Papua New Guinea	FAO	UN-REDD
Seychelles II	UNDP	Not applicable
Timor-Leste	Camões, GIZ	Not applicable
Vanuatu	World Bank	World Bank
LoCAL	UNCDF	UNCDF, SIDA, Government of Liechtenstein, Belgian Technical Cooperation

Note: Camões = Institute for Cooperation and Language, Portugal; CIFOR = Centre for International Forestry Research; Danida = Danish International Development Agency (Ministry of Foreign Affairs); DFID = UK Department for International Development; FAO = Food and Agriculture Organization of the United Nations; GIZ = German International Cooperation Agency ; SIDA = Swedish International Development Agency; UNCDF = United Nations Capital Development Fund; UNDP = United Nations Development Programme; UNEP = United Nations Environment Programme.

Site reforested with eucalyptus in Kroukoto, Mali

As the GCCA evolves into the GCCA+, further support will be provided for the development of local capacities for managing climate change challenges.

2

Supporting capacity development at the local, national and regional levels

The effectiveness of technical cooperation on climate change lies at the heart of the GCCA's work. As the GCCA evolves into the GCCA+, we will further support the development of local capacities to deal with climate change challenges.

Defined by the Organisation for Economic Co-operation and Development (OECD) as 'the ability of people, organisations and society as a whole to manage their affairs successfully' (OECD 2006a: 12), capacity requires much more than skills development. It is also needed to develop supportive strategies and policies, to strengthen the implementation of laws and procedures, and to set up well-functioning and lasting organisations.

Capacity development refers to the process by which individuals and organisations develop the ability to set and achieve their own objectives. It is a key area that aid cooperation should support, as indicated in the Paris Declaration on Aid Effectiveness and underscored in both the Accra Agenda for Action and the Busan Partnership for Effective Development Cooperation.

While strengthening its work on capacity development, the GCCA+ will continue to adhere to the following EU guiding principles:

- Capacity development must be owned by those who develop their capacity — otherwise it simply does not happen.
- External partners cannot design and implement capacity development — they can only support capacity development processes or help create the right external incentives.
- Those setting out to develop their capacity must lead and drive the assessment of their needs and the fformulation of their capacity development plan, so that their ownership and commitment remains intact or even gets boosted.
- Implementation of capacity development processes must be organised so that leadership and ownership are firmly in the hands of those who develop their capacity.

Engaging and empowering local stakeholders in adaptation to climate change

Supporting local adaptation and mitigation action is complex and entails addressing a number of interlinked dimensions: the grassroots and livelihoods dimension of communities, local authorities (formal and informal) and stakeholders and their relationship with other institutions, and the many connections between specific adaptation initiatives and broad sustainable development priorities.

Promoting adaptation and possible synergies between adaptation and mitigation at the local level produces at least two types of gains: (1)) increased resilience of the population groups most impacted by climate change; and (2) capitalisation of the most appropriate responses for sustainable adaptation as developed by local communities. It is therefore important to enhance local-level adaptation capacities in five general areas, as specified by the UNFCCC: observation, assessment of climate impacts and vulnerability, planning, implementation, and M&E of adaptation actions.

Development and climate adaptation practitioners have developed a series of tools for promoting participatory approaches during the identification, implementation

and evaluation of projects. The best known of these are the ecosystem-based approach, the community-based approach and community-based disaster risk management. In practice, the issue is often not **whether** to reach out to and involve local stakeholders, but **how** best to do so.

Investment in local capacity development is an important component of those projects that achieve local empowerment. It favours indigenous processes of adaptation, based on extensive use of local knowledge and skills. The development of a structured exchange of knowledge among beneficiaries is one of the best practices identified in a GCCA-financed study carried out in 2014 focused on scaling up local action on adaptation to climate change (box 2-1).

Strengthening capacities for accessing and managing climate finance

An area of concern common to many countries is developing the capacity to manage, absorb and attract long-term climate change finance. The GCCA helps address this challenge by strengthening planning capacities, public financial management and monitoring systems, laying the foundation for climate-related budget support, contributing to the establishment of multi-donor funds, paving the way for nationally owned climate change trust funds, and attracting co-financing for climate-related programmes. The GCCA also supports countries in strengthening their enabling environment to catalyse private finance and investment, and prepare for participation in REDD+ and for enhanced access to the Clean Development Mechanism (CDM) and voluntary carbon markets.

For example, the GCCA+ will support the Government of **Seychelles** in strengthening its management of climate finance, including tracking climate finance flows and climate-related public expenditures. The programme will support the implementation of a climate public expenditure and institutional review, based on the successful piloting of this tool in Cambodia and other countries.

In **Mozambique**, the GCCA-supported sector programme aims to enhance the capacity of the government to mainstream climate change into its poverty alleviation and development strategies. The programme has contributed to developing capacities within the health and energy sectors, among others. Twenty-two local adaptation plans have been developed, and the programme has supported capacity building for about 70 civil servants at the central, provincial and district levels. The strengthening of financial management capacity in the environment and climate sector, combined with other activities focused on the capacities of the Ministry for the

Box 2-1 Best practices in engaging local stakeholders and strengthening capacities

- In programme design and implementation, it is important to ensure the involvement of the whole chain of actors, from local to national whenever possible.
- Using locally appropriate communication approaches enables capacity as well as trust building, which is another critical element of stakeholder involvement.
- Creating networks among local actors provides an opportunity for creating awareness and elaborating adequate policies.
- Local facilitators or “multipliers” must be identified and trained, notably among non-governmental organisations and community-based organisations.
- Vulnerability reduction assessment tools should be used not only as a way to increase local understanding of the linkages between climate change and livelihoods, but also as a way to build awareness and engagement among beneficiaries.

Community engagement in the Pacific

Coordination of Environmental Action, sets the stage for higher budget allocations and improved budget execution with regard to the environment and climate change.

The enhancement of government's capacities to mainstream, cost and budget responses to climate change in key development sectors is the focus of the GCCA initiative in **Nepal**. Activities include carrying out economic and social appraisals and governance and fiduciary risk assessment, with a view to addressing public financial management challenges — and thereby enabling the country to effectively generate, attract and absorb climate-related funds. Seventy local adaptation plans of action (LAPAs) have been developed which have prioritised activities to address such needs as irrigation, flood and landslide protection, early warning systems, agriculture and aquaculture training, renewable and efficient energy technology and water management. These plans have been integrated into the Government of Nepal's planning process, and LAPA implementation guidelines have been issued to ensure a focus on vulnerable groups, women and social inclusion. In addition, climate change coordination committees and monitoring subcommittees have been established in 14 districts and 69 villages. A management information system has also been designed to capture qualitative and quantitative data from the plans, and staff have been trained in use of the software.

In **Djibouti**, the GCCA is supporting the strengthening of national capacities to pilot energy efficiency activities and access various sources of funding for renewable energy projects. Specifically, the GCCA supports institutional capacity building within the designated national authority (DNA) set up for participation in the CDM and the recently created Djibouti Agency for Energy Efficiency. Activities target staff training and the definition of a three- or five-year plan for promoting energy efficiency. In addition, the programme is building capacities for project promoters, DNA staff and staff of the Ministry of Energy for accessing the CDM and possibly the voluntary carbon market, as well as other financial instruments available to support the development of renewable energies.

Effective planning in the short, medium and long term

Short-, medium- and long-term planning is necessary to ensure coherent and effective action to tackle climate change. National adaptation programmes of action (NAPAs) and national adaptation plans are intended to, respectively, address short-term adaptation needs based on a project approach and promote a medium- to long-term strategy to reduce vulnerability, including through programmatic approaches fully integrated with national development planning. Nationally appropriate mitigation actions and low-emission development strategies address the strategic planning needs in climate change mitigation — sometimes integrating adaptation and mitigation, as in low-emission climate resilient development strategies. However, the development of such plans and/or the integration of climate change into already existing plans is not a simple exercise. The GCCA is therefore strongly committed to supporting this process and assisting recipient countries in developing their capacities to do so.

Mali is an example of a GCCA programme supporting the strengthening of institutional capacity for the development and implementation of a national policy, strategy and action plan on climate change addressing both adaptation and mitigation, as well as mainstreaming of climate change into key sector policies and strategies.

In the **Comoros**, the GCCA will strengthen mechanisms for mainstreaming climate change in the transport sector and for natural — including climate-related — disaster prevention and management. Planned activities include an assessment of policies, strategies, plans, legal and regulatory frameworks; the implementation of a strategic climate-environmental assessment in the transport sector; the development of proposals for mainstreaming climate change in budgetary and monitoring systems; and capacity building on disaster risk reduction.

A sector adaptation plan of action for the renewable nature resources sector, based on the country's NAPA, has been prepared in **Bhutan** with GCCA support. It focuses on mainstreaming climate change into planning systems. In parallel, a capacity-building plan has been prepared under the aegis of the sector's overall human resource development plan; fully demand-driven and country-owned, it seeks to maximise the resources devoted to field-level implementation of adaptation activities.

Follow-up of seedling production in Bafoulabé tree nursery, Mali

Linking policy making with local action

Responding to countries' needs, GCCA interventions frequently combine the integration of climate change into national policies and strategies with action at the local level through support to local authorities and community-based adaptation. This approach helps reinforce exchanges between national institutions and local communities. Interventions focused on mainstreaming also support the implementation of field projects, fostering the identification and development of good practices at the community level to inform action at higher levels of governance. This way, the GCCA prepares the ground for scaling up local action at the policy level.

For example, the GCCA programme in **Jamaica** aimed to increase resilience and reduce risks related to natural hazards in vulnerable areas. It addressed the links between climate change adaptation and disaster risk reduction in order to build socio-economic and environmental resilience. Pilot activities for watershed rehabilitation and coastal ecosystem restoration and protection involved from the outset the Ministry of Water, Land, Environment and Climate Change and supported the development of the Climate Change Policy Framework and Action Plan. This approach enabled political and geographical replication.

In the context of this programme, watersheds have been rehabilitated through slope stabilisation based on the reforestation of denuded hillsides. To manage this process, local forest management committees have been established. The resilience of ecosystems to the impact of climate change has been enhanced through restoration and protection of selected ecosystems. A plan for effective management of protected areas has been established and a database for monitoring ecosystem changes developed. The database is a critical tool for decision making, allowing, among others, to prescreen development interventions, assist environmental impact assessments and map vulnerable areas. Thanks to GCCA support, more than 7 hectares of degraded coastal areas have been planted with mangroves forests, and over 1 500 square metres of seagrass replanted. A climate change awareness campaign has been implemented, involving parliamentarians, students and artists. Pilot projects on public education, risk and vulnerability assessments have also been developed by the Environmental Management Division and the Meteorological Service of Jamaica.

'The project was the first significant piece of climate change funding made available to Jamaica for mainstreaming activity. It created the groundwork and credibility for attracting other funds.' —GCCA Evaluation 2014

The GCCA programme in **Belize** seeks to strengthen the country's resilience to climate change effects by supporting implementation of its water sector strategy while also focusing on enhancing national capacities to plan for and coordinate a national response to the threats of climate change. The programme played a critical role in the creation of the National Climate Change Office; the office, in turn, has achieved a variety of results including the completion of vulnerability assessments for the tourism, agriculture, fisheries, coastal development and health sectors. These assessments will feed into the development of specific adaptation strategies. In conducting the assessments, key partnerships were established with Cuba's Institute of Meteorology, which helped scale down climate models; and with the GCCA regional programme led by the Caribbean Community Climate Change Centre, which assisted in ensuring the quality of deliverables and their relevance to national plans. The Belize programme also developed activities on the ground. National and local authorities are working

'To date, water management projects have contributed to strengthening the implementation capacities of executing partners. This has respectively yielded lessons learnt to guide the implementation of similar climate change projects and contributed to the creation of new knowledge that can inform sector-specific activities and national development planning processes.' —GCCA Evaluation 2014

together to implement several pilot projects aimed at building resilient communities to withstand food insecurity and the lack of potable water and to strengthen forest and watershed management. The programme is thus embedded in several sectors and draws on the participation of various ministries and agencies, which will facilitate the scaling-up process.

Building capacities at the regional level

Addressing local vulnerabilities also implies a regional dimension, as some adaptation initiatives are more effectively implemented at the regional level. Indeed, addressing climate-related risks — whether at the national or local level — requires observing the phenomenon, producing relevant data to be used by decision-makers and learning from existing experience and best practices to design robust actions. Performing these activities is often more effective and efficient when implemented at a regional scale. Observation systems are complex, costly and need the triangulation of information from different sources, including satellite imaging and geographical information systems. It is often more effective to build such capacity at the regional level. The same may also apply to data collection, collation and sharing as well as its translation into user-friendly information for decision-makers.

The sharing of information and best practices on technical solutions, as well as the mainstreaming of climate-related considerations into national systems may also benefit from a regional dynamic as it allows, for example, a shift beyond specific policy or institutional frameworks to other approaches and solutions. Moreover, it is only at a regional level that risk-insurance schemes are economically viable. Such schemes protect against climate-related risks and provide financial support that allows countries and communities to recover if affected by climate change hazards.

For example, the GCCA supports the **Secretariat of the Pacific Community** and the **Secretariat of the Pacific Regional Environmental Programme** to deliver climate change adaptation support at the national and regional levels in a more coherent, coordinated, efficient and mainstreamed fashion. In particular, the programme supports the preparation of adaptation roadmaps, the financing and implementation of concrete actions in participating countries, and the strengthening of regional and national capacities and institutions to enable them to bring a more effective response to climate change.

Raising awareness on environment and climate change: youth drawing competition in Cambodia

Comparing fuelwood use in traditional fire and cooking stove, Malawi

As the GCCA experience highlighted here illustrates, strategic support to develop the capacity of local communities and national and regional institutions is a key factor in successfully addressing climate change challenges. Drawing on the lessons of past programmes, the GCCA+ is committed to further promoting capacity development, providing direct support to local communities, administrations and national governments for the implementation of nationally owned adaptation solutions.

Stories from the field: Mali

Title: Global Climate Change Alliance — Mali

Priority areas: Mainstreaming, REDD

Sector: Forests

Budget: €6.485 million of which €5.92 provided by the EU (GCCA) and €565 000 provided by the Government of Mali

Partners: Ministry of Environment, Water and Sanitation; Ministry of Foreign Affairs and International Cooperation

Time line: 2010–2017

The Mali GCCA programme helps strengthen institutional capacities and supports the development of a national policy on climate change. It supports the government in its efforts to integrate climate change into national and sector policies and strategies. It also supports improved knowledge and monitoring of forest stocks and enhancement of these stocks through afforestation/reforestation projects.

Key achievements to date

- The Environment and Sustainable Development Agency, created in 2010, is receiving support in the implementation of the climate change policy and strategy. This support has especially focused on setting up a climate fund, helping government officials prepare for international climate negotiations, training them in the REDD+ mechanism, and assisting with implementation of a capacity-building plan for the agency.

- The forest inventories of the Kayes, Koulikoro, Sikasso and Ségou regions are now complete, and the data have been incorporated in the national forest information system. A methodology for the inventory of communal forests is being finalised.

- Officials from the National Directorate for Water and Forests were trained and participated in the forest inventory exercise, so as to be able to monitor changes in forest cover across the country.

- The forest information system, which was created to collect and disseminate information on and monitor forest resources, has received support from Senegal's Centre for Ecological Monitoring. Links between different databases have been reviewed, staff have been trained and more powerful hardware has been purchased.

- Non-governmental organisations (NGOs) are implementing six 'greening' projects. Data obtained during their afforestation/reforestation activities will be fed into the forest information system. The NGOs share a platform with other organisations working in the same areas to ensure their activities complement each other.

Lessons learned

Given the importance of the forest information system, it is essential to ensure that sufficient expertise is readily available to support its management team. For this reason, Senegal's Centre for Ecological Monitoring has been brought in; it can offer remote support as well as visit Mali regularly. Capacity also needs to be developed in fast-evolving geographical information system technology.

The Environment and Sustainable Development Agency plays a central role in coordinating activities relating to climate change, including serving as a focal point on climate change, being the designated national authority for the CDM and preparing communications to the UNFCCC. Because it is a young agency and receives support from a variety of funding bodies, it is vital to ensure proper coordination between all the technical and financial partners. This coordination is carried out by the donors' technical group on Environment and Climate Change.

Working with NGOs in Mali for the greening projects has helped to foster ownership on the ground. The GCCA is setting up regional cooperation frameworks to help collect and share information about projects related to forestry and climate change to support implementation of activities.

The way forward

GCCA Mali will take charge of the national validation of the results of a study on the CDM carried out by the Intra-ACP Programme. It will also provide support to the Mali Climate Fund during the first phase of its implementation. It will help the Ministry of Environment, Water and Sanitation prepare for the forthcoming UNFCCC Conferences of the Parties, in Lima in 2014 and Paris

in 2015. Further work on the forest inventory in 28 localities will involve staff from the National Directorate for Water and Forests supported by officials who helped prepare the regional inventories. Local staff from this Directorate will be trained to enable them to effectively monitor work carried out by NGOs.

‘Very quickly, I saw the benefits’

‘In the past, I would cut down and burn trees in order to clear parcels of land to grow millet’, says Ousmane Guindo, an agricultural worker in the village of Sokoura in Mali’s central Mopti region. ‘But I saw that this didn’t help at all as now there was nothing to stop the wind. My crops got buried in sand and yields were very poor.

‘So I started using the assisted natural regeneration technique. I left tree stumps intact and started to nurture the new shoots that grew up around them. Very quickly, I saw the benefits: the leaves that fall from the trees decompose and act as fertiliser for my crops; selective pruning ensures a regular supply of wood fuel for cooking; my millet yields are better, as the trees prevent the wind from burying the seedlings; and the trees provide welcome shade for our rest breaks when working in the fields’.

Guindo’s efforts are supported by the Reverdir Mopti (‘Greening Mopti’) project, which aims to improve tree cover and reverse soil degradation and creeping desertification in this arid region just south of the Sahara. Worsening soil degradation in recent decades — a result of population growth, inappropriate farming methods and increasingly arid weather patterns linked to climate change — has undermined Mali’s capacity to produce food. In response, the government has prioritised reforestation as a means to combat both the degradation of natural resources and poverty.

This GCCA-supported project is implemented by Sahel Eco, an NGO which, for the past 10 years, has worked with rural communities in the region to apply agroforestry, in particular by using assisted natural regeneration. The technique involves nurturing natural tree seedlings by removing flammable plants and undergrowth to enable tree cover to regenerate.

The NGO works with farmers and local associations to improve crop cover and cultivation across a broad area. Drissa Gana, Sahel Eco’s project coordinator, explains. ‘We set up a tree promotion committee with officials, elected representatives and community leaders, which plays a central role in getting reforestation activities going, setting up local agreements and follow-up. It also creates a commitment to ensure project results are sustainable’.

Fifteen months after project start-up, the results speak for themselves:

- 141 000 trees have been planted, and 435 000 trees protected.
- 30 people have been trained in water and soil conservation techniques.
- 16 agreements have been signed with local communities on management of tree resources in order to promote the active involvement of local farmers, collectives and village leaders.
- Two partnership agreements have been signed for the management of the Samori and Segue forests, and action plans have been developed for each to restore degraded areas and create firebreaks (i.e. natural or man-made gaps in vegetation to slow or halt the spread of fire).

‘We have also noticed that in several areas neighbouring our project, farmers have started to use the method, which shows that it is gaining ground through informal channels and without project support’, notes Gana. The main challenge now is to advance laws to make the farmers responsible for managing the trees they look after. Another challenge is to get more value from non-wood forest products from the trees protected by assisted natural regeneration, as this would allow women to be more involved.

‘If we had counted all the trees in Sokoura 10 years ago, there would have been fewer than I have just in my fields alone today’, says Ousmane Guindo. ‘These efforts really are bearing fruit’.

Stories from the field: Pacific Islands

Title: Pacific Islands Forum Support Programme

Priority area: Adaptation, disaster risk reduction

Sector: Education and research, technological development

Budget: €9.9 million

Partners: Pacific Centre for Environment and Sustainable Development, University of the South Pacific

Time line: 2011–2016

Recent assessments of the climate change threat to small islands are stark: a rise of 2-4°C in mean global temperature will cause sea level rise, ocean acidification, extreme weather events, higher temperatures and changing rainfall patterns — translating into a medium to very high risk of loss of livelihoods, coastal settlements, infrastructure, ecosystem services and economic stability by the end of this century (Nurse et al. 2014).

Building capacity to adapt to climate change and reducing disaster risk are thus top priorities for the 15 Pacific Island member states of the ACP Group, namely: Cook Islands, Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Kingdom of Tonga, Tuvalu, Vanuatu and Timor-Leste. The leaders of these countries and territories have developed a common strategy for action on climate change and disaster risk reduction. The GCCA supports the implementation of this strategy through a programme implemented across the region by the University of the South Pacific's Pacific Centre for Environment and Sustainable Development. The programme focuses on adaptation but also contributes to disaster risk reduction. It coordinates activities in three interlinked areas: capacity building, engaging communities in measures for adaptation, and applied research aimed at developing tools to assess the islands' vulnerability and prepare adaptation plans.

Key achievements to date

Capacity building. The programme is building capacity — and thereby empowering a new generation of planners, researchers and policy-makers — through postgraduate studies. GCCA funding supports course development as well as scholarships, which have been awarded to 61 students. So far, 100 students have received postgraduate diplomas in climate change, 17 have earned master's degrees and 3 have obtained PhDs. Three new courses have been developed: disaster risk management, Pacific ecology in relation to climate change and tropical meteorology.

As part of the master's programme, small groups of students have attended international climate negotiations, to gain practice in preparing briefings, analysis and negotiating. 'Taking part in UNFCCC talks is a complicated affair and the Pacific Islands are well represented but don't necessarily have experienced negotiators', says Professor Elisabeth Holland, Director of the Pacific Centre for Environment and Sustainable Development. 'This is working towards that for the future'.

Alumni have gone on to careers in government environment departments, negotiating at international climate talks, in conservation management and with consultancies, as well as conducting further research.

The programme also conducts informal training through workshops. It has trained 15 in-country coordinators, who have become trainers themselves, sharing knowledge on climate change at the subregional and national levels, with the ultimate goal of leading workshops at the community level. To date, the programme has trained over 500 people on the ground and has established an online Knowledge Centre to collect progress reports, papers and journal articles produced by programme staff and students.

Alumni have gone on to careers in government environment departments, negotiating at international climate talks, in conservation management and with consultancies, as well as conducting further research.

It has also hosted 200 participants at the Pacific Islands Climate Services Forum, an event aimed at engaging climate experts in dialogue and sharing information with resource and disaster risk managers, community planners, project in-country coordinators, meteorological service representatives, postgraduate students, representatives of government ministries and other programme managers and policy-makers. The forum helped increase access to meteorological forecast data and raise awareness of regional products.

Community engagement. National project advisory committees have been set up in each of the 15 countries to enable the vulnerable communities to take the lead in determining where assistance is most needed. Four countries — Fiji, Samoa, Tuvalu and Vanuatu — have completed draft adaptation plans for the three pilot communities selected in their countries, and country coordinators have completed vulnerability and adaptation assessments of these sites. Activities to help the community adapt to climate change are decided on the basis of these assessments, conducted using a participatory approach. Thus, Fiji is implementing water and wastewater measures; Samoa is focusing on water, health and food security; Tuvalu is implementing water sector and biogas projects; and Vanuatu will work on water, food security and coastal stabilisation.

In one of Fiji's demonstration sites, the vulnerability and adaptation assessment found that the Korolevu community had not had access to clean and safe drinking water for over 40 years. The project installed a 10 000 litre water tank and piping system to distribute water to the community. As a result, more than 100 people from 28 households can now access water in their own homes.

Applied research. Research students are focusing on a wide range of climate-relevant topics: gender and energy; food security and the selection of crops and cultivars to maximise returns in a changing climate; documenting coral reef dieback; algal overgrowth and its potential uses as a fertiliser or biofuel; ocean models for carbon monitoring; and investigation of factors hindering the growth of giant swamp taro, an important source of carbohydrates in Tuvalu.

Lessons learned

The biggest lesson learned so far is the importance of collaboration and exchange of experience. Prof. Holland notes that 'It's been an inspiration to use materials developed in one region and use them throughout the Pacific. And to have that ongoing exchange with what's going on in the communities, talking with the 15 in-country coordinators and listening to all that they've learned. We've gone from being a group of people who felt victimised by climate change to a group of people interacting to empower themselves in the communities'.

'A lot of the time climate change is seen as something caused outside the Pacific but affecting the Pacific strongly. It can be hard to find a voice and not be trapped as a victim. What we have seen through this project is a powerful network for change to empowerment.'
—Professor Elisabeth Holland, Director, Pacific Centre for Environment and Sustainable Development

The way forward

Communities that have implemented projects will act as mentors and models for others. 'That way, we finish with a robust network of communities working together to become more resilient to climate change, and where each community has an adaptation plan in place with priorities identified', says Holland. The work has begun in 43 communities, and — through collaboration with other projects — they will reach over 70. These will be the hub of a locally managed climate change adaptation network.

Coastal erosion is a threat faced by Palau, like most Pacific Islands

Terrace farming in Musanze district, Rwanda

The GCCA+ fully appreciates the importance of budget support as a tool to address the inclusion of the environment and climate change into poverty reduction and development.

3

Budget support for climate change

Piloting budget support on climate change

The OECD defines budget support as 'a method of financing a partner country's budget through a transfer of resources from an external financing agency to the partner government's national treasury' (OECD 2006b: 26).

Budget support is an aid modality fully in line with the principles of aid effectiveness of the Paris Declaration, conceived to deliver better aid and achieve sustainable development results. It not only helps reduce poverty but is also a tool to enhance human rights, democracy, and the rule of law. According to the EU budget support guidelines, budget support entails policy dialogue, a financial transfer to the national treasury account of the partner country, performance assessment and capacity development, based on partnership and mutual accountability.

The GCCA+ uses budget support as an effective tool to address the inclusion of the environment and climate change into poverty reduction and development in general, in several sectors or in a key sector. At the core of the budget support process, policy dialogue offers a great opportunity to place the environment and climate change at the centre of national development planning and mainstream them into national and sectoral policies. Using budget support rather than project interventions gives greater emphasis to policy dialogue with governments regarding national poverty reduction strategies and development plans, and how climate change actions fit into these policies.

As part of GCCA support, eight countries have so far received funds straight into their national treasury: Bhutan, Guyana, Rwanda and Samoa in the form of sector budget support; Lesotho, Mauritius, Seychelles and Solomon Islands as general budget support. Further funding under the GCCA+ has recently been approved for Rwanda, with more countries in the pipeline.

In **Guyana**, the GCCA provided both the government and the EU an opportunity to innovate, by agreeing on a sector policy support programme that would assist in the implementation of a national action plan for mangrove management. There was little experience with the budget support modality in Guyana, and with the technical area of mangrove restoration, making this joint undertaking a means to explore new ways of working in a new thematic area. The initiative has proved to be a success, and there is strong evidence of its having achieved a high level of sustainability compared to what might have been possible under a project approach.

Building on existing strategies

GCCA budget support programmes build on existing EU and partner country experience in implementing general and/or sector budget support programmes. The existence of other programmes facilitates the decision to use this modality for climate-related support, because their presence implies that fiduciary and macroeconomic assessments have already been conducted and that activities are under way to strengthen public financial management systems. In several cases, GCCA budget support specifically complements or builds on other ongoing budget support programmes, as in Bhutan and Samoa.

In **Bhutan**, the EU supports development in the renewable natural resources sector through sector budget support. The targets it has set relate to sustainable rural livelihoods, the promotion of sustainable agricultural production and commercialisation, food security and

Children with mangrove seedlings, Guyana

the preservation of natural resources. GCCA funding complements this EU sector programme by promoting the integration of climate change adaptation measures into the sector strategy and the medium-term sector budget, alongside improvements in sector monitoring systems.

In **Samoa**, the EU has supported the water sector through sector budget support since 2010; this has helped integrate water sector planning, budgeting and institutional processes into the government's wider planning systems and processes and develop planning and implementation capacity. This experience made it easier for the GCCA to opt for the budget support modality; the GCCA programme reinforces ongoing activities by strengthening the integration of climate change adaptation into the water sector plan and improving drainage infrastructure.

Strengthening monitoring

Managing for results is especially critical for budget support programmes, which need to demonstrate the contribution of financial transfers to tangible achievements. Criteria for monitoring such programmes ideally originate from the performance assessment framework associated with the supported policy or strategy. The GCCA has experience in selecting indicators from national monitoring systems. In all cases, the GCCA strives to use budget support operations to strengthen national monitoring systems, as it has done in Bhutan, Guyana, Lesotho and Seychelles.

In **Bhutan**, improvements in sector monitoring and in the quality of statistical data have been made a criterion for progress in the renewable natural resources sector and disbursement of budget support tranches. Outcome indicators and criteria are used to measure the implementation of agricultural practices aimed at reducing vulnerability and/or greenhouse gas emissions as a result of mainstreaming climate change adaptation in the sector. The choice of these indicators reflects a willingness to monitor the climate-related performance of funds implemented through the national budget.

In **Guyana**, monitoring criteria selected for determining the disbursement of the variable tranches of budget support were very straightforward and drew directly from the performance assessment framework of the Mangrove Management Action Plan. The budget support programme helped enhance national capacity to monitor mangroves and the results of the action plan, including through the establishment of a mangrove inventory, the development of a mangrove monitoring plan and protocols, and field monitoring.

One of the criteria associated with the disbursement of the second tranche of GCCA budget support in **Lesotho** relates to the finalisation of M&E frameworks for the country's new climate change adaptation and renewable energy strategies; this includes providing clear information on data sources, data availability and reliable data collection methodologies.

In **Seychelles**, criteria for the disbursement of the tranches of budget support included setting up monitoring mechanisms for the Seychelles National Climate Change Strategy, and for mainstreaming climate change into all key sectors of the Sustainable Development Strategy 2011–2020.

Combining budget support with technical assistance

Technical assistance can be a useful complement to budget support operations, provided it is embedded in national structures, relies at least in part on national expertise, and supports long-term institutional strengthening and capacity building. Guyana, Lesotho, Mauritius, Seychelles and Solomon Islands provide examples of how technical assistance is — or, where no specific provisions were made for technical support, could have been — used to complement the GCCA budget support.

In **Guyana**, the technical assistance provided with sector budget support for mangrove management was very useful, given the scarcity of local technical expertise. The Guyana experience highlights the utility of mobilising such assistance relatively early in a project.

In **Lesotho**, complementary technical assistance is used to support capacity building for government and non-state actors in achieving agreed-upon indicators, in particular with regard to strengthening sector-level coordination and M&E of policy and strategy implementation.

Coastal defences: rock armouring at Anse Marie-Louise in Mahé, Seychelles

A small provision for technical assistance in the **Mauritius** programme was used to elaborate policy and guidelines on sustainable buildings and construction standards, develop targets for the Mauritius Green Buildings 2025 strategy, and design a rating system for green buildings. It provided access to specialised expertise that might otherwise have been difficult to mobilise.

In **Seychelles**, where no specific provision was made for technical support, experience showed that targeted high-level institutional technical assistance and capacity building would have been useful in a context characterised by a complex institutional framework, a lack of coordination, and limited staff and management capacity. This lesson will be integrated into future programmes.

In **Solomon Islands**, where no specific provision had initially been made for technical assistance either, following up and reporting on some of the disbursement criteria for the second tranche of budget support proved very challenging. To reinforce the project implementation unit and help finalise some programme elements, short-term technical expertise was mobilised.

Closer attention is thus being paid to the technical support that might be needed to implement and follow up on the reforms agreed to under budget support programmes. A crucial element for delivery of effective technical assistance conducive to the timely completion of planned policy reform is its provision from the outset. In the future, efforts will also focus on ensuring that technical assistance provided by complementary

projects is well aligned with the provision of budget support finance.

The use of performance measures can be a challenge. Often, no proper indicators are in place to monitor climate change impacts and vulnerability and/or the effectiveness of adaptation and mitigation measures, and the onset of GCCA budget support stimulates their design.

In **Lesotho**, for example, the budget support modality has provided a useful entry point for supporting the climate change policy-making process, with a specific focus on an inter-ministerial coordination mechanism, adoption and budgeting of the climate change strategy, and development of a credible M&E system. The choice of a general budget support programme was consistent with the objective of promoting climate change mainstreaming into the existing national development and poverty reduction strategy. Lessons learned from ongoing budget support operations — related to weaknesses in coordination, public financial management and the M&E process — were taken into account during programme design, leading to the selection of cautious and structured disbursement conditions based on process rather than outcome indicators.

The sustainability of the reforms supported by the GCCA through budget support will continue to be assessed as results from the eight GCCA budget support programmes roll in. Currently, three of the eight programmes are under implementation, four are being closed out, and only one (Rwanda) has been completed. The GCCA+ will ensure continuity in government efforts in recipient countries.

In **Rwanda**, for example, a sector reform contract was recently approved to promote climate-proof investments by farmers through improved land administration and land use monitoring capacities at the central and local government levels. This new sector budget support programme will complement and build on the results of the first phase of land reform in Rwanda supported through budget support by the GCCA. The intervention will aim to increase decentralised capacities to sustain the national land registry and capacities for land use planning and monitoring while ensuring the financial sustainability of the national land registry. Improved land management is expected to enhance resilience to climate change.

Stories from the field: Guyana

Title: Sustainable Coastal Zone Protection through Mangrove Management in Guyana

Priority area: Adaptation, REDD

Sector: Coastal zone management, forests

Budget: €4.165 million

Partners: National Agriculture Research and Extension Institute

Time line: 2009–2014

With its low-lying coastal plain, large river system draining a forest and upland region, and crumbling sea defence system, Guyana is at exceptional risk from climate change. The sea level is rising continuously and this phenomenon, combined with the hazards associated with extreme weather events, makes it necessary for the country to adopt urgent measures to protect against greater coastal flooding.

In 2012, the government approved implementation of a new Sea and River Defence Policy. This considers sea defences to be made up of three pillars: man-made and natural defences, drainage and irrigation, and conservancy dams (for storage of flood and irrigation water). Mangrove forests are an integral part of Guyana's sea defences and cover a substantial part of the coastline. They dampen wave action and protect coastal banks. At the same time, mangroves provide an invaluable service to food security in the country: 90 per cent of the agriculture in Guyana is located along the very fertile coastal belt. Sea defence breaches can be catastrophic in nature, destroying property and livelihoods in populated areas, and making agricultural land unusable for a decade or more due to increased salinity of the soil. Mangrove fields have been degraded over the years by a combination of natural processes and their traditional use as a source of raw materials — for firewood, in building construction, to make fishing rods, etc.

Mangrove forest conservation and the protection of coastal areas are thus a central priority. Mangrove management is addressed in various policy documents and legal instruments, and a National Mangrove Management Action Plan was adopted in 2010. In the same year, the Guyana Minister of Agriculture declared mangroves a protected species under the Forestry Act. The GCCA provided budget support to implement the mangrove action plan, with the objective of mitigating climate change (through carbon sequestration in reforestation and forest preservation) and increasing resilience to its effects (through support for sea defences and biodiversity). The programme also aimed to raise national public awareness and education about the importance of mangroves for the benefit of coastal communities and the country as a whole.

Key achievements

Following government backing for the mangrove action plan in 2010, the Guyana Mangrove Restoration Project established an advisory body composed of 12 government agencies, research organisations and the private sector, and set up a project unit.

To date, 7.5 kilometres, equivalent to 48.5 hectares of mangroves, have been restored, and 470 000 black mangrove seedlings have been raised and planted with community involvement. This has been supported by the complementary planting of spartina grasses and, in selected areas, the construction of hard structures designed to increase sedimentation and promote natural regeneration, thus enhancing the sustainability of planting efforts.

The project recruited nine rangers to monitor and protect 24 kilometres of coastal mangroves. Seven village action committees and community infrastructure projects have been established to promote awareness and protection of mangroves at the local level; a website provides information about the project; a Mangrove Reserve Women's Producers Cooperative has been set up to promote alternative livelihoods in communities along the coast (see box); and a new mangrove visitor centre welcomes 3 000 students per year and 200 visitors a month.

To support public education about mangroves, a documentary, Holding Back the Sea, was produced for the Guyana Learning Channel, aimed at primary schools, and a teachers' resource manual on mangroves is now part of the secondary school curriculum. The project has also awarded 18 research grants and published scientific articles on the carbon storage capacity of mangrove species in Guyana and on nurseries and conservation of mangroves.

Lessons learned

The project has recognised that to ensure success in establishing new mangrove plants, technical assistance is needed at an early stage to analyse pilot sites for wave energy, mud elevation, hydrology and coastal activities, all of which can affect sensitive seedlings. Also, to restore the mangrove belt at the scale and within the timeframe required in Guyana, planting must be carried out in conjunction with other methods of mangrove restoration (hard structures, spartina grass planting, etc.).

The way forward

To make the mangrove monitoring system fully operational, the project will need to boost geographical information system and data management capacity and use of satellite data. Continuous research on the influence of offshore mud banks on mangrove restoration is also critical to successful planning and restoration of the country's coastal mangrove forest. At the community level, it will be beneficial to find ways to exploit mangrove-based products more effectively in order to improve the community benefits of conservation efforts.

Women generate business opportunities through mangrove protection project

The Guyana Mangrove Restoration Project is a success story in how to combine climate change resilience — in this case, by protecting mangrove forests — and new business opportunities for local communities. Funded by the Government of Guyana and the GCCA, the project extends across five regions on the country's northern coast and includes awareness raising, research, mangrove restoration and community development. Social entrepreneur Annette Arjoon-Martins became chair of the project in 2010, and sought to replicate her experience as founder of the North West Organics brand which successfully marketed products produced within and adjacent to protected turtle breeding grounds. She created a mangrove reserve brand that communities were permitted to use on their home-grown and manufactured products once they were protecting mangrove forests in tangible ways. The producers — mainly women — now have a range of products such as golden mangrove honey, handmade beeswax candles, cassava bread, coconut biscuits and pepper sauce.

The line of products was launched at a farmers' market sponsored by Digicel, a Caribbean mobile telecom operator which ordered 350 gift baskets for corporate customers during the Christmas season. Members of the five communities were also trained as tour guides. The tour starts from the mangrove reserve visitor centre, in a traditional plantation house, where a display chronicles the story of mangroves. Tourists then visit a thriving mangrove forest and wetland, see conservation work and local villages, and encounter traditional Guyanese heritage including a drumming and folk singing show. The villagers, meanwhile, have new enriching occupations as tour guides, horse-cart drivers, cane juice vendors, musicians, beekeepers and agri-products producers. The group recently won the Tourism and Hospitality Association of Guyana's Environmental Award and the Caribbean Tourism Organisation's Biodiversity Conservation Award.

'These experiences have demonstrated just how effective these locally based ventures become, especially with the encouragement of mentors who understand that the transition to a modern business world cannot be rushed or expedited at the loss of the area's most important resources', says Arjoon-Martins. 'I gained great respect for how these women were motivated to embrace a new-found sense of preserving the most natural assets in their communities while forging innovative paths as beneficiaries of fair trade principles and a thriving economy'.

Ambassador of Norway buying mangrove products

Water harvesting for supplementary irrigation, Ethiopia

Decision-makers need to know which adaptation policies, programmes and projects actually work and why.

4

Monitoring and evaluating adaptation to climate change

As more and more developing countries establish national policies, strategies and action plans for climate change response, it is vital to put in place corresponding systems that evaluate their impacts. Some countries are already actively engaged in creating such systems, and — as evidence of increased recognition of the subject's significance — measurement, reporting and verification (MRV) of climate mitigation and monitoring and evaluation (M&E) of climate adaptation was one of four key topics discussed at the GCCA's September 2013 Global Policy Event.

Although some technical challenges remain, methodologies and tools for MRV of climate mitigation are relatively well developed. The issue has received wide attention within the UNFCCC process, and various initiatives for building capacities in developing countries are under way. On the other hand, M&E of climate adaptation is a relatively new discipline and poses greater challenges than MRV, as adaptation is an inherently complex process which is context-specific and for which no single metric exists to measure success. Indeed, there are no commonly agreed-upon standards or criteria for measuring how well a particular programme or project reduces people's vulnerability to the adverse impacts of climate change. While a number of different M&E frameworks have been developed in the last few years, notably by the World Resources Institute, the German International Development Cooperation (GIZ) and the International Institute for Environment and Development (IIED), the nature and context of the actual intervention will dictate the approach that is taken.

Against a backdrop of scaled-up funding for climate change adaptation, it is increasingly important to ensure the efficacy, equity and efficiency of adaptation interventions. Comprehensive M&E constitutes a key part of this, and will help provide evidence to shape future adaptation investments. Decision-makers need to know which adaptation policies, programmes and projects actually work and why.

Robust M&E can be thwarted by a number of methodological challenges. Many aspects of climate change (and hence adaptation outcomes) will not be fully seen for a number of years, but programme outcomes are often evaluated on a much shorter term that only spans the lifetime of a particular programme or project. There are likely to be evolving stresses and risks due to climate change and other contextual factors, i.e. 'shifting baseline' problems. This will in turn throw up problems around attributing success (or indeed failure) to meet the stated objectives of a programme. Furthermore, climate impacts are dynamic, and adaptation will not simply eradicate the adverse impacts of climate change so that development can take place unimpeded. A short-term narrow focus merely on 'climate proofing' will only address small incremental changes in existing climate-related risks, but will possibly fail to take account of unforeseen longer-term changes (Brooks et al. 2011).

Learning from GCCA experience

Whilst the M&E of adaptation programmes and interventions can be challenging, the 50+ national, regional and multi-country programmes supported by the GCCA across the globe provide a good opportunity to gather practical lessons on how M&E is being undertaken. These lessons can be used for cross-learning among ongoing GCCA-funded programmes and to inform the development of the GCCA+.

On behalf of the GCCA, the IIED undertook a review of GCCA-funded programmes to assess how M&E is integrated into them and to identify innovative and successful

approaches to M&E. The review focused on M&E at the programme level (how the programme is measuring its achievements) and system level (how programmes are directly or indirectly contributing to regional, national or local systems for M&E of adaptation).

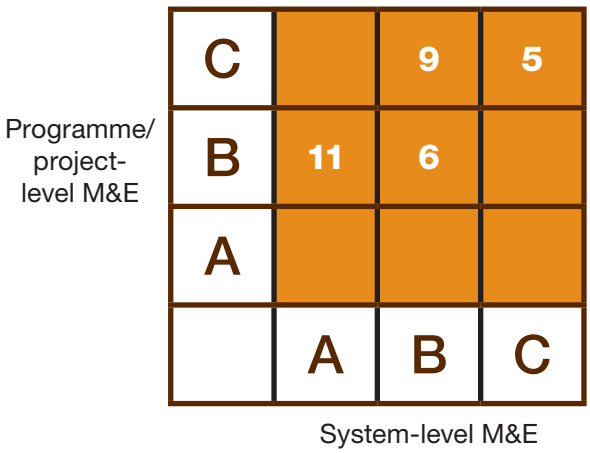
An analytical framework based on indicative M&E best practices was developed, and a set of preliminary benchmark criteria was defined using the Tracking Adaptation & Measuring Development (TAMD) framework developed by IIED (Brooks et al. 2011), along with a number of other sources. During the course of the review, a score was assigned to each programme based on evidence of innovation and best practices. The spectrum from the bottom left to the upper right of diagram 4-1 represents a continuum designating the degree of sophistication with which M&E is addressed.

All the GCCA programmes reviewed included some design elements specific to the M&E of adaptation. Key findings of the IIED review are presented below.

Well-defined indicators. A number of the logical frameworks reviewed featured indicators measuring how effectively climate risks are being managed through climate-sensitive decision-making and the use of climatic information, as well as indicators aimed at measuring adaptation outcomes. They also featured indicators for climate finance, which measure the improvement in climate finance management systems or changes in expenditure for addressing climate change.

The indicators vary in specificity and quality of design. The best indicators establish exact metrics for measurement. Where direct quantitative measurement is not possible, precise process indicators provide an alternative. Useful indicators of climate finance were found, for example, in the logical framework of the Ethiopia programme ('Climate finance guidelines elaborated by Environmental Protection Agency by month 18 and made available to enhance quality and appropriateness of new proposals') and of the Mekong River Commission's Climate Change and Adaptation Initiative (CCAI) ('Financial contributions from Lower Mekong Basin countries to the CCAI increasing in line with transfer of core functions' and 'Budget allocation for gender responsiveness and planned activities implemented').

Diagram 4-1 Programme/project-level and system-level M&E: classification of reviewed GCCA programmes



Programme/project-level M&E

A. Business as usual: M&E is relying exclusively on a logical framework with indicators that are not specifically designed to track the effects of the intervention on climate risk management and/or climate vulnerability.

B. Nascent: Some indicators within the logical framework are clearly aimed at measuring effect on climate risk management and climate vulnerability.

C. Established: A well-developed set of indicators has been developed and is regularly updated; in the most advanced cases, a theory of change is available.

System-level M&E

A. Other focus: The focus of the action is not specifically on strengthening national climate change M&E systems.

B. Indirect contribution: Programme activities are likely to help develop national systems indirectly (e.g. through vulnerability baseline studies).

C. Specific focus: Developing or reinforcing national systems is one of the objectives of the programme through a dedicated set of activities.

Planting trees on World Environment Day, Cambodia

Outcome-oriented indicators are needed in addition to output and results-focused indicators, so as to avoid overreliance on output-oriented quantitative indicators or results indicators that fail to measure the underlying change processes. Qualitative indicators allow the use of narratives which can help highlight participatory change processes and can incorporate success stories, positive and negative outcomes and emerging themes that indicate how change actually came about and not just that change occurred. The indicators formulated for the Ethiopian programme, for example, are designed to measure impact, outcome and outputs, and to utilise both quantitative and qualitative measurements. An output level indicator aims to determine progress towards enhancing the Environmental Protection Agency's institutional capacity through assessing the extent to which the systems required for effective coordination and support are put in place. The M&E framework states that the quality of these new systems will be assessed via interviews with randomly selected beneficiaries, which offers a good opportunity for the inclusion of narratives.

Gender-disaggregated and gender-specific indicators are included in the logical frameworks of a number of programmes; for example, the M&E manual developed for the Nepal Climate Change Support Programme explicitly states that, to ensure the programme focus remains on the most vulnerable groups, monitoring data must track whether they are participating and benefiting from adaptation activities, and that this will involve a disaggregation of data by gender where possible.

Consultative process and participatory M&E. The review showed that developing M&E frameworks through a consultative process can help ensure that the design is both appropriate and realistic, while taking into account local capacities and knowledge. It also helps define clear roles and responsibilities among stakeholders. As observed in Uganda, using an inclusive and participatory approach to design M&E frameworks can substantially contribute to building the capacities of programme staff and beneficiaries, testing and strengthening the logic of the intervention, and fostering stakeholder engagement in programme implementation.

Defining baselines. Climate vulnerability assessments and baseline studies have been conducted in some programmes and are planned in several others. Dedicated activities to generate baselines can be useful for a number of reasons:

- They offer specific information for programme design.
- They enable development of more precise indicators.
- They help produce information to steer programme implementation.
- They lay the groundwork for post-programme evaluation.

As shown by the GCCA programme in Uganda, several very important indirect benefits can also be generated as a result of baseline development activities, including capacity development, awareness raising, ownership of implementation and overall improved engagement.

Dedicated M&E framework document. The review found that the strongest M&E systems were those that were clearly thought through, set out in a dedicated M&E framework document and seen as an integral part of the intervention from the outset. Such documents feature well-defined indicators and activities for establishing baselines and collecting data, and delineate clear roles and responsibilities. There is evidence in a number of programmes that developing M&E framework documentation can help build capacity and understanding among stakeholders, as well as improve overall M&E design.

Learning dimension. About half of the reviewed programmes explicitly acknowledge learning as a dimensions of the M&E framework. Programmes in Uganda (box 4-1) and Africa (box 4-2) show how this aspect has been integrated to achieve a good balance between the accountability and learning functions of M&E.

Inclusion of a theory of change. A theory of change is another valuable tool used for mapping out the logical sequence of a programme from inputs to outcomes, and can provide a non-linear way to consider not only what will change, but the underlying dynamics and assumptions around how and why change will occur (Barnett

Box 4-1 Adaptation to climate change in Uganda: benefits of establishing a baseline

The M&E framework for Uganda's programme was developed in a participatory way, with extensive consultation and participation from a broad range of stakeholder groups. For example, the framework was refined and validated by local governments, as well as by partner non-governmental organisations. Involving these stakeholders was particularly useful, as they are responsible for conducting a number of M&E activities. Early engagement helped foster ownership and buy-in, as well as helping overcome potential challenges to implementation on the ground.

Uganda's GCCA programme established a baseline for M&E shortly after the programme began — again through an extensive participatory process with the involvement of all stakeholders, including those at the local level. This process enabled the identification of specific vulnerabilities at the district level, which in turn allowed for more accurate measurement of changes that could be attributed to programme actions. In establishing the baseline, it was possible to map climate vulnerability across the districts involved and then select the most appropriate communities as the focus for the intervention. The data collected may also be used to measure the impact of other programmes operating in the same areas.

Including local-level stakeholders in establishing the baseline helped raise awareness around adaptation issues within communities, as well as improve their understanding of climate change. The baseline activities also created an opportunity for the programme team to interact with the primary beneficiaries, and gave programme staff a better understanding of local stakeholders' expectations.

A key lesson is that engagement of stakeholders at various levels (national to local) is vital, as it helps develop support for the M&E activities as well as ownership of the process.

Box 4-2 ClimDev Africa: using a theory of change

The Climate for Development in Africa (ClimDev Africa) Programme is a joint regional initiative of the United Nations Economic Commission for Africa, the African Union Commission and the African Development Bank. The ClimDev Africa M&E system — known as the Monitoring Framework and Evaluation Approach — aims to address issues of socio-economic returns on climate information investments by putting a development value on climate investments. It seeks to devise metrics by which to measure returns on different types of investment and the effectiveness of changes. More specifically, the approach sets out how knowledge on returns on investment in climate information services will be generated through the programme's tracking and assessment system, which is supported by the ClimDev Special Fund. The system is also used as a learning process to adjust and reorient the programme after the completion of each cycle.

Given the initiative's unique institutional framework, a theory of change has been used to delineate the roles and responsibilities of the three institutions involved. M&E was not fully integrated in the design of the programme from the beginning; the use of a theory of change has helped bridge the gap and offers a strong foundation for implementation of a robust M&E system. The theory of change has proved useful in identifying exactly what will have to be measured within ClimDev Africa, and provides a valuable, harmonised reference point for each of the participating institutions in undertaking M&E activities. Moreover, the process of developing the theory of change has been beneficial in terms of involving all the relevant stakeholders, fostering a sense of ownership of the M&E system among the institutions, and helping donors understand how results are to be achieved.

Building dialogue in the Caribbean

and Gregorowski 2013). A counterfactual analysis can also prove useful in establishing a 'control' (the situation in the absence of the programme). A few programmes currently use these tools; the GCCA-supported ClimDev Africa programme provides an example (box 4-2).

Contributing to the development of system-level M&E. Many of the reviewed programmes offer some contribution to system-level M&E, and some of them with well-designed programme-level M&E systems contribute indirectly to the national, subnational and system levels. To improve performance in this regard, the development of an explicit objective or set of activities to establish and strengthen national, subnational or regional-level M&E systems should be encouraged. The programme in Cambodia is a good example of one that makes a direct contribution to the system level (box 4-3).

Next steps

The GCCA initiative has opened a very important space for experimentation, and the review has uncovered a wealth of experiences and strong examples of best practices in action in adaptation M&E; this is very valuable in informing the GCCA+. Going forward, the GCCA+ has an excellent opportunity for proactively encouraging the development of innovative climate change M&E practices in the national and regional programmes it supports. The GCCA+ will approach this by strategically developing policies or guidelines for national and regional programmes for undertaking the M&E of climate change adaptation activities. Tools and indicators to assess the overall cumulative results of the global programme could also be developed.

Developing an M&E approach that spans all the adaptation programmes could help countries interested in establishing long-term climate adaptation evaluation programmes integrate these with national development M&E systems. In this way, progress towards improved resilience could be measured at a much larger scale. To help drive learning, the M&E of climate adaptation should be designed to assess changes beyond the programme level, and to support moves towards measuring national and regional changes in resilience.

Also, the M&E system should be an integral part of interventions from the outset. At the programmatic level (i.e. at the level of national and regional programmes), M&E should be integrated into programme design at the earliest opportunity. This will help define and integrate clear objectives and well-articulated results and activities, with clear roles and responsibilities for all stakeholders. This information should be set out in formal documentation with appropriate participation from all stakeholders. Such an approach is also relevant for programmes where several partners are involved, where it makes sense to measure overall results in a consistent manner, with all partners using the same reference M&E framework. Measurement of the specific GCCA+ contribution should only be considered in instances where this will not lead to programme fragmentation and overly onerous reporting requirements on the part of programme implementers.

Box 4-3 The Cambodia Climate Change Alliance's contribution to the national M&E system

The Cambodia Climate Change Alliance (CCCA) focuses, among other objectives, on helping establish a national climate change M&E framework and ensuring it becomes a part of mainstream policy-making. The Cambodia Climate Change Strategic Plan 2014–2023 is the central policy for tackling climate change impacts in the country. The CCCA supported preparation of this plan and provided technical assistance and capacity building to the Ministry of Environment on M&E. The strategic plan makes explicit provision for establishing a national framework for the M&E of climate change activities. It is also planned to integrate this framework into national and subnational development planning processes through the National Strategic Development Plan, as well as sectoral development plans. This provides a firm policy foundation for a national climate change M&E system that is clearly linked to development planning.

Such a 'top down' approach has a number of benefits, notably offering a more coordinated approach that will help institutions better harmonise their actions.

Woman collecting home-grown vegetables in Cambodia

Fisherman in Zanzibar, Tanzania

In its new configuration as a flagship initiative, the GCCA+ will more efficiently respond to the needs of vulnerable countries and groups.

5

The way forward

Strengthening emerging areas of support

Since 2007, when the GCCA was launched, the number of projects has risen from 4 to over 50. It now has a budget of more than €315 million supporting more than 38 countries, with a focus on SIDS and LDCs, and 8 regions and subregions. In 2014, the GCCA has built on its experiences to broaden its work, transitioning to a new flagship initiative, the GCCA+.

The GCCA+ boosts the efficiency of its response to the needs of vulnerable countries and groups. Using ambitious and innovative approaches, it will achieve its goals by building on the GCCA's platform for dialogue and technical and financial support. In parallel, the GCCA+ concentrates efforts to further advance capacity development, engaging with and empowering local stakeholders, and continue to support international climate change negotiations.

Under its first pillar, the GCCA+ focuses on policy dialogue and lesson sharing. It aims to bring renewed attention to the issue of international climate finance, in particular private finance. Under the second pillar, the GCCA+ focuses on the world's most vulnerable countries, whose populations need climate finance the most. Further effort will be made to strengthen the strategically important issues of ecosystem-based adaptation, climate-induced migration and gender equality.

Supporting ecosystem-based adaptation

The GCCA+ strategy helps people and communities to adapt to the negative effects of climate change by using an ecosystem-based approach. Such an approach supports biodiversity and services provided by local ecosystems.

Ecosystems act as fundamental life support units, whose biodiversity provides enormous benefits to people and their livelihoods. There is ample scientific evidence on the links between climate and biodiversity. According to the Millennium Ecosystem Assessment (2005), climate change is likely to become the dominant direct driver of biodiversity loss by the end of the century. It is already forcing biodiversity to adapt either through changing habitat, life cycles or development of new physical traits.

Tackling climate change therefore has direct benefits for biodiversity conservation and maintenance of life suitable for humankind. Indeed, the impoverishment of biodiversity will affect vital ecosystem services for all humans, such as air and water purification, pollination and food production, decomposition and nutrient cycling, and carbon sequestration.

Conserving nature is a powerful way for communities to adapt to climate change. Protecting ecosystems reduces the vulnerability of the poorest populations, those people who are the most dependent on its services for basic needs including food, clothes, medicine, shelter and income.

Climate change adaptation through ecosystems — or ecosystem-based adaptation — has a multitude of co-benefits. The conservation and restoration of habitats has positive effects for climate change mitigation and adaptation: forest conservation and restoration, for example, can reduce the amount of greenhouse gases released into the atmosphere; conserving healthy ecosystems can reduce the disastrous impacts of climate change and other natural hazards such as flooding and storm surges; the promotion of systems based

School drawing project to raise awareness on mangroves among children in Guyana

on agroforestry, conservation tillage, crop diversification and legume intensification offers a means by which basic food needs can continue to be met while minimising negative trade-offs for the environment. Maintaining healthy ecosystems also paves the way for low-carbon development, a core mechanism of a green economy.

Ecosystem-based adaptation is generally more accessible to the rural poor than actions based on engineering. Its approaches are compatible with community-based adaptation, capacity development and local knowledge and needs, and can be tailored to the most vulnerable such as women and indigenous people.

For example, to address **Senegal**'s coastal environmental problems — including coastal erosion, coastal flooding, soil and water salinisation, mangrove degradation and a reduction in fish stocks — the GCCA has funded a comprehensive and effective response by laying the foundations for an integrated coastal zone management plan that effectively addresses coastal erosion while implementing concrete coastal protection measures. The project envisages a mix of activities at the community level with a strong focus on ecosystem restoration, together with technology transfer and institution building. Activities on the ground are coupled with tools and mechanisms to promote replication and integration of best practices into national policies and strategies.

Like Senegal, the **Gambia** is experiencing serious coastal issues caused by climate change. The GCCA is funding an initiative to strengthen national-level capacity to plan for and respond to climate change impacts in coastal areas and contribute to mainstreaming climate

change into development planning. Demonstration and research projects are being supported to enhance ecosystem and livelihood resilience to climate change and/or ecosystem rehabilitation in coastal zones, and to develop viable alternative processes to sand extraction for the construction industry. Interventions also promote the reinforcement of community-based organisations or village development committees, and the involvement of private actors.

In **Guyana**, GCCA support to the National Mangrove Management Action Plan has delivered excellent results in the areas of mangrove rehabilitation, protection and sustainable use, with the support of mangrove-related research. Additionally, a code of practice for mangrove management has been formulated, public awareness and education on the benefits of protecting mangroves have been strengthened, and mangrove-related policy and legislation are subject to ongoing review. Not surprisingly, mangrove protection and rehabilitation are generating significant benefits for local communities, through participation in mangrove seedling production as well as the sale of non-timber forest products, honey from beekeeping and other mangrove-based products. The mangrove reserve women producers' group established to promote alternative livelihoods in communities along the coast won an award from the Caribbean Tourism Organisation in 2012 (see box at end of chapter 3).

The GCCA is also actively supporting the REDD+ process, continually operating along the double strand of mainstreaming and local participation. The recently launched GCCA support programme to **Burkina Faso** will enhance mainstreaming of climate change and REDD+ into sectoral frameworks and strategies; strengthen the participatory planning and management, protection and rehabilitation of forests and woodlands, timber and non-timber forest resources, wildlife management, agroforestry and alternative livelihoods; support small and medium-sized enterprises; and promote coordination and capacity building for information and knowledge sharing. In **Mali**, the GCCA is contributing to improving, and actually implementing, climate change-related policies and strategies, with a focus on forestry. **Tanzania** is another GCCA success story. Innovative ecosystem-based adaptation measures have been implemented in several communities with considerable success and full local participation. The model is going to be replicated in other areas of the country, as an example of horizontal scaling-up (see the story from the field at the end of the chapter).

Ecosystem-based adaptation helps ensure coherence of EU action in the areas of environment/climate change and natural resource management by integrating different EU flagship initiatives such as the GCCA+, Biodiversity for Life, support for a green economy that reconciles economic development with environmental sustainability, and a new initiative on climate change mitigation. It is also transversal in supporting the achievement of the objectives of international conventions and mechanisms such as the UNFCCC, the Convention on Biological Diversity, the Millennium Development Goals, the United Nations Convention to Combat Desertification and the upcoming Sustainable Development Goals.

The GCCA+ continues to pursue, to the maximum extent possible, an approach based on the conservation and restoration of ecosystems with a view towards increasing resilience to the consequences of climate change and reducing poverty.

Addressing climate-induced migration issues

Climate change and environmental degradation are likely to have an ever larger impact on population movements. Negative impacts will be more severe in developing countries due to the limited resources available to adapt to, and cope with, the consequences of environmental and climate change. Particularly vulnerable regions include drylands, low-elevation coastal zones and mountain regions.

Migration is usually the result of a complex combination of environmental, economic, social, security and political factors, with environmental factors acting directly as well as indirectly via their impacts on other drivers. The decision to migrate lies along a spectrum between voluntary and involuntary movement, depending on elements such as the type of environmental constraint and the socio-economic characteristics of the population. Individual, community and even regional factors can influence both the ability and the desire to migrate. While slow-onset events are linked to relatively voluntary migration, in which communities have a degree of control over the timing and destination of their movement,

populations affected by quick-onset changes such as flash floods or more intense and frequent hurricanes are forcibly displaced, typically in situations of high vulnerability. However, even the cumulative impact of slow-onset events can — over the long term — gradually render areas inhabitable, reducing the freedom of communities in their decision to stay or migrate. The relationship between climate change and livelihoods is particularly important, as migration requires significant resources which might be eroded by environmental change to such a degree that families are trapped and unable to move.

The linkages between climate change and migration thus remain far from clear cut. With the exception of certain cases such as SIDS affected by sea level rise, it is extremely difficult to pinpoint precisely the role of climate change as a driver in decisions to migrate.

However, research has highlighted the fact that, due to the types of populations most likely to be affected and the significant resources migration requires, climate change is most likely to affect migration flows occurring internally within developing countries, or intra-regionally within developing regions. This focuses attention on the situation of receiving areas within the developing world — especially since climate-induced migration does not only take place from, but also towards, environmentally exposed and climate-vulnerable areas. Fast population growth in urban centres in the developing world is a clear example of the problems climate-induced migration exacerbates.

Fully aware of the growing importance of this topic in development and policy agendas, the European Commission in 2013 published the document 'Climate change, environmental degradation and migration' to accompany the Commission Communication 'An EU Strategy on adaptation to climate change' (COM(2013) 216 final). The issue is further developed in the 2013 Commission communication 'Maximising the Development Impact of Migration' (COM(2013) 292 final). The GCCA+ builds on existing and forthcoming policy directives and strategic thinking to best provide support to countries and regions requesting assistance to address climate-induced migration.

Lagoon, Solomon Islands

Women farmers in an agricultural community in South Africa

Empowering women in the context of climate change

The GCCA+ integrates women's rights and gender equality as a cross-cutting goal in relation to climate change. Key priorities for the EU in this area include integrating gender considerations into medium- and long-term adaptation programmes to ensure that GCCA+ activities more effectively contribute to reducing gender inequalities; ensuring that programmes bring about gender-positive impacts and do not exacerbate inequalities; and mainstreaming gender considerations into capacity development and technology support to foster gender balance in decision-making at the local, national and regional levels. Reducing gender inequality entails a shift in approach to climate change adaptation and mitigation, through stronger mainstreaming of gender considerations into GCCA+ programmes and increased focus on building the resilience of communities — with women and girls playing a central role in the process. Adaptation and mitigation activities can be designed to ensure equal participation of both genders in decision-making and implementation, thereby mitigating inequalities. In turn, including gender considerations into adaptation and mitigation programmes can increase their efficiency and ensure their implementation in communities.

Stories from the field: Tanzania

Title: Global Climate Change Alliance in Tanzania

Priority areas: Adaptation, REDD

Sector: Overall development and poverty reduction, agriculture, forests, land and natural resource management, water and sanitation

Budget: €2.205 million

Partners: Division of Environment of the Vice-President's Office, Ministry of Finance

Time line: 2010–2013

In 2013, the Tanzanian government launched a National Climate Change Strategy and Action Plan to mobilise resources to implement adaptation and mitigation projects. It had observed that climate change was already affecting farming, forestry and water supplies. Indeed, major crop yields such as maize and rice have declined and groundwater levels have dropped due to variable rainfall patterns and soil erosion and degradation. Deforestation, meanwhile, is increasing, due to overgrazing, wildfires, clearing for agriculture, charcoal burning and the overexploitation of wood resources. The impacts directly affect vulnerable communities in rural, remote, drought- and flood-affected areas. Women in particular shoulder the burden, as the principal collectors of water and firewood.

The first GCCA project in Tanzania aimed to increase the resilience of vulnerable communities to climate change by increasing their ability to use natural resources sustainably and adapt to the changing conditions. To this end, it supported the creation of ecovillages in three specific landtypes to test innovative adaptation measures, addressing agriculture and rangeland, water and sanitation and energy and biomass supply. The three land types selected for project activities due to the vulnerable nature of their communities were coastal zones and islands, drylands and highlands. Following a call for proposals, three projects (one in each targeted ecosystem) received a grant:

- **Pemba Island.** Activities in this coastal community focused on transferring land ownership to communities, agro-forestry, afforestation (including mangrove), kitchen gardens, production of fuel briquettes and earth blocks, fuel-efficient stoves, beekeeping (for honey production), composting and rainwater harvesting.

- **Chololo Village.** In this dryland community, activities centred on raising awareness about better management of natural resources, improving crop production technologies including seed selection, improving livestock breeding and fodder, and improving the water supply.

- **Uluguru Mountains.** The highlands project also worked to promote and develop sustainable farming practices, water use efficiency and reforestation, and networks of good practice that can be scaled up for wider impact.

Chololo ecovillage — an example of success in Tanzania's drylands

Chololo village in Dodoma province is located in semi-arid drylands. The Chololo ecovillage project (2011–2014) worked with the community to identify, introduce and evaluate new approaches in agriculture, livestock, water, energy and forestry. It proved a great local success and a source of learning on climate adaptation for other communities and regional and national decision-makers. Its strategies are being shared widely.

In Chololo, the words of the villagers speak for themselves:

'Initially, I planted in the dry season when the first rains came in November. But after being trained I now wait for the big rains, then plough, plant my crops in proper spacing and now the yields have increased.'
—Stefano Chifaguzi, farmer

In the past farmers were encouraged to plant their seeds as early as possible. However, less predictable rainfall patterns led to low productivity, crop failure and food shortage. A study of rainfall patterns found that seeds planted at the start of the rains produce plants that tend to die in the dry spell in February. So farmers were encouraged to wait and plant seeds three to four weeks later than usual, in late December or early January. This way the plants do not reach the critical flowering stage by February when the dry spell hits. They flower in March when the rains return, guaranteeing

a good harvest. Chololo has a new slogan: *'Panda baada ya Krismasi'* ('Plant after Christmas').

'The project has changed me. In the past I did not use farmyard manure in my farm but now it is a great resource. Combined with 'good agricultural practices' I am now getting enough food for my family and surplus for sale.' —Gilbert Masiga, farmer

Chololo farmers used to practice slash-and-burn agriculture, planting the same crop year after year until the soil was depleted of nutrients, then shifting to a new field, felling trees to clear the land. The project introduced a package of ecological agricultural technologies to make the most of limited rainfall, improve soil fertility, reduce farmers' workload and improve the quality of local seeds. The techniques include ox-drawn tillage to help prepare the land, creating ridges and other features to help capture rainwater and prevent erosion, use of farmyard manure and improved seed varieties, optimal plant spacing, intercropping and crop rotation. The project trained 400 farmers in the improved land preparation practices.

'The project gave me sorghum and cowpea seeds. I planted them in rows in proper spacing in January 2014. By early March the sorghum plants were starting to flower, and the cowpeas were fully matured and I started to harvest leaves and beans for my family. I expect to get enough yields in both cowpea and sorghum. I advise other farmers to use intercropping.' —Minza Chiwanga, farmer

Intercropping makes better use of resources, provides higher yields per unit area, hedges against single crop failure and helps protect against pests and diseases. Planting a cereal-legume mixture in the same field also reduces depletion of soil nutrients and can provide a family with a balanced diet of staple grains, protein-rich beans and green leaves for essential vitamins.

Access to sustainable agricultural practices has enabled this Chololo farmer to obtain good food for his family and a surplus for sale

'Now I don't have to beg money from my husband for things like clothing, medicine and school fees. I now have enough money for the household and extra money which is helping me to build our new house.' —Mary Mpilimi, farmer

The community selected chicken-rearing as the most lucrative activity for the women of Chololo. While men tend to handle the money from goat and pig-rearing, women control the chicken business. They crossed local hens, which are well-adapted to the area's harsh conditions but have a low egg and meat yield, with 123 introduced exotic cocks, after studies showed the crossbreeds produce 3-4 times more eggs and weigh twice as much as the local birds. The 123 poultry-keepers were trained in chicken management including feeding, breeding, record-keeping, housing and disease control.

'I made a fishpond, which is supplying fish for my family. I am also using water from the fishpond to irrigate my flowers and papaya trees and seedlings. I am now getting papaya fruits and selling seedlings to different people within and outside the village.' —Agnes Mwalimu, community member

Small-scale fish farming can work even in dry and semi-arid areas. In the first year four Chololo farmers built and stocked fishponds on the advice of a farmer from another district in Tanzania, who supplied them with fingerlings (small young fish) to get them started. He showed them how to fertilise the pond with chicken manure and feed the fish with locally available materials. They harvested adult fish for household consumption and sold fingerlings to other fish farmers as they joined in. Now there are 11

fishponds in the village; they are managed seasonally — filled during the rainy season, stocked with fingerlings and harvested for adult fish at around four months, after which the water is used for irrigation. The fish provide a rich source of protein to families.

'Children are getting water all the time for drinking and washing their clothes. Water is also available to irrigate trees and tree nurseries. School children will carry the rainwater harvesting knowledge to their parents and start their own rainwater harvesting.' —Amon Mada, primary school teacher

At the start of the project, there was no drinking water supply to the village as the borehole equipment had broken down. Villagers — mostly women and girls — had to walk for two hours a day to get a bucket of water from the next village. Even in the rainy season, the water runs away quickly, creating gullies and causing soil erosion. Seasonal rivers that fill up during the rains dry up as the water flows downstream. The project tackled these issues through a number of innovations:

Women report increased chicken and egg production and have been empowered with additional income to meet the needs of their families

- The village water supply is now powered by solar energy rather than diesel. This has reduced the number of breakdowns and cost of repair bills. The price of water has been halved, and it is provided for free to older and vulnerable people.
- A rainwater collection system on the roof of the village primary school fills underground tanks with a capacity to hold 60 000 litres of water.
- A subsurface dam captures thousands of tonnes of water in the sandy riverbed, providing water for domestic use and livestock throughout the dry season. Subsurface dams are considered to be the most reliable and low-cost water source in arid and semi-arid lands.
- A sand dam captures seasonal rainfall and feeds a hand pump for domestic supply. A sand dam provides a clean and reliable source of water all year round for up to 1 000 people. It has low operation and maintenance costs and can last for around 50 years.

'We decided to develop a village land-use plan because the village forest has been severely depleted which resulted in massive soil erosion, and sometimes there are conflicts between livestock keepers and farmers.' —Yona Sudai, village environment committee member

Women used to walk five to six hours to collect firewood from the forest, as nearby trees had been felled for agriculture, charcoal and construction. The loss of trees increases soil erosion, wind speed and land degradation. The project has:

- trained 133 community members in afforestation, nursery management and tree planting;
- created tree nurseries at the school and other community institutions;
- planted 33 650 tree seedlings (including leuceana, acacia polycanth, neem, mango and guava) at households, churches, the school and dispensary;
- planted 3 000 trees in a three-acre forest reserve.

The village also developed a land-use plan to ensure land is used sustainably. It identified areas for crop and livestock production, settlements, woodlands, conservation, beekeeping and industry.

'You can cook two pots at a time and there is no coughing due to smoke.' —Mama Chifaguzi, community member

The project supported the village to test and evaluate alternative energy technologies, including energy-saving cooking stoves and domestic biogas plants.

Typically women in the region cook on three stones over an open fire inside the home. Without chimneys, the homes are smoke-filled, leading to respiratory and eye diseases, while the open fire presents a serious safety hazard. The project trained 12 women on how to build energy-saving stoves, carried out a community information programme and provided a subsidy to cover labour costs.

Householders were asked to collect clay, grass and water to make the stoves. Around 240 Chololo homes now use the stoves, which cut fuel use by over 50 per cent, reduce cooking time as they have two burners, and evacuate smoke through the chimney. Their use reduces CO_2 emissions and

the time and risks associated with collecting firewood. A stove costs half the sale price of a local chicken and the investment can be recouped in 22 days based on the local value of firewood saved.

'The biogas is very useful to me. It helps me to cook tea and food quickly in the morning for the people going to graze livestock. Unlike the past, I no longer go to fetch firewood. There is no smoke during cooking and I don't destroy the environment.' —Agnes Mwalimu, livestock keeper

Biogas digesters convert available biomass, especially cattle dung, into a gas that can fuel lamps and cooking stoves. They also produce a nutrient-rich slurry by-product, which is a natural soil fertiliser.

The project introduced 10 domestic biogas plants in Chololo, where almost half of households keep cattle and there are over 2 000 cattle. Farmers with two or three cows can generate enough gas to meet their daily cooking and lighting needs, saving fuel costs and the workload of fetching wood fuel. Gas cooking also eliminates the indoor air pollution associated with cooking on inefficient wood stoves. The biogas process is carbon neutral, and the fertiliser produced in the digester helps reduce soil degradation and erosion. The cost of the digester can be recouped in a few years of reduced fuel costs.

The project also installed an automatic weather station to provide data about local rainfall and other weather patterns to inform farmers and help them adjust their growing season to the changing climate.

Woman using improved cooking stove in Chololo ecovillage

The way forward

Now that the project has created a working model of good practice, efforts continue to scale up the good innovations through sharing the results with other communities in the region. The village already has a website and Facebook page, while a Swahili dance and drama group has developed a production about the causes and effects of climate change and the innovations introduced in Chololo to spread the message with other communities. Students, other farmers and policy makers have visited the village to see the results for themselves, and the project and its participants have been featured on local radio, national press and TV.

Resources

Abbreviations and acronyms

ACP	African, Caribbean and Pacific
CDM	Clean Development Mechanism
COMESA	Common Market for Eastern and Southern Africa
EDF	European Development Fund
EU	European Union
GCCA	Global Climate Change Alliance
GCCA+	Global Climate Change Initiative+ (EU flagship initiative for the 2014–2020 period)
IIED	International Institute for Environment and Development
LDC	least developed country
M&E	monitoring and evaluation
MRV	measurement, reporting and verification
NAPA	national adaptation programme of action
NGO	non-governmental organisation
OECD	Organisation for Economic Development and Co-operation
REDD	reducing emissions from deforestation and forest degradation
SIDS	small island developing states
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change

References

Barnett, C. and R. Gregorowski. 2013. *Learning about Theories of Change for the Monitoring and Evaluation of Research Uptake.* IDS Practice Paper in Brief. Institute of Development Studies, Brighton, UK.

Brooks, N., S. Anderson, J. Ayers, I. Burton and I. Tellam. 2011. *Tracking Adaptation & Measuring Development.* IIED Climate Change Working Paper No. 1, International Institute for Environment and Development, London.

IPCC. 2014. 'Summary for policymakers'. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects.* Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B. et al. (eds.)]. Cambridge University Press, Cambridge, UK and New York: 1–32.

Millennium Ecosystem Assessment. 2005. *Ecosystems and Human Well-being: Synthesis.* Island Press, Washington, DC.

Nurse, L.A., R.F. McLean, J. Agard, L.P. Briguglio, V. Duvat-Magnan, N. Pelesikoti, E. Tompkins and A. Webb. 2014. 'Small islands'. In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part B: Regional Aspects.* Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Barros V.R. et al. (eds.)]. Cambridge University Press, Cambridge, UK and New York: 1613–54.

OECD. 2006a. *The Challenge of Capacity Development: working towards good practice.* Organisation for Economic Co-operation and Development, Paris.

OECD. 2006b. *Harmonising donor practices for effective aid delivery. Volume 2: Budget support, sector wide approaches and capacity development in public financial management.* Organisation for Economic Co-operation and Development, Paris.

Schalatek L., S. Nakhooda, S. Barnard and A. Caravani. 2012. *Climate Finance Thematic Briefing: Adaptation Finance.* Heinrich Böll Stiftung, Berlin and Overseas Development Institute, London.

The Global Climate Change Alliance+ (GCCA+) is an initiative of the European Union (EU) which aims to strengthen dialogue and cooperation on climate change with developing countries most vulnerable to climate change.

The GCCA+ focuses on least developed countries (LDC) and small island developing states (SIDS), which are often the most affected by climate change but have the fewest resources to tackle it.

The initiative was launched in 2007 and is coordinated by the European Commission (EC).

The three GCCA+ priority areas are:

- Climate change mainstreaming and poverty reduction
- Increasing resilience to climate-related stresses and shocks
- Sector-based climate change adaptation and mitigation strategies

Global Climate Change Alliance+ (GCCA+)
E-mail: info@gcca.eu