



SGP The GEF
Small Grants
Programme



ENHANCING CLIMATE RESILIENCE

Experiences from the SGP's Community-Based Adaptation Programme





The Small Grants Programme (SGP) is a corporate programme of the Global Environment Facility (GEF) implemented by the United Nations Development Programme (UNDP) since 1992. SGP grantmaking in over 125 countries promotes community-based innovation, capacity development, and empowerment through sustainable development projects of local civil society organizations with special consideration for indigenous peoples, women, and youth. SGP has supported over 20,000 community-based projects in biodiversity conservation, climate change mitigation and adaptation, prevention of land degradation, protection of international waters, and reduction of the impact of chemicals, while generating sustainable livelihoods.



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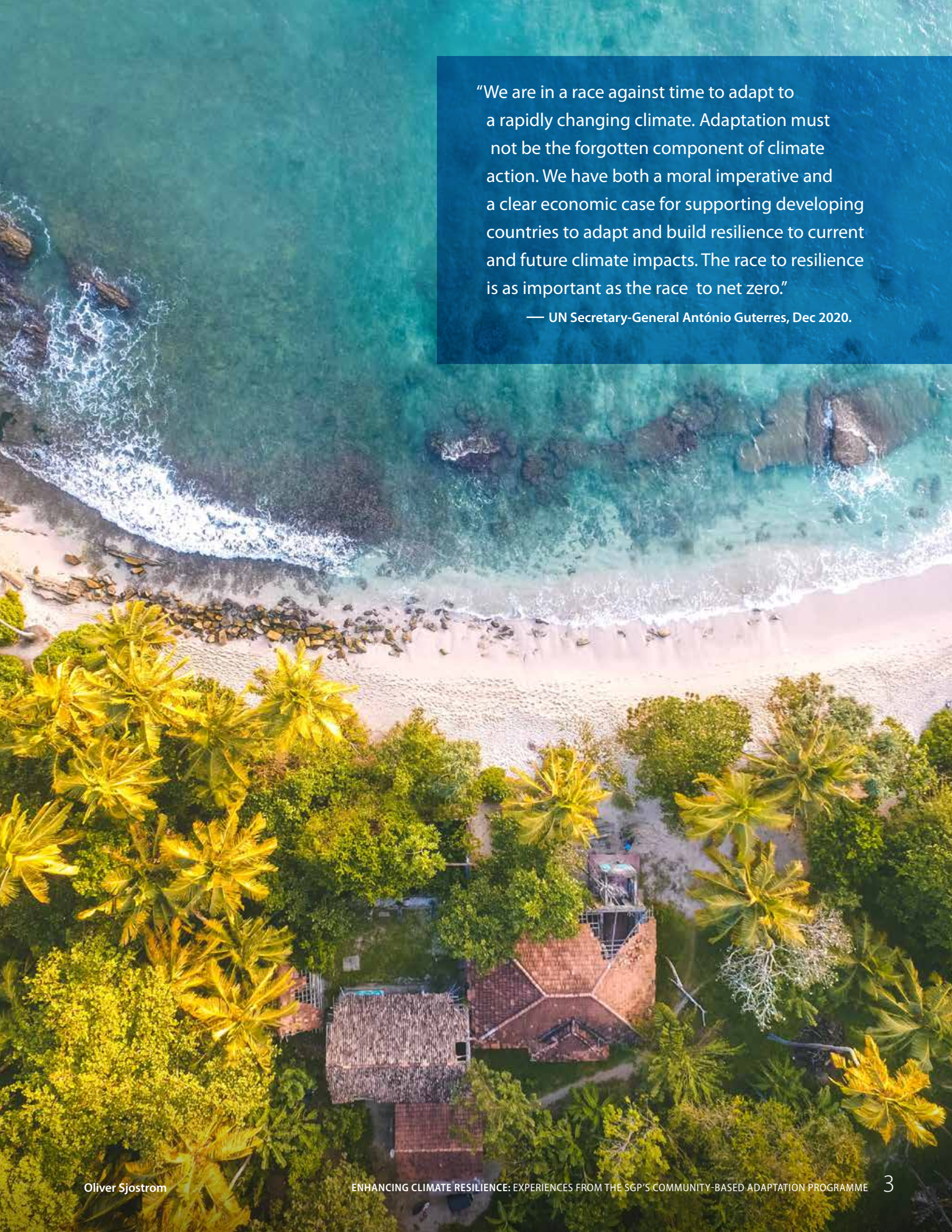
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Acronyms

AF	Adaptation Fund	JCCCP	Japan-Caribbean Climate Change Partnership
AU\$	Australian Dollar	LDCs	Least Developed Countries
AUSAID	Australian Aid	NAP	National Adaptation Plan
CANP	Cooperativa Agrícola Niceto Pérez	NAPA	National Adaptation Programmes of Action
CBA	Community- Based Adaptation	NGO	Non-Governmental Organisation
CBO	Community Based Organisation	ODPM	Office of Disaster Preparedness and Management
CCA	Climate Change Adaptation	OP	Operational Phase
CCBAP	Cambodian Community Based Adaptation Programme	PWDs	Persons with Disabilities
CPDCBS	Clarendon Parish Development Committee Benevolent Society	SDGs	Sustainable Development Goals
CRRF	Coral Reef Research Foundation	SGP	Small Grants Programme
CSO	Civil Society Organisation	TANGO	Tuvalu Association of Non-Governmental Organizations
CVA	Coastal Vulnerability Assessment	TRASS	Terrestrial Restoration Action Society of Seychelles
DFAT	Department of Foreign Affairs and Trade	UNDP	United Nations Development Programme
FAO	Food and Agriculture Organization of the United Nations	UNCDF	United Nations Capital Development Fund
FYD	Foundation for Youth Development	UNFCCC	United Nations Framework Convention on Climate Change
GCF	Green Climate Fund	USAID	United States Agency for International Development
GEF	Global Environment Facility	US\$	United States Dollar
GIS	Geographic Information System	VRA	Vulnerability Reduction Assessment
IIED	International Institute for Environment and Development	YCAN	Youth Climate Action Network
IPCC	Intergovernmental Panel on Climate Change		
ISGAP	Innovation Small Grant Aggregator Platform		



“We are in a race against time to adapt to a rapidly changing climate. Adaptation must not be the forgotten component of climate action. We have both a moral imperative and a clear economic case for supporting developing countries to adapt and build resilience to current and future climate impacts. The race to resilience is as important as the race to net zero.”

— UN Secretary-General António Guterres, Dec 2020.

Foreword

The year 2020 saw some of the most significant global disruptions of recent history from the COVID-19 pandemic and its social and economic impacts. It was also the hottest year on record, with climate change manifesting itself in the form of raging wildfires across the United States and Australia, droughts in South America, severe floods in Africa, and catastrophic storms in Asia and the Pacific affecting more than 50 million people. The compounding effects of the pandemic and the climate crisis have highlighted our shared vulnerabilities on a planet under stress.

This emergency period has taught us the importance of adequate crisis response and resilience. Investing in these areas is critical to safeguard development gains and address the needs of the poor and vulnerable through the Sustainable Development Goals and 2030 biodiversity and climate targets. Ecosystems that are resilient to shocks and stressors are not only critical to secure environmental benefits, but also serve as the foundation for economic and human development. Climate resilience is an important component of this, particularly in countries that depend on natural resources and traditional practices for livelihoods.

This is why community-based adaptation is so important. For the past 10 years, local communities and societies have been investing in resilience-building with support from the Small Grants Programme (SGP), which is supported by the Global Environment Facility and implemented by the United Nations Development Programme, with partnership and funding from the Australian Government's Department of Foreign Affairs and Trade (DFAT). By enabling local communities to adapt to the impacts of climate change based on their specific environmental, social, and economic contexts, the Community-Based Adaptation Programme (CBA) has helped enhance climate resilience in 41 countries, including 37 Small Island Developing States. The Programme reflects Australia's strong focus on funding climate adaptation and resilience efforts as part of its contribution to global climate financing. Over 70 per cent of Australia's regional and bilateral climate finance targets adaptation and resilience building challenges.

This publication showcases examples from the SGP's CBA Programme and highlights the essential role of civil society organizations and local communities in building resilience and adapting to a changing climate at the local level. These case studies feature action from the ground up, from Jamaica to the Kiribati, which have demonstrated the importance of investing in Indigenous Peoples, young people, women, persons with disabilities, and other marginalized groups affected by climate change. These initiatives highlight the importance of local culture and traditions and the need to ensure that adaptation is participatory and inclusive, based on genuine partnerships and synergies with a range of stakeholders.

For example, in St. Lucia in the Caribbean, a local innovator designed a solar-powered mobile desalination unit to provide a reliable source of drinking water from sea water during times of water shortage. Through a south-south exchange facilitated by the programme, this innovative community solution was successfully replicated in Nauru in the Pacific, which is now providing communities with 2,400 litres of potable water per day.

We hope this publication will inspire further innovation, knowledge sharing, mainstreaming, replication and scaling up of community-based adaptation approaches and techniques around the world. The SGP Community-Based Adaptation initiatives have shown that actions to empower local communities to act and contribute to sustainable development yield many benefits for people and the planet, with significant room for expansion as countries work together to build a safer and healthier post-pandemic future.



A handwritten signature in black ink, appearing to read 'Pradeep Kurukulasuriya'.

Pradeep Kurukulasuriya
*Director - Nature, Climate and Energy
Executive Coordinator –
Environmental Finance
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Development Programme*



A handwritten signature in black ink, appearing to read 'Gustavo Alberto Fonseca'.

Gustavo Alberto Fonseca
*Director of Programs,
Global Environment Facility*



A handwritten signature in black ink, appearing to read 'Jamie Isbister'.

Jamie Isbister
*Ambassador for the Environment
Department of Foreign Affairs and Trade
Government of Australia*

Message from the Global Manager

Climate change remains a defining issue of our time that not only has detrimental effects on the environment and the resilience of natural ecosystems, but also ripple effects on every sector of the economy and society, including economic stability, agriculture and food security, water access and sanitation, health and well-being, education, tourism and livelihoods. Poor and vulnerable populations as well as Least Developed Countries and Small Island Developing States continue to be most at risk and disproportionately affected.

Building capacity and resilience of local communities and empowering them to take action and shape their future is at the heart of the SGP's Community Based Adaptation Programme. The initiative aims to provide countries with concrete ground-level experience on local climate change adaptation, and to mainstream these processes into national planning and policy processes. Its approach is also aligned with the UN's Sustainable Development Goals and their commitment to leave no one behind.

Since 2009, the programme has supported 237 projects with 12 million Australian dollars in funding from DFAT, benefitting more than 250,000 people and achieving significant results in its main focal areas of water security, agriculture, land degradation and coastal zone management. The SGP is grateful for this partnership and for the contributions that the Australian Government has made to this important area of work.

This publication presents SGP's CBA approach and showcases experiences from a few participating countries. Projects in Kiribati, Jamaica and Nauru have ensured water security for hundreds of community members; initiatives in Cambodia, Sri Lanka and Mauritius have empowered women, mainstreamed gender into local planning processes and ensured sustainable livelihood opportunities for them; and projects in Cape Verde, Saint Kitts and Nevis and the Marshall Islands have built the capacity of local disability organizations and persons with disabilities, facilitating their active participation and contribution towards national disaster risk reduction initiatives.

These initiatives have provided the impetus and models for taking CBA to scale, enabling SGP to implement projects that are regional and global in nature. Lessons learnt from working with regional and global grants have demonstrated that larger impacts can indeed be sparked by local actions. I hope that this publication will encourage further investments in SGP's CBA work and provide opportunities to amplify these innovative and inclusive small-scale projects to create larger and more sustainable impacts.



Yoko W.
Yoko Watanabe

Global Manager, GEF Small Grants Programme

An aerial photograph showing a river winding through a dense, lush green forest. The river is a light brown color, suggesting it carries sediment. In the center of the image, there is a large, irregularly shaped sandy area where the river has likely dried up or deposited sediment. The surrounding forest is thick and vibrant green. The overall scene depicts a natural landscape with a significant area of exposed earth in the middle of a wooded region.

SECTION 1

Introduction

Climate change continues to be one of the greatest challenges facing our planet and humanity today, and could drive an additional 100 million people into poverty by 2030¹. Local communities and Small Island Developing States (SIDS) are least responsible for climate change yet are the most vulnerable and suffer the most from its impacts.

Drought and rising temperatures, excessive precipitation and flooding, sea level rise and saltwater intrusion, coastal erosion, loss of agricultural crops, degradation of coral reefs due to bleaching, increased instances of pests and diseases, and unpredictable storms and weather events are just some of the challenges experienced by SIDS. These variations in climate not only affect the environment and resilience of natural ecosystems, but also have ripple effects on every sector of the economy and society including economic stability, agriculture and food security, water access and sanitation, health and well-being, education, tourism and livelihoods.

SIDS often experience acceleration or intensification of climate change impacts due to their small land areas, susceptibility to natural disasters, geographical isolation, limited natural resources and sensitive ecosystems. Many of these natural resources are often already facing other anthropogenic pressures such as overexploitation, over-harvesting, pollution, deforestation and degradation. In addition, many SIDS struggle with fragile economies, emigration of active population, political instability, high import costs and

heavy dependence on external aid. These countries do not have adequate resources to combat climate change impacts on their own, and further degradation of natural resources and ecosystems will increase poverty, hunger and economic and social inequalities. Without urgent adaptation, recent gains in human development will be undone, triggering more conflict and instability, especially for already vulnerable communities and nations. Thus, accelerating climate adaptation is a human, environmental, and economic imperative².

With these challenges in mind, the Global Environment Facility Small Grants Programme (GEF SGP) entered into a partnership with the Government of Australia's Department of Foreign Affairs and Trade (DFAT). Over the period 2009-2020 and with AU\$12 million in funding from DFAT, the objective of the partnership was to enhance climate resilience in 37 SIDS and 4 countries in the Asia Mekong Region.

The goals of the Community-Based Adaptation programme were to:

- reduce the vulnerability and improve the adaptive capacity of local communities to the adverse impacts of climate change;
- provide countries with concrete ground-level experience on locally led climate change adaptation; and
- provide clear policy lessons, scale up community-based adaptation (CBA) practices and mainstream CBA within national planning and processes.



Participating Countries

PACIFIC SIDS

-  Cook Islands
-  Fiji
-  Federated States of Micronesia
-  Kiribati
-  Marshall Islands
-  Nauru
-  Niue
-  Palau
-  Papua New Guinea
-  Samoa
-  Solomon Islands
-  Timor Leste
-  Tokelau
-  Tonga
-  Tuvalu
-  Vanuatu

CARIBBEAN SIDS

-  Antigua & Barbuda
-  Barbados
-  Belize
-  Cuba
-  Dominica
-  Dominican Republic
-  Grenada
-  Guyana
-  Haiti
-  Jamaica
-  Saint Kitts & Nevis
-  Saint Lucia
-  Saint Vincent & Grenadines
-  Suriname
-  Trinidad & Tobago

ATLANTIC & INDIAN OCEAN SIDS

-  Cape Verde
-  Comoros
-  Guinea Bissau
-  Maldives
-  Mauritius
-  Seychelles

MEKONG/ASIA

-  Cambodia
-  Laos
-  Vietnam
-  Sri Lanka

What is Community-Based Adaptation?

CBA is a locally led process that empowers people and communities to plan for and cope with current and future climate change impacts. The CBA approach is inclusive and centred on the priorities and processes chosen by the community. It involves shifting the power to local stakeholders to lead or meaningfully participate in adaptation actions, and does not prioritize the interests of external parties over those of the community. While CBA projects are very similar to other community development projects, there are two main distinctions: i) projects address problems induced by climate change, often long-term in nature, as opposed to shorter-term climate or weather variability; and ii) projects demand a strong emphasis on the process and not just outcomes. They are not just projects implemented at the community level or projects that involve communities in a symbolic manner to achieve pre-determined objectives.

CBA is an important component of the larger picture of the management and avoidance of climate change impacts by local people. It provides information and concrete examples on potential impacts of climate change and mitigative measures which are context- and location-specific and managed by the community. CBA also generates information and learnings that can be adapted, shared and replicated in appropriate formats to other communities and climate change adaptation (CCA) projects.

Governments, donors, academia, the private sector and the international agencies must be ready to learn from local communities and work with them to come up with adaptation solutions and actions that are truly useful and have a strong chance of being adopted and owned by people on the ground. The key priority of CBA is to reduce vulnerability and increase the adaptive capacity of local actors to manage climate change and related risks.



Assessing vulnerability

Vulnerability Reduction Assessment (VRA)³ is a participatory methodology that assesses a community's vulnerabilities and perceptions, as well as their ability to adapt to climate change impacts. It is initiated at the beginning of a CBA project and done in close collaboration with the community, local actors, national partners and technical experts. It is also used as a monitoring and evaluation tool to measure the impact and effectiveness of a CBA project under implementation. The methodology is based on indicator questions, tailored to capture locally relevant issues that are at the heart of understanding vulnerability to climate change. These questions are used to identify:

- the specific climate impacts that the community is susceptible to such as flooding, drought, sea level rise, or cyclones;
- their level of awareness and capacity to respond and adapt to current and future climate trends;
- specific vulnerabilities of various social groups such as women, children and youth, persons with disabilities (PWDs), or indigenous peoples; and

- locally appropriate adaptation strategies- and evaluate whether they are working to reduce actual and/or perceived vulnerabilities during project implementation.

Questions are posed during three to four community meetings over the duration of a CBA project. Responses take the form of a numerical score provided by the respondents during these community meetings. Repeated evaluations of community perceptions of project effectiveness and climate change risks provide an indication of the relative change in vulnerability. This is assessed through the degree of change in the VRA scores relative to baseline values established prior to the start of project activities. It is a flexible methodology designed to fit a range of community-based project interventions at both the community and national levels, and facilitates open and inclusive dialogue with a range of stakeholders and partners. The VRA uses a perception-based approach and is most effective when complemented by other quantitative indicators and technical assessments.



Thematic focus of CBA projects

The CBA programme applied various adaptation strategies to the following key sectors:

Agriculture and food security

Droughts, flooding, shifting seasons and increased variability in rainfall and temperature patterns continue to affect agricultural production across the globe. These impacts are even more severe for smallholder, rural and small-scale farmers. For rural farming communities this can lead to food insecurity, poverty, poor health, nutrition and wellbeing. To cope with these challenges CBA projects invested in sustainable climate-smart agriculture techniques to boost productivity and income generation, improve resilience, and reduce greenhouse gas emissions where possible. Drought tolerant/resistant crops and seeds, improved irrigation systems and water storage, biological pest control, greenhouses and protected agriculture systems, agroforestry, adjustments to farming cycles, capacity building and training,

establishment of saving groups and livelihood diversification were some of the strategies used in the programme.

Land degradation

Land (including soil and water) is fundamentally linked to both climate change mitigation and adaptation. The land-use sector has great potential to reduce emissions, sequester carbon and increase both human and ecosystem resilience to climate change impacts⁴. However, this vital global resource continues to be degraded by poor agricultural practices, deforestation, soil erosion, desertification, droughts and floods. CBA projects have introduced agro-ecology and sustainable land management practices to improve ecosystem services and address some of the drivers of land degradation at the community level. Agroforestry, permaculture, use of soil amendments, organic composting, mulching, vermiculture, crop rotation, forest and watershed reforestation, and elimination of harmful chemicals, pesticides and fertilizers on farms were some of the techniques used in the programme.

Coastal zone management

For SIDS the coastal zone is an area of high economic activity and high population density, but these areas are also harshly exposed to sea level rise, storm surges, coastal erosion, and extreme weather events such as hurricanes and cyclones. Nature-based solutions such as mangrove restoration and rehabilitation of coastal vegetation are commonly used to adapt to these challenges, but in some cases physical infrastructure and coastal defences are a necessity, and both techniques were applied to CBA projects. In addition, projects also focused on managing saltwater intrusion, improving coastal freshwater supplies, sustainable fisheries and marine conservation, and participatory mapping exercises to identify coastal assets and resources.



SGP Samoa

Water security and resource management

Climate change is projected to exacerbate water shortages and increase the number of water-stressed regions globally. Thus, sustainably managing water resources is a critical aspect of climate change adaptation. In many Least Developed Countries (LDCs) and SIDS, rural and remote communities are already struggling to meet basic water and sanitation needs with obvious impacts on health, well-being and other development priorities. CBA projects incorporated information about current and future climate variability into water-management projects to prepare communities to better respond to longer-term climate change impacts. Rainwater harvesting, instillation of storage tanks, underground water cisterns, earth ponds, gravity fed water systems, and watershed rehabilitation were some of the techniques employed by the CBA programme to improve both domestic and agricultural water supply and access.

Disaster risk reduction

Climate change is often most evident when observed through changes in the intensity and frequency of disasters such as hurricanes, cyclones, landslides, floods, fires and heatwaves. Disaster risk reduction (DRR) takes a systematic approach of adapting to this reality with a focus on preventing hazards from evolving into full-fledged disasters⁵. It includes a wide range of adaptation activities, such as risk and vulnerability assessments, utilizing early warning systems, improving multi-sectoral communication and collaboration, and education and awareness. DRR, disaster management and preparedness were cross-cutting themes that were integrated into several CBA projects.



CBA approaches

To realize the CBA programme goals, projects invested in **capacity development and awareness-raising initiatives** aimed at strengthening local communities' resilience to climate change through sustainable **nature-based solutions** that optimize environmental, economic and social outcomes. The integrated approach to land, water, forest and coastal resource management also contributed to environmental co- benefits.

CBA's focus on **social inclusion and cohesion** ensures that all members of society have a voice, a role, and access to opportunities and services, irrespective of gender, age, ethnicity, or mental and physical abilities. This **participatory approach** throughout the project cycle allowed capacity development in every component, including project proposal writing, development of action plans, financial management, and development of income-generating livelihood activities. Through the VRA process, communities identified problems and measures, and designed interventions that were specific to their community and **adapted to their local culture and traditions**. This resulted in an engaged, empowered and mobilized community. **Indigenous knowledge** was also combined with scientific practices to ensure that adaptation strategies were relevant and context specific.

To **bridge the gap between local, national and regional actors**, various multi-level consultation meetings and dialogues were held throughout the project cycle. These engagements served as a space for communities' voices to be heard, their needs to be understood, and their challenges to be recognized and addressed by various decision makers. In addition, these processes enabled **community views and**

actions to be mainstreamed into development processes, and to inform global actions. The resulting increased awareness of all stakeholders reinforces the **collective responsibility** in tackling climate change and identifies **opportunities for shared action**. These inclusive partnerships were established on a shared vision that puts people and nature at the centre of climate resilient development. These synergies also create pathways to expanded support to scale up CBA interventions. The SGP CBA Country Programme Strategy of each country was also aligned to various national and sub-national planning and adaptation priorities. Hence, the country programmes had the foundation to influence the policies and development programmes at various levels.

The programme's projects, processes and results also addressed the climate change priorities of each country as stated in their respective National Action Plans on Adaptation (NAPAs) and National Adaptation Plans (NAPs), as well as the Sustainable Development Goals (SDGs). The programme's cross-cutting initiatives contributed in particular to SDG 5 (Gender Equality), SDG 6 (Clean Water and Sanitation), SDG 10 (Reduced Inequalities), SDG 13 (Climate Action), SDG 14 (Life below Water) and SDG 15 (Life on Land). Its impacts also contribute to SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 11 (Sustainable Cities and Communities) and SDG 17 (Partnerships for the Goals).



CBA outcomes and results

The goals of the CBA programme were supported by four programme-level outcomes:

- 1. Capacity strengthening among non-governmental organizations (NGOs) and community-based organizations (CBOs) for designing and implementing community adaptation measures.**
- 2. Realisation and mainstreaming of adaptation to climate change at the community level.**
- 3. Relevant national and sub-national policies and development programmes revised based on lessons from CBA initiatives and development plans.**
- 4. Up-scaling practices and sharing knowledge for increased up-take of CBA experiences documented for replication purposes.**

The following section provides some brief illustrations of results achieved under each outcome.

Outcome 1: Capacity strengthening among NGOs and CBOs for designing and implementing community adaptation measures

CBA projects were geared towards strengthening the capacity of NGOs, CBOs and local communities in designing and implementing locally led adaptation initiatives. To date, more than 1,200 CSOs and 250,000 individuals have participated in CBA projects and have improved their knowledge, understanding and built their adaptive capacity to climate change impacts. Capacity strengthening was focused on the following areas:

- Education and awareness on several environmental and climate change topics such as adaptation, mitigation, resilience, ecosystem-based solutions and

disaster preparedness. Raising awareness is a key first step needed in building individual and community capacity. Prior to the CBA projects most beneficiaries had limited or no knowledge in these areas.

- Training sessions, practical demonstrations and project implementation increased the knowledge and skill sets of CBA beneficiaries, and in many cases equipped them with new transferable skills and competencies. In most cases the practical, hands-on elements of project implementation fostered positive shifts in attitudes and behaviour. Communities are now transferring these skills and learnings to other surrounding communities and NGOs.
- Through networks created via CBA projects, beneficiaries were exposed to a range of stakeholders and partners such as technical experts, research institutions, academia, state and government agencies, other donors and private sector organizations. Prior to CBA interventions, communities had limited opportunities to engage with these bodies in meaningful ways. CBA projects thus provided opportunities for partnership creation, synergies and resource mobilization.
- The CBA project development and implementation cycle, including the VRA sessions, built the capacity of participants in problem analysis, project planning, reporting, financial management, monitoring and evaluation and communication. Due to the skills developed during the grant management process many CBOs are now able to pursue other sources of funding and partnerships.
- Projects also helped communities to understand and contribute to national plans and strategies and other climate change and environmental policies. It provided a platform for participatory and inclusive dialogues, and advocacy.



In the **Seychelles**, capacity building was a core component of the three CBA projects implemented on Praslin Island. The VRA exercise proved to be an effective tool to bring the politically divided members of the Anse Kerlan community together to openly discuss ideas and solutions regarding the issues of sea level rise and coastal erosion they were experiencing. Through the VRA exercise the community identified their strengths and weaknesses, as well as their available resources. The CBA process enabled them to work towards a common vision and provided them with opportunities to actively participate in training, data collection, community mapping, land and coastal surveys, and resource mobilization. They learned new skills and also used their existing knowledge of their community to develop feasible solutions.

The community are now the owners of this technical coastal data and are frequently consulted by government agencies on the information they

have learned from the project. After working together for over five years on the project, the community is now united and several coastal protective structures (rock armouring) have been constructed along the coastline to reduce coastal erosion. Due to the limited funding available from the CBA grant, community members had to prioritize which households would benefit from the rock armouring structures. This could have been a contentious issue, but based on common understanding and shared vision the most vulnerable households and individuals were selected to be beneficiaries. The community also mobilized resources and support from local businesses to supply building materials and other services. Even though this process did have its challenges, the major achievement was that the CBA process was ultimately able to unite, mobilize and empower the people of Anse Kerlan, contributing to a more cohesive and resilient community.

RESULTS SNAPSHOT FROM 2009 TO 2020



53 **PLANNING GRANTS**



184 **PROJECTS** have been implemented



41 **COUNTRIES** – 37 SIDS and 4 Asia Mekong



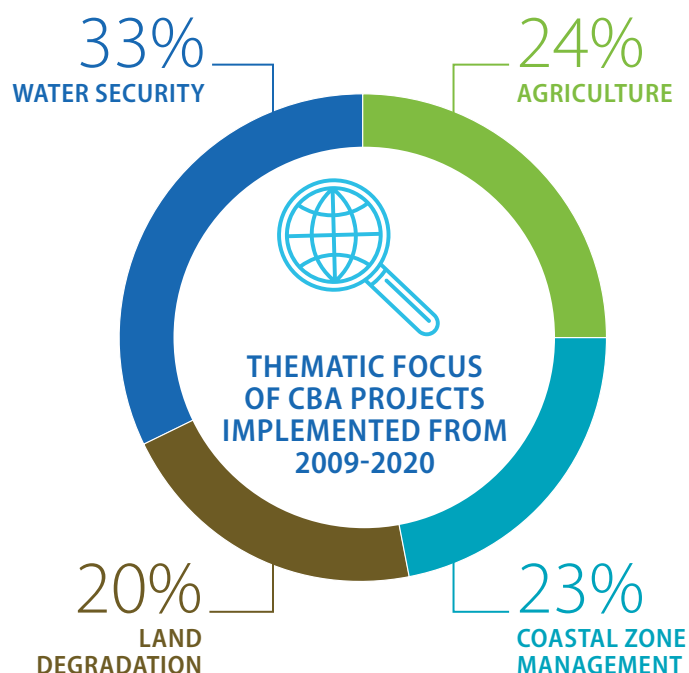
+250,000 **PERSONS**
have participated in CBA projects and activities
43% female participation, 57% male participation
More than 50,000 youths engaged



+13,000 **HECTARES**
of land have been restored
(NOTE: definition of restoration is that more than 70 percent of land has been rehabilitated to near its original condition)



+35,583 **COMMUNITY MEMBERS**
have improved access to water and basic sanitation



In **Tonga**, the women of the B2 Women Development Group have been living in the swamplands of Tongatapu Island following their migration from the outer islands for many years. These indigenous women are one of the most vulnerable groups in Tonga and their new settlement on Tongatapu is susceptible to flooding, sea level rise and saltwater intrusion. The women also have the additional challenge of land insecurity, as they do not have legal rights to the lands they live on. While the women have been beneficiaries of other donor funds indirectly, the CBA project with the Foundation for Youth Development (FYD) was their first opportunity to directly access funding and be involved in the design and implementation of project activities. FYD organized a series of town hall meetings to sensitize and empower members of the group, and eventually facilitated the registration of B2 Women Development Group as a recognized civil

society organization (CSO) with Civil Society Forum of Tonga. These measures significantly increased the capacity of the women's group and empowered them to lead on this adaptation project. The project backfilled and stabilized 1.9 acres of land using clay, stones and soil, which reduced the impact of flooding in the area, and benefitted 30 vulnerable households and 270 individuals. The women were recognized at the 2019 National Climate Change Awareness Week in Tonga and were invited to speak and present on the impacts of the project and share their lessons and experiences with other national agencies and villages. This was a significant achievement for them as their efforts were nationally recognized and honoured. Their registrations as a legal CSO also now allows them to directly receive additional funding from other donors and directly lead on project implementation.

Outcome 2: Realisation and mainstreaming of adaptation to climate change at the community level

Overall, projects activities resulted in more than 13,000 hectares of land under restoration and improved management. Thirty-three per cent of projects focused on improving water security, 24 per cent on enhancing agriculture productivity and income, 20 per cent on rehabilitating degraded land and 23 per cent on better management of coastal zones. An estimated 35,583 community members now have improved access to water and basic sanitation. Projects have also reported that more than 38,000 people have experienced livelihood improvements, and more than 3,000 children have improved their school attendance.

In **Guinea Bissau**, 70 per cent of the population are rural-based and depend on natural resources for their livelihoods, with agriculture generating 56 per cent of the gross domestic product from rice, cashew and livestock. Land degradation from sea level rise and saltwater intrusion have degraded many farmlands and the infrastructure that protects them. One CBA project supported 100 families of the Bor community to rehabilitate water drainage systems and riverbanks with dykes to prevent saltwater inundation in *bolanhas*, or rice paddies. The community actively participated in the rehabilitation of the various rice fields, and the training and awareness raising workshops significantly helped to change behaviour towards more sustainable agricultural practices. Respecting local culture and practices, and integrating these with modern techniques were also key to securing community support and buy-in. This eight-month project, which started implementation in March 2016, restored more than 130 hectares of land leading to a 50 per cent increase in rice production and an increase in the average farmer's annual income from US\$2,233 to US\$10,210. The farmers were able to see the tangible results of the projects and benefitted from livelihood improvements (income generation and food security). This encouraged them to continue with the sustainable

practices that were introduced. The project also facilitated dialogues and partnership building among key institutions including the Ministry of Agriculture and Ministry of Environment, UNDP and the Food and Agriculture Organization. The President of Guinea Bissau visited the site and was impressed with the results, and further expanded the project to other farming communities with similar challenges. Since completion of the CBA project, 2,250 metres of dykes have been constructed to prevent saltwater intrusion onto the fields, and three river channels have been rehabilitated to improve drainage and water flow. Rice production in the other communities has also increased and the Bor community continues to share their knowledge and practices with other rice farmers in the communities of Cuntum Ondam, Bigimita de Prábis and Antula. These additional activities were made possible due to contributions from the Government.

Outcome 3: Relevant national and sub-national policies and development programmes revised based on lessons from CBA initiatives and development plans

CBA projects have contributed to the implementation of national and sub-national policies across several implementing countries- for example in Palau, Papua New Guinea, Marshall Islands, Samoa, Jamaica, Trinidad and Tobago. These were made possible due to the active engagement of key government agencies and ministries throughout the project cycle, as well as their participation in VRA sessions and other project activities.

For example, in **Belize** CBA projects focused on climate-smart coffee and cocoa farming as well as investing in small-scale family farms to ensure preservation of indigenous seeds and food varieties. CBA projects implemented in coastal areas focused on marine conservation and seaweed farming as a means of providing employment and diversifying livelihoods. Throughout these CBA projects the SGP office facilitated and promoted dialogues between



grantee partners and key government ministries and national agencies working in the marine and agriculture sectors. Projects activities also directly aligned to several priorities of these ministries and acted as community demonstration and pilot sites. CBA Belize contributed to the development of the National Seaweed Mariculture Policy and the National Agroforestry Policy, by sharing the experiences, learnings, challenges and best practices of CBA projects with the government ministries.

The case studies presented in this publication provide further illustrations of knowledge sharing and policy implementation.

Outcome 4: Up-scaling practices and sharing knowledge for increased uptake of CBA experiences documented for replication purposes

Through networks created, CBA beneficiaries are exposed to a range of stakeholders and partners such as technical experts, research institutions, state and government agencies, donors and private sector organizations. Many of these partners also integrate

the experiences and learnings to adapt, scale up and replicate the results of CBA pilot projects to national climate initiatives. For example, water-access projects in Dominica and Jamaica have been scaled up by the Japan Caribbean Climate Change Partnership (JCCCP). In the Comoros, the Green Climate Fund (GCF), Ministry of Agriculture and Fisheries and the Rural Economic Development Centre used the results and learnings from CBA pilot projects to design current adaptation projects under their mandates and replicate the pilots in other communities. In Sri Lanka, partners such as the UNDP, Ministry of the Environment, GCF and the Adaptation Fund have scaled and replicated reservoir restoration and rural livestock adaptation projects to other districts in the country. Cuba has also experienced increased collaboration with the Adaptation Fund and the European Union to share experiences and knowledge on CBA. Across several Pacific islands the USAID Climate Ready programme is collaborating with SGP National Coordinators to transfer the learnings of the CBA programme into current climate change development programmes.

In the **Comoros**, CBA projects focused on sustainable land management and projects provided farmers and agriculture groups with training on a range of climate-smart agriculture techniques. Training focused on agroforestry, water storage and irrigation, reforestation, soil restoration, and encouraged farmers to use crop calendars to improve their data collection, recording and management skills. CBA projects ensured that several workshops and training sessions were conducted with the farmers on climate change, adaptation and good agricultural practices. Traditional knowledge and practices were incorporated into adaptation strategies to ensure that projects were relevant and applicable to the local context. As a result, more than 250 hectares of land are being sustainably managed. Strengthening the technical and organizational capacities of agricultural groups and their membership was a major achievement, and a key factor contributing to the ownership and sustainability of projects in the Comoros. The lessons from the project were also communicated to national and regional farmers' platforms, researchers, NGOs and agricultural advisory agencies, which was an important step in scaling up local level adaptation efforts. The

CBA water-access projects have now been replicated in other vulnerable communities by the Green Climate Fund, UNDP and other national agencies.

CBA beneficiary, the president of the Mavieux Terrain group confided that

“Since I was born, I have never had this opportunity to manage money....The other donors come and tell us ‘we have to do that,’ but the SGP CBA has made funds available to us that we manage ourselves. I pray to God that this will continue because we have never seen an initiative with such an approach in Dimadjou. People are now adopting new behaviours and practices because of these projects.”

In **St. Lucia**, the Laborie Fishers and Consumers Co-operative implemented a CBA project aimed at improving the water security of the Laborie community during times of drought and after



natural disasters. In 2017, Karlis Noel a local engineer and fisher from the village, designed the Caribbean's first mobile solar powered desalination unit to convert sea water into drinking water. The unit was equipped with a solar dryer able to process the brine into salt- thus generating zero waste. This cost effective and energy efficient model has a daily production capacity of approximately 3785 litres. An independent study by the Caribbean Public Health Agency confirmed that the water was potable and met the highest chemical, biological and physical standards. This innovative community invention received recognition from the government of St. Lucia and its success was widely celebrated via the media and other national and regional channels. The SGP also facilitated knowledge sharing and promoted the unit as a model appropriate for replication to other water-stressed coastal communities.

In 2018, the SGP office in Nauru contacted St. Lucia and expressed interest in replicating the system to address similar issues of water shortage and saltwater intrusion. Several exchanges and capacity building sessions were conducted between St. Lucia and Nauru, and in 2019 a smaller and more efficient model was constructed with a production of capacity of 2,400 litres of potable water per day. This unit is now operational in Nauru and there continues to be a growing interest from donors, academia and other development partners to replicate the technology to other vulnerable Pacific communities. This South-South exchange between St. Lucia and Nauru represents just one of many possible opportunities for knowledge transfer, capacity building and skills development among SIDS and LDCs.



Inclusive adaptation

Like all global crises, climate change highlights and intensifies existing inequalities in our societies. The complex interactions between exposure to climate impacts and certain biophysical, social, economic, and environmental factors contribute to social vulnerability. These factors apply to all social groups including women, men, the elderly, children and youth, Indigenous Peoples and ethnic minorities and persons with disabilities. There are numerous factors that contribute to vulnerability including:

- limited roles in decision making;
- limited access to resources including cash, credit, land, livestock, and tools;
- lack of education and access to information;
- discriminatory cultural or social norms;
- limited mobility;
- dependence on natural resources for livelihoods; and
- division of labour based on age, gender and other social definitions.

Understanding the dynamics of these factors makes it possible to mainstream vulnerable groups within CBA projects ensuring that they can effectively: participate in adaptation or development initiatives; develop the skills to gain access to, and control over, resources; and take responsibility in their decisions and actions to enable them to cope with climate change impacts. The people most affected by climate change must be part of the climate solution. Social inclusion has been a cross-cutting theme in the CBA programme and women, youth, PWDs, and Indigenous Peoples have been actively engaged across a range of CBA initiatives. A few illustrations are presented below:

Gender

Women and girls are among the most vulnerable social groups affected by climate change. To improve their adaptive capacity all CBA projects included gender considerations as guided by the SGP's gender guidelines, that is, addressing gender considerations from project design through project implementation,



to monitoring and evaluation. Forty-three per cent of projects were led by a female project coordinator, women's group or women's cooperative, or had women playing leading roles in community mobilization, implementation of key project activities, reporting and financial management. Overall, male participants accounted for 57 per cent and female participation was at 43 per cent. The most effective strategy employed in the programme was promoting gender equality in all stages of the project including:

- gender awareness training for project partners;
- ensuring female participation in meetings, dialogues and decision making;
- improving access to financial resources for women, for example establishing women's saving and loans groups;
- capacity building training focused on the specific needs and climate vulnerabilities of women and girls;
- encouraging CSOs to develop gender strategies and plans; and
- increasing or improving livelihood opportunities for women and girls.

In **Viet Nam** the red onion is a traditional agricultural product of Vinh Chau in the Mekong Delta, where it is cultivated on more than 6,000 hectares. Water scarcity has become increasingly acute with the impacts of climate change, and the lack of irrigation has severely impacted red onion cultivation. The CBA programme supported a project to pilot integrated farming, water saving irrigation methods, and the application of micro-organisms to produce organic fertilizer for the red onion crops. The project was led by the Women's Union of Vinh Chau and implemented on 165.5 hectares of land. Through adaptive farming, the women farmers improved irrigation and saved water, used less pesticides, and used red onion waste for composting. The project also raised the awareness and technical capacity of 800 people in the community, and 47 per cent were women. In addition,

the project improved the organizational capacity of the Women's Union in planning, reporting, and financial management, and more women have joined the Union due to their positive work. Guidance material on seeds, crops and agricultural best practices was distributed and a revolving fund was established, which has made it easy for other women farmers to replicate these successful initiatives. The learnings from this women-led project were also included in a government programme focused on restructuring the agricultural sector by promoting sustainable cultivation of the red onion in the Mekong Delta, poverty reduction and livelihood improvements.

CBA projects in Viet Nam had a strong focus on gender equality and this was promoted across all projects. Strategies included ensuring gender analysis prior to the design of the project, designing gender-specific activities to ensure female participation, including gender indicators among other project indicators, partnering with women's organizations in project implementation, promoting engagement of women's networks and connecting the women's groups across national and community levels. These strategies helped to build capacity, knowledge and skills of women across several villages and provinces in Viet Nam.

Youth

Young people are increasingly aware of the challenges and risks presented by the climate crisis and of the opportunities to shift the trajectory towards sustainable development. They are also valuable contributors to climate action, and are change agents, entrepreneurs and innovators. Through education, science and technology, youth are increasing their efforts and using their skills to accelerate climate action. CBA projects engaged youth in a variety of ways including education, awareness, advocacy activities and campaigns, training and capacity building, and directly via adaptation activities focused on livelihood development, diversification and income generation. More than 50,000 youths have been engaged in CBA projects to date.



In **Samoa** The Youth Climate Action Network (YCAN) is a youth-led NGO established in 2016 with the aim of increasing environmental and climate change awareness and promoting positive environmental action across the Samoan islands of Savaii and Upolu. In 2016 they received funding from the GEF SGP to implement a CBA project focused on mangrove restoration, climate change awareness and advocacy and waste management across 12 villages in Samoa. The CBA project was the first major project that they led and implemented and although they experienced challenges as a young and inexperienced group, they were eventually able to gain the trust, support and encouragement of several villages and traditional leaders where their projects were being implemented. In Samoa it is not the norm for youths to lead initiatives, so this project played a crucial role in empowering them and encouraging other youth-led initiatives across Samoa. The experience significantly built their capacity in project implementation, reporting, financial management, communication, advocacy and partnership building. The youth group also won the prestigious Ramsar Wetland Conservation Awards 2018 for their outstanding work in mangrove rehabilitation, coral reef protection, waste management and climate change education and awareness. YCAN is also the first and only youth organization to be included as a partner in Samoa's

National Environment Sector Plan 2017-2021, and regularly participates and contributes to national and regional dialogues and meetings.

Indigenous Peoples

Indigenous Peoples are among the first to face the direct consequences of climate change, due to their dependence upon, and close relationship with, the environment and its resources. Climate change exacerbates the difficulties already faced by indigenous communities including political and economic marginalization, loss of land and resources, human rights violations, discrimination and unemployment⁶. All CBA projects in the Pacific islands and several projects in Belize, Timor Leste, Suriname, Viet Nam, Comoros and Guinea Bissau actively engaged Indigenous Peoples and communities. CBA projects also integrated local customs and traditions, and traditional knowledge in the design and implementation of community initiatives.

Tuvalu is a volcanic archipelago in the Pacific made up of reef islands and atolls. The islands are particularly susceptible to sea level rise, storm surges, saltwater intrusion, cyclones and drought. Rainwater harvesting is the primary method of water collection on the island of Nanumaga (population 1,500). To improve the water supply during times of drought, the Foundation

for Youth Development partnered with the Tuvalu Association of Non-Governmental Organizations (TANGO) to construct a 120,000-litre water cistern for the community on Nanumaga island. A Water Sanitation and Hygiene Committee was established to ensure community ownership and long-term management, and community members were also trained on repairing and maintaining the cistern.

Nanumaga has four tribal clans, namely Fale Kalava, Fale Mouhala, Fale Magomahi and Fale Magatai, and each clan has its own cultural role and responsibility for managing resources on the island. The Fale Kalava was primarily involved in project implementation, but throughout the course of the project neighbouring clans supported with in-kind contributions. The women provided food and water, the men and youths provided free labour, and traditional Tuvalu dancing was also used to keep the community motivated during project activities. These contributions ensured the successful completion of the water cistern, and in return secured opportunities for the other clans to receive water in time of drought. This indigenous practice of solidarity is called Alofa in the local language and translates to love and kindness. This created a stronger bond between the Fale Kalava and the other tribal groups and helped to build morale and motivate the villagers during project implementation. The CBA project benefitted from this traditional practice as it encouraged participation and stronger community ownership.

In **Timor Leste** the CBA Programme focused on three key principles: capacity building and awareness raising activities; sustainable natural resource management and ecosystem restoration techniques to generate socio-economic benefits; and utilizing traditional knowledge and customs to ensure community participation and enhance scientific innovations and technology. *Tara Bandu* is the traditional Timorese custom that enforces peace and reconciliation through the power of public agreement and focuses on three key relationships- people to people, people to animals and people to the environment. It also promotes sustainable use and governance of natural resources.



With the close guidance and support from traditional and community leaders, the CBA Programme integrated these customary principles from the initial project planning stages through to implementation and monitoring an evaluation. *Tara Bandu* also facilitated the active participation of all community members in all project stages irrespective of gender, age, status and other social definitions, ensuring that everyone had an equal voice, opportunity and shared responsibilities. Formal ceremonies were also held to promote and/or restrict certain practices, and this reinforced the community's commitment to abide by newly adopted decisions.

Persons with disabilities

PWDs are a broad, diverse community and are among those most adversely affected in climate disasters and emergency situations. They suffer disproportionately higher rates of morbidity and mortality yet are among those least able to access healthcare services, emergency support and information. Additionally, many PWDs experience intersections of social and economic risk factors that compound their vulnerability, such as poverty, unemployment, reduced levels of education and gender inequality. The meaningful participation, inclusion and leadership of persons with disabilities and their representative



organizations within disaster risk management and climate-related decision-making at the local, national and global levels, should be at the core of climate action that is respectful of the rights of persons with disabilities.

Marshall Islands, Dominica, Cape Verde, St. Kitts and Nevis, St. Lucia and Trinidad and Tobago implemented CBA projects specifically relevant to PWDs or led by PWD organisations. Projects primarily focused on DRR and disaster preparedness, development of livelihood opportunities, training, capacity building and advocacy.

The **Republic of Marshall Islands** consists primarily of low-lying atolls and islands and is one of the Pacific nations most vulnerable to climate change. The country is challenged with numerous social issues including lack of representation of marginalized groups in decision-making processes, and inadequate climate and disaster data on PWDs. In 2015, the islands succumbed to the impacts of the tropical Typhoon Nangka including flooding, storm surges, high winds and property damage. Many PWDs were unaware of the approaching storm and lacked access to information and contact with emergency services during and after the event.

Recognising these challenges in 2019 the Deaf Flourish Club embarked on project that focused on inclusive climate change adaptation and disaster preparedness. The members of the Deaf Flourish Club are all persons with hearing disabilities, and led the implementation of the project using sign language and interpreters on the island of Majuro. Main project activities included mapping the geographic location and vulnerabilities

of PWDs to aid emergency preparedness and response efforts, and the design of an inclusive emergency preparedness, response and recovery toolkit in collaboration with national emergency agencies. In addition, four youth members of the Club were trained to lead workshops, conduct research and facilitate community discussions, and played leading roles in the development of the toolkit.

More than 157 people benefitted from this project including 100 PWDs and staff members from various NGOs and government ministries. One of the most significant achievements of the project was that the Deaf Flourish Club successfully registered as an official NGO on Majuro and is the first Marshallese NGO to be led by persons with hearing disabilities. They utilized sign language and other forms of communication to facilitate discussions with key disaster-response agencies and used the VRA sessions as a space for inclusive dialogues. For the first time they led and managed discussions on these important issues and openly raised their concerns, ideas and suggestions for more inclusive climate change adaptation and community development programmes. The Club built partnerships with the Red Cross, the National Disaster Management Office, and the Environment Protection Agency among others. The project also aligned with the National Climate Change and Emergency Response Policy and this was used to create synergies among all concerned stakeholders working to implement the policy.

Since the successful completion of the project, Deaf Flourish Club has expanded their activities with the assistance of the International Organisation for Migration based in Micronesia. They are working through the 'Inspiring Women's Advancement through Collective Action' initiative to replicate CBA activities in other atolls in the Marshall Islands. The Club has also registered to become members of the Marshall Islands' Council of NGOs. This project empowered the Deaf Flourish Club, built their capacity, created enabling environments and ultimately gave the NGO the opportunity to lead on important community-driven initiatives.

SECTION 2

Case Studies

The following case studies highlight the various thematic areas, approaches and results achieved against the CBA programme goals and outcomes.



Kiribati

Improving water security and sanitation for rural communities in Kiribati



Grantees

Bonnano, Mauanako, Kaue, St. Patrick and Te Roti Village Councils



Duration

2017-2018

Background

Kiribati is a small Pacific island nation comprising of 33 coral atolls and isles with an average height of three to four metres above mean sea level. Its geographic location and economic situation make Kiribati one of the most vulnerable countries to climate change, with sea level rise, coastal erosion, coral bleaching and storm surges already threatening the county's physical existence. A major challenge on the island is insufficient freshwater supplies due to drought, stresses on existing underground wells, saltwater intrusion, and contamination from animal and human waste. Over the last ten years, population numbers have also increased, putting additional demands on the limited water supplies, as well as on the poor sewage and sanitation systems.

Adaptation strategies

To address these challenges the village councils from five Kiribati communities, namely Bonnano, Mauanako, Kaue, St. Patrick and Te Roti, embarked on CBA projects to rehabilitate their community rainwater catchment and sanitation systems. Rainwater harvesting is a commonly used adaptation technique, which captures rainwater during periods of rainfall and stores it for later use when water is less available. Many rural communities use this technique to improve water supply to households and agriculture fields in the absence of a reliable main water supply.

By improving access to clean water, the projects also helped to increase the communities' capacity to cope with drought and other climate change impacts.



Toilet blocks were built in all the communities, each comprising of four toilets and two showers, and overhead water supply tanks of 3,000 litres apiece were also installed. Four 5,000-litre tanks were also linked to rainwater-catchment roofs of the five community centres, or *Maneaba* halls. The halls were also installed with 1.5-kiloWatt solar electricity systems to support community night-time activities, and each now acts as a homework centre. Community members also participated in education and awareness sessions focused on water conservation, good sanitation and hygiene and climate change. The project also encouraged the active participation of community members in the construction of the water and sanitation systems, and provided basic training on their maintenance.

Results and impact

In total, 28,900 community members including 5,779 children benefited from projects focused on clean water access and sanitation. Before the project, many children did not have access to safe drinking water, and most of children were tasked each morning with fetching water for the family from wells located far distances from their homes. This took time away from their school hours and affected their concentration and learning capacities. With the installation of the solar panels on the *Maneaba* halls, children can now spend longer hours reading and studying, and more community activities can now take place in the evenings and nights. The community toilets also improved the cleanliness and sanitation of the villages and beaches. This project has improved the quality of life, health and welfare of these Kiribati families.

Local culture

In Kiribati, the *Maneaba* is a traditional village leadership system based on community consensus, where everyone contributes to discussion and decision-making. It is a well-established and respected community institution with its own laws and governance systems, and contributes to community cohesion. Village elders play a key role in distributing responsibilities and sharing resources, and within each village *Maneaba*, every family



or clan has a particular role or function. This system has played an important role on the small Kiribati islands where land and water resources are limited, as it allows for equal distribution of scarce resources. At the centre of most Kiribati villages is the traditional *Maneaba* hall, which serves as a meeting place for formal and informal matters. The whole community is involved in its construction, and every aspect of the *Maneaba* has a symbolic as well as a practical function.

This indigenous community system played a crucial role in getting support from community members at the start of the projects. Consultation meetings were held with the communities at the *Maneaba* halls to explain the project and to get their input into the planning and design. Complex terminology often associated with climate change was broken down into simple local terms, and vulnerability reduction exercises were conducted in local language to ensure that everyone understood the proposed CBA strategies. Village elders also assigned certain tasks to families and community members to ensure that the communities became fully engaged in the project and understood the importance of their commitment and participation. The *Maneaba* system was beneficial in mobilizing the community and sustaining community interest and engagement throughout implementation.



Palau

Linking research, education and policy at Jellyfish Lake, Palau



Grantee
Coral Reef Research Foundation



Duration
2016-2019

Background

Ongeim'l Tketau (*Fifth Lake*), also known as Jellyfish Lake, is a marine lake located in the Rock Islands Southern Lagoon of Palau's Koror State, and is typically home to millions of Golden jellyfish (*Mastigias papua etpisoni*), an endemic sub-species. The lake and its ecosystem contribute significantly to Palau's biodiversity and it is a major site for research and tourism- as visitors from around the world come to swim with these harmless jellyfish, known to have only a mild sting that enables them to feed. The lake was once home to 10 million to 20 million jellyfish, hitting 30 million at its peak in 2005, with an average typical population size between five-seven million jellies. However, the strong El Niño drought event in 2015-2016 influenced the lake ecosystem and resulted in sharp jellyfish population declines.

The Coral Reef Research Foundation (CRRF) is a research NGO based in Palau, and has been engaged in conservation and environmental monitoring since 1991. In 1998, the CRRF embarked on a project to monitor the impacts of climate change and tourism on the lake ecosystem, and its ability to recover from climatic and anthropogenic stresses.

Adaptation strategies

Through the project, the CRRF monitored the lake to complete a 15-year data set on the lake ecosystem. Changes in oxygen levels, salinity, weather patterns, temperature and sea levels were documented to understand how these factors affect jellyfish population numbers, and by extension the income to local authorities and communities. Several researchers and collaborators have also been collecting data for



several years on other parameters such as microbial diversity, food web dynamics and ecosystem community structure, which all contribute to the greater understanding of the lake ecosystem and its resilience to climate change. The CRRF also analysed visitor numbers during peak tourist seasons through digitizing visitor log-books, allowing Koror State to monitor tourist behaviour at the lake.

Results and impact

Years of data indicated that the lake ecosystem is susceptible to changes in weather and climate. Research suggested that extreme drought periods might lead to decreased essential nutrients affecting survival of juvenile jellies, while higher temperatures influence jellyfish reproduction. Human activities, such as bringing non-native and invasive species and harmful sunscreen pollutants to the lake, are also a concern to the lake's health, but were not thought to be related to the 2016 jellyfish population crash.

Policy and advocacy

The research and data collected was submitted to the Koror State Department of Conservation and Law Enforcement, and insights gained from the monitoring and analysis were discussed with policy makers, tour operators and key stakeholders. These actions helped to improve management of the lake ecosystem by reducing tourism and anthropogenic pressures on the lake in light of climate change impacts.

Education and capacity building

The project also provided training and capacity development of one Palauan woman as a marine lake specialist, and four other locals working part

time on the project. These community members now play an active role in the CRRF's ongoing monitoring programmes. Outreach activities, school visits and lectures to raise awareness and instil pride and ownership of the marine lakes directly reached 575 people, eight schools and 17 agencies involved in tourism. Information detailing the jellyfish population crash and conservation strategies, and the threats from tourism were presented to the traditional and state leadership. The information provided to the local state government was also shared with public via newspapers, engaging the entire Palau population.

This project promoted the protection of Jellyfish Lake, its unique endemic Golden jellyfish, and other marine lakes of Palau, thereby contributing to biodiversity conservation of the Rock Islands Southern Lagoon, a UNESCO World Heritage Site. The lake ecosystem has been recovering from the El Niño drought, and in 2019 CRRF reported that jellyfish population numbers increased to around three million. Tourists are once again visiting the lake and CRRF is optimistic that jellyfish numbers will continue to increase.

This project illustrates the importance of research and data analysis in understanding the impacts of climate change on sensitive ecosystems. This is often a vital first step before adaptation strategies can be designed and implemented; and is important in contributing to sound management and policy decisions. Engaging community members and key stakeholders throughout these processes creates ownership and encourages participation at all levels.



Jamaica

Influencing policy and securing water access in Clarendon, Jamaica



Grantee

Clarendon Parish Development Committee Benevolent Society



Duration

2012-2013

Background

The small communities of Pleasant Valley and White Chapel are located in the southern part of Jamaica's Clarendon Parish and are home to approximately 1,500 people. With so few inhabitants there is an absence of government-supplied potable water, as relevant agencies tend to prioritize water supply to larger community settlements. For these small communities the struggle for water and the impacts of harsh dry seasons are everyday realities.

For many years households depended on trucks to supply water for basic domestic needs. During the dry season the cost of truck-borne water significantly increases, and for these rural communities the cost is prohibitive. Residents, in particular women and children, would often walk 5 kilometres or 30-40 minutes to access water from the nearest standpipe or water source. This lack of water also affects domestic health, sanitation and livelihoods.

Climate change-driven events such as increasing temperatures, droughts, bush fires, irregular rainfall and flooding have also impacted the availability and quality of water in these areas. In 2012, under the leadership of the Clarendon Parish Development Committee Benevolent Society, the community decided that an intervention was necessary, both in the short and long term. The community discussed their capacity to adapt to climate change and drought, and people openly raised their concerns about the social and economic impacts of water scarcity. They agreed that rainwater harvesting, and rehabilitation of the communal water-catchment system, would provide the needed solutions.

Adaptation strategies

The project aimed to strengthen resilience to climate change impacts through awareness-raising and capacity building activities in water security and natural resource



SGP Jamaica

Rainwater harvesting is a simple and time-tested method for collecting water and is a commonly practiced climate change adaptation technique.

management. Building on local knowledge and using a participatory approach, awareness-raising workshops were held on climate change mitigation and adaptation.

One of the primary project activities was to repave and refurbish the old community water-catchment system, which had been out of service for 40 years. The old community catchment tank was rehabilitated and seven storage tanks were installed. The system can now collect and store up to 100,000 litres of water, which is used for domestic purposes and is tested and purified in partnership with the Clarendon Municipal Corporation.

An earth pond was also constructed to collect water for irrigation purposes. Additionally, one hectare of land previously used for bauxite mining is now being managed using sustainable agroforestry management techniques. Fruit trees such as ackee, avocado and other crops completely cover the once-degraded area, significantly improving the earning potential of the farmers.

In conjunction with the benefits of water availability and sustainable land management, the project introduced renewable energy to the catchment areas. The Environmental Foundation of Jamaica provided cash co-financing and provided two solar water pumps to provide power at the collection sites.

Results and impact

The project has improved water access for 1,500 people. In addition, 40 people were trained in water resource management including watershed management and rainwater harvesting. Key networks and partnerships were also established with stakeholders such as the Producers Marketing Organisation, the National Association of Parish Development Committees, the Forestry Department, the Rural Agricultural Development Authority, the National Irrigation Commission and the Social Development Commission.

As part of the rehabilitation, a maintenance plan for the tank and pump was established including

a roster of trained community maintenance volunteers. The community also reinforced their partnership with the Clarendon Municipal Corporation, which enabled them to gain support for additional training in chlorination and other critical aspects of tank management that were unforeseen at the beginning of the project.

One of the main factors that contributed to the success of the project was that the community understood the hardships associated with drought and lack of water. To find a lasting solution to this problem was indeed a priority and the driving force to get the project completed. Since the project was completed in 2013 the community has not gone one day without water. The community has a true sense of pride and ownership for the collection systems and this has resulted in a more unified and empowered group. Residents who previously left the area due to water hardships are now returning due to increased water supply and opportunities.

Gender

Gender equality was a priority for the project, but women experienced significant benefits as they no longer had to walk great distances to source water for domestic use. Women also benefited from training sessions in water management, and were involved in the planning and in decision-making processes. Most women indicated that due to the project they felt a sense of belonging and were empowered due to their central role in motivating the community and mobilizing support for the initiative.

“We used to have to carry water on our head for miles, especially when we had drought, but now we have our tank again. We know the hardships when we don't have water.....We feel we have contributed equally to something that benefits the entire community and now have an equal role in the management of our local resources.”

— Luzan Elliot, from Pleasant Valley

Policy impact, replication and scale up

Rainwater harvesting is now a viable and nationally endorsed water security strategy in Jamaica. This project and other GEF SGP water-security projects have demonstrated the success and effectiveness of community driven adaptation interventions. These project sites now serve as CBA models and are frequently visited by national and regional ministries and agencies, donors and academia.

Policy influence was integrated into the project from inception, as its design was informed by key national climate change documents such as Jamaica's National Communications to the United Nations Framework Convention on Climate Change (UNFCCC) supported by UNDP. The projects' best practices, lessons and technical designs have now been incorporated into Jamaica's national water plans and policies, such as the Rural Water Policy. The projects have also influenced the local authorities to seek funding to improve water access and distribution to communities that are without a water supply, such as the nearby Mocho community. CBA and rainwater harvesting are now mainstreamed into Jamaica's Local Sustainable Development Plans, enabling communities and policy makers to work together on joint interventions.

The project has also been replicated and upscaled through the Japan Caribbean Climate Change Partnership regional project, implemented by the UNDP and the Climate Change Division in the Ministry of Economic Growth and Job Creation. The JCCCP projects are working with 70 institutions across Jamaica including primary and secondary schools, 4H centres and correctional facilities, many of which are located in rural communities. Projects focus on climate-smart technologies such as rainwater harvesting, drip irrigation and sustainable gardens. These projects are scaling up innovative community-based approaches to climate change adaptation and water security in Jamaica.



With strong networking and good inter-agency coordination, the CBA programme in Jamaica has been able to share the experiences and lessons of small-scale community-led projects to contribute and influence national planning and policy processes.

“The CBA projects that have been implemented through the GEF Small Grants Programme augmented the climate change and disaster resilience programme in the target communities. The main factors of success for most of the CBA projects stemmed from the partnership-building process that was cemented at the local and national level, which promoted the sustainability of the initiatives. The emphasis now is on sharing these lessons to encourage replication and upscaling by creating even more collaborations with local and international funders.”

— Eurica Douglas, project manager

Cuba

Climate-smart agriculture and early warning systems on Cuban farms



Grantee
Cooperativa Agrícola Niceto Pérez



Duration
2014-2019

Background

The *Cooperativa Agrícola Niceto Pérez* (CANP) is an agricultural cooperative located in the Cuban municipality of Güira de Melena, around 50 kilometres south of Havana. The area is particularly vulnerable to climate change due to its physical landscape as part of the swampy, low-lying Havana-Matanzas Plain, and its partially flooded forests. Despite these features, agriculture remains the main source of subsistence for the communities in this region. Years of poor agricultural practices have contributed to a deterioration of soil quality, increased incidence of pests and diseases, and soil salinization. From 2014 to 2017 Cuba also experienced one of the most extensive droughts for a century, affecting 80 per cent of the country, including crop and livestock

production. Compounding these problems, in September 2017 Hurricane Irma devastated the island, severely crippling the economy including the agricultural sector. For Cuban farmers the effects of climate change such as irregular rainfall, high temperatures and unpredictable weather patterns is a real and daily struggle.

Considering these challenges, the CANP embarked on a project to build the adaptive capacity of its farmers to climate change. The CANP has a membership of 204 farmers across 64 farms, representing a total of 540 hectares of land dedicated to agriculture and cattle farming. The cooperative is the primary source of income for 10 small settlements with a total population of 1,400.





Adaptation strategies

The CBA project worked with key stakeholders in the agriculture and research sectors to provide training to the farmers on climate-smart agriculture techniques and good agricultural practices, to build the resilience of their farms to climate change. Project activities involved working with research centres in Cuba that have developed varieties of crops that are more resistant to extreme weather, including tomato, onion, garlic, chilli, banana, sweet potato and taro. The farmers were educated and trained on these new varieties of crops and started using them on their farms to increase production during drought periods.

The project has also facilitated partnerships with the University of Havana to train farmers in the use of bio-stimulants on their farms. The stimulants are naturally derived fertilizer additives used to enhance plant growth, nutrient use and improve resistance to temperature and water stresses, thereby increasing yields. Farmers also eliminated the use of synthetic chemicals on their farms and are now using organic products, repellent plants, crop rotation, vermiculture and beneficial micro-organisms to control pests and diseases, as a result of the training from the University.

As part of the CBA project, the National Meteorological Services also trained farmers in the use of early warning systems to monitor the concentrations of tropospheric ozone. In the stratosphere, ozone is a helpful shield against ultra-violet radiation. However, the majority of tropospheric ozone forms when nitrogen oxides, carbon monoxide and volatile organic compounds react in the atmosphere in the presence of sunlight. These reactions produce tropospheric ozone, which is a secondary air pollutant and a greenhouse gas. More than 20 years of data collected and analysed by the Institute of Plant Health Research and the National Centre of Scientific Research have suggested that tropospheric ozone reduces the ability of plants to photosynthesize and sequester carbon, affecting water regulation, flowering and fruiting and ultimately affecting crop health and productivity. The National Meteorological Services worked with the farmers to create communication networks using mobile phones, which allowed farmers to receive text message updates on weather and ozone conditions. The system enabled farmers to be better prepared by employing adaptive measures such as increasing irrigation and applying a lime hydrate solution during times of increased ozone concentration. These two measures protect plant foliage and significantly reduce instances of crop failure during these periods. The early warning systems also made it possible to introduce other meteorological warnings and agro-meteorological information, which were used to plan crop irrigation based on the weather forecast, thus making more effective use of water supplies.

Other project activities included the establishment of three greenhouses to provide a controlled environment to produce high quality seedlings, education and outreach to schools and other farms, development and dissemination of agro-ecological manuals, and monthly training and knowledge-sharing sessions. Farmers are also using other good agricultural practices such as planting along contour lines to reduce soil erosion, crop rotation, and reducing the use of heavy machinery to prevent soil compaction.

Results and impact

To date, 210 hectares of farmlands have come under sustainable management through these climate-smart measures, and more than 90 per cent of the farmers apply these techniques on their individual plots. Production rates of the farmers increased from 12 tonnes per hectare at the beginning of the project in 2014 to 29 tonnes per hectare as of 2018. The farmers also experienced a 25 per cent increase in their average yearly income due to increased production and quality of crops. These benefits have contributed to improved income generation and quality of life, and have increased the saving potential for these farming communities.

Knowledge sharing

The capacity of the CANP has been built such that it now acts as a demonstration site and training centre on the island. In 2018, 31 producers from 7 provinces and 10 municipalities around Cuba participated in training workshops hosted by CANP, facilitating the sharing of technology and the dissemination of information. The CANP has also participated in several South-South exchanges with farmers from other Caribbean SIDS and Latin America. Five training manuals documenting the good practices for the control and management of pests and diseases using agro-ecological strategies have been prepared and published and have been widely disseminated to other farming communities. The project has also provided local authorities with innovative examples and practical illustrations that can be replicated and integrated into future climate change development planning. Partnerships have also been established with two climate change adaptation projects funded by the Adaptation Fund and the European Union, and knowledge sharing and capacity building continues to take place among the projects. The University of Havana, the Meteorological Institute of Cuba and the National Organization of Small Farmers continue to provide guidance, training and support to the farming groups on pest and disease control, soil improvement, composting and other agro-ecological

techniques. Continuous knowledge sharing and capacity building are key objectives of the SGP CBA programme in Cuba and facilitates overall programme sustainability.

Early warning systems are an adaptive measure for climate change, using integrated communication systems to help communities prepare for hazardous climate-related events. Informed advisories, alerts and robust early-warning systems are essential for farmers and rural communities to prepare for and adapt to changes in climate. For these systems to be effective they need to involve the people and communities at risk, facilitate public awareness and education, and ensure that there is a constant state of preparedness so that early action is enabled. The significance of an effective early warning system lies in the recognition of its benefits by local people.

“The effects of climate change have been very strong, and we as farmers have also degraded the soil for many years. With this training we have learned to manage the soil efficiently, to treat it as it should be treated. Our farmers are now aware that chemicals are very harmful elements for crops and we are making a large portion of our products organic, so there is a greater awareness by our farmers on the use of organic products, which are very important for human health.”

— Jorge Luis Denis, President of CANP



Trinidad and Tobago

Disability-inclusive disaster risk reduction in Trinidad and Tobago



Grantee

The Digicel Trinidad and Tobago Foundation



Duration

2015-2018

Background

The Republic of Trinidad and Tobago is an archipelagic nation in the southern Caribbean, located northeast of Venezuela and south of Grenada. Like many other Caribbean SIDS, Trinidad and Tobago has been experiencing sea level rise, coastal erosion, intense tropical storms, severe flooding, hillside erosion, landslides, severe dry seasons, drought and frequent bush fires, all of which are indicators of the continued impacts of climate change.

The Office of Disaster Preparedness and Management (ODPM) is the national body in Trinidad and Tobago responsible for building national capabilities for disaster risk management and climate change

adaptation among key emergency agencies and the general population. While ODPM's plans and policies have generally considered DRR for persons with physical disabilities, they have largely excluded those with a range of intellectual disabilities and other developmental disorders such as autism, cerebral palsy and Down syndrome to name a few. Many persons experience combinations of both physical and intellectual disabilities, making them particularly susceptible to climate change impacts.

The Digicel Trinidad and Tobago Foundation is the NGO arm of the private sector telecommunications company Digicel. Since 2012 it has been advocating for and supporting initiatives that improve opportunities



for PWDs, through various enrichment programmes. To address this gap, the Foundation developed a DRR programme for PWDs titled 'Preparing You! - A Disaster Preparedness and Emergency Evacuation Pilot Project for persons with special needs.' The programme's goal was to improve the resilience of PWDs to climate change and other natural disasters, by building partnerships with the ODPM and the Ministry of Local Government.

Adaptation strategies

The project was implemented in two phases over the period 2015-2018 and was the first of its kind to be executed across the islands. The Digicel Foundation focused this pioneering work on eight schools for children with disabilities in some of the most vulnerable communities across Trinidad and Tobago, many of which are located in low-lying flood-prone areas with poor infrastructure.

The key strategy of the project was to develop resilience within the PWD community by embracing a public-private partnership approach. These partnerships engaged national disaster agencies such as the ODPM, the Tobago Emergency Management Agency, the Trinidad and Tobago Fire Service and relevant disaster management units of the Ministry of Rural Development and Local Government. The Digicel Foundation also conducted VRA exercises to identify the disasters and threats that the schools were susceptible to. The sessions were designed and conducted in a participatory manner with parents, caregivers, teachers, students, representatives from the ODPM and the other national disaster agencies. They provided an opportunity for the PWD community and the disaster agencies to learn about each other and enhance communication; prior to this very little interaction existed among these groups. These sessions were repeated several times throughout the course of the project to monitor and evaluate the effectiveness of the interventions, and as a means to maintain dialogue and strengthen partnerships among the key project stakeholders.

These agencies were involved in capacity building initiatives with each school via the 'train the trainer' programme, where specialized content on disaster preparedness was delivered to teachers, caregivers and parents. During these sessions the disaster agencies also improved their knowledge and understanding of the PWD community and their specific challenges. The agencies also worked with each school to establish disaster management committees and develop evacuation plans and frameworks. Health and safety inspections were also conducted.

Results and impact

To date more than 60 teachers and caregivers and 350 persons with disabilities participated in initiatives to build their capacity and improve their understanding of climate change adaptation and DRR. Workshops and trainings focused on first aid, proper use of fire extinguishers, evacuation drills, preparation of personal disaster kits and emergency checklists, and development of detailed disaster management plans for each school and household. Interactive songs, puppet shows, performances and practical demonstrations were utilized to teach students with varying learning capacities about disaster preparedness. The facilities and buildings of the eight schools were upgraded and modified to include emergency equipment such as fire extinguishers, smoke detectors, emergency alarms, emergency lighting and signage; and in one case the entire school was reconstructed to improve its safety. The schools also developed a strong working relationship with the fire services and the first responders of the local disaster management units in each location. Regular site visits and equipment checks are now carried out by these agencies at the schools. Two project videos, four hazard instructional videos, one blog and five educational posters were created and circulated to public agencies and schools to raise awareness on climate change and natural disasters.



SGP Trinidad and Tobago



Policy and mainstreaming

The ODPEP was the key partner and leading agency in implementing the 'Preparing You!' programme. As a result, major breakthroughs in disaster management planning for PWDs have occurred nationally. Due to the project the ODPEP expanded their classification of PWDs to include a wider range of intellectual and development disabilities, and they have made changes to their existing programmes to include a more diverse PWD community. They have also significantly revised the National Disaster Emergency Handbook and policy documents to include disaster planning templates and checklists, specific mitigation instructions for a range of disabilities, and instructions on each stage of the disaster management cycle specifically focused on PWDs.

Through the partnerships established, the ODPEP is currently working with the Digicel Foundation to revise and update the national database to include the Geographic Information System (GIS) data on the locations and specific medical information for the PWD community in Trinidad and Tobago. This will ensure that DRR methodologies are appropriate and tailored to this vulnerable community for future responses. Outreach for persons with intellectual disabilities now forms part of ODPEP's programme titled 'Communities Organised and Ready for Emergencies.'

'Preparing You!' is now a flagship community programme at the Digicel Foundation. In 2018 they

incorporated a virtual reality game called 'Masters of Prep' as part of the initiative. The game builds on the teaching models, learnings and experiences of the early phases of 'Preparing You!' and was designed as a tool to educate and prepare children and caregivers on preparedness in a virtual world. Various 'Preparing You!' teaching tools and methods are currently being used to raise awareness and communicate messages on COVID-19 health and safety best practices.

Replication and scale up

In 2019, The Digicel Foundation entered into a partnership with the Inter-American Development Bank and has received additional funding to scale up the CBA DRR interventions to more schools across Trinidad and Tobago, and to other schools in Dominica, Haiti and Jamaica. This scale up will also include technology-based training on disaster preparedness for more than 900 students and 150 teachers and caregivers at PWDs schools and facilities.

“The Foundation prides itself in embarking on programmes that are life-changing, impactful and sustainable, and ‘Preparing You!’ is a true model of that.”

— Penny Gomez, chief executive of the Digicel Foundation



Mauritius

Diversifying livelihoods and building resilience of coastal communities on Rodrigues Island



Grantee
Shoals Rodrigues Association



Duration
2012-2020

Background

The island of Rodrigues in the Republic of Mauritius is situated in the southwest Indian Ocean. The small volcanic island is surrounded by an extensive reef platform, which supports a diversity of habitats and endemic species and is recognized as a global biodiversity hotspot.

The economy of Rodrigues is heavily dependent on agriculture, livestock farming and fishing, with over one third of its workforce employed by these sectors. However, agriculture on Rodrigues is a challenge due to severe droughts, particularly during the summer months, which results in poor harvests and unhealthy livestock. During this period, villagers depend on truck-borne water, but must provide their own storage tanks to receive and store this vital resource. Local fishers have reported that catches of octopus and reef

fish have declined by approximately 75 per cent over the past 10 years due to anthropogenic and climate change impacts on the surrounding reefs. This has significantly reduced their earnings and affected the livelihoods of the island's communities.

Baie du Nord is a village of approximately 350 inhabitants, located in the northern region of Rodrigues. The surrounding marine ecosystem is vital to the village, as it supports livelihoods and provides food for the community. The dependency on the sea, the shallow lagoon and fishing is higher (53 per cent) in Baie du Nord than in the rest of the island and in other villages on the north coast (35 per cent). The fact that most villagers have low levels of education contributes directly to this, as they are not able to secure any other forms of viable employment on the island.





Adaptation strategies

With these challenges in mind, in 2015 the Shoals Rodrigues Association implemented a CBA project with the community of Baie du Nord to help fishing-dependent communities on Rodrigues adapt to climate change. Through the VRA exercise and several consultations and meetings, the community expressed interest in diversifying their sources of income and expressed the need for a more stable water supply. The main project activities included:

- developing a Coastal Vulnerability Assessment (CVA) for Baie du Nord and the surrounding vicinity to aid coastal management planning;
- supporting livelihood diversification through the establishment of sustainable poultry farming activities, in order to reduce the community's dependency on fishing;
- addressing the issue of water shortages through the provision of rainwater harvesting tanks; and
- transferring lessons learnt to local government agencies.

Results and impact

The project installed rainwater-harvesting tanks with a capacity of 2,000 litres each on the houses of 38 community members. This has reduced their dependence on truck-borne water and increased the amount of water available for their gardens and livestock farming. Community members are now saving between US\$30-US\$44 per month on water.

A total of 16 families have now started selling eggs, chickens and chicks, which has improved their monthly income. Prior to the project, the monthly income per family was US\$43, and now it has increased to US\$60. The eggs and the chickens also supplement their household food consumption and generates savings. Additionally, with further support from the CBA programme, 60 sheep and five piglets were given to the grantees in 2020. A total of 144 people benefited from these project interventions to date.

Shoals Rodrigues also partnered with the Centre de Formation Agricole Frere Remy, an agricultural training institution to provide training to beneficiaries. The capacity building sessions focused on poultry farming and agriculture, domestic financial management and record keeping, project implementation, marketing and value-added products. This partnership was formalized through a memorandum of understanding and the Centre continues to provide support and technical assistance to the community to date.

A key project activity also included a Coastal Vulnerability Assessment for Baie du Nord and surrounding areas to aid coastal zone management and planning. To create the CVA, existing and new GIS data maps were compiled with various layers to highlight topography, coastal landforms, shoreline erosion, slope, infrastructure, and distribution of vegetation, corals, seagrasses and mangroves. The data was used to prepare a series of maps to illustrate the vulnerability of the coastline to wave impact and sea level rise. The maps identified low-lying coastal areas prone to sea-level rise and flooding and recommended that future development to be restricted to at least two meters above present sea levels.

The CVA process was participatory and enabled community members to apply their local knowledge about natural resources to the planning process. It also increased their understanding of the potential risks of climate change, helping to improve their disaster

preparedness skills. Project participants concurred with the outcomes of the CVA and provided testimonials on the impacts of coastal erosion and sea level rise, including damage to boats, loss of cattle, flooding of low-lying houses and decrease in fish catch.

Policy and replication

A policy brief was also prepared to highlight the CVA study, making several key recommendations to the local authorities regarding future infrastructural development work and underscoring the importance of protecting natural buffers such as coral reefs, seagrass beds and mangroves. This work also aligned and contributed to the implementation of the National Integrated Coastal Zone Management Plan for Rodrigues Island. The CVA method can be adopted by other practitioners in Mauritius by refining the data inputs and adding new datasets (e.g. modelling data for storm waves), and by addressing different types of hazards (e.g. saltwater intrusion). The small size of Rodrigues proved to be an advantage for demonstrating these types of techniques and for implementing strategies to build community resilience to external impacts.

Shoals Rodrigues Association also prepared a second policy brief on rainwater harvesting in the context of climate change, which was also submitted to the relevant authorities. It highlighted the importance of rainwater harvesting as a practical method to empower rural communities, improve water security, sanitation and hygiene, as well as reduce household costs and improve food security. The brief also recommended the incorporation of rainwater harvesting into building regulations so that it is mandatory for all new buildings on the island.

The people of Baie Du Nord have demonstrated that, with determination and willingness to learn new skills, vulnerable communities can build their capacity to adapt to climate change. The livelihood diversification component can also be replicated to other communities with similar challenges.



“This tank has greatly help me and my family, as before the project I had only four drums of water per month and these [were] usually finished after a week, but now with the water tank I can go up to 20-25 days. Right now it is helping greatly as the domestic water supply has not worked since Cyclone Gelena [which hit Mauritius on 10 February 2019]. [But] the tanks are collecting water each time it rains”.

— **Tolbize Louis Joseph, beneficiary of the water tank**

Seychelles

Watershed rehabilitation using nature-based solutions on Praslin Island



Grantee

Terrestrial Restoration Action Society of Seychelles



Duration

2014-2017

Background

The Seychelles is an archipelago of 115 coralline and granitic islands located in the Indian Ocean, and is often associated with exotic beaches, rich coral reefs and lush tropical forests. This isolated paradise is a popular tourist destination and the perfect retreat; however climate change presents a very different reality for these vulnerable islands.

The impacts of climate change and environmental degradation are particularly evident on Praslin Island. Fires (both natural and anthropogenic) are the main threat to Praslin's unique forest ecosystems, and the harsh drought periods intensified by climate change increase the occurrence and severity of fires. Over the years, the watershed of La Hauteur suffered several

forest fires degrading over 30 hectares of land.

The La Hauteur watershed is the primary water source for the farming and residential communities downstream. The direct relationship between forest fires, forest degradation, and the impact on the water cycle (e.g. reduced river flows) has already impacted the livelihoods of farmers and food production on the island.

To address these challenges the GEF SGP partnered with The Terrestrial Restoration Action Society of Seychelles (TRASS), the largest environmental NGO on Praslin. Since 2009 they have been working with local communities and a dedicated team of volunteers on mangrove and wetland conservation and restoration of degraded lands using nature-based solutions.



The GEF SGP aligned its CBA projects on Praslin island to the Seychelles National Climate Change Strategy, and designed adaptation projects in a participatory manner with key inputs from local NGOs and communities, private sector and local businesses, state agencies and local environmental and climate change authorities. This early engagement was a key step to secure the support of these stakeholders in the planning and implementation of the adaptation strategies.

Adaptation strategies

To address land degradation on the watershed, TRASS focused on developing a Rehabilitation and Management Plan that involved baseline ecological assessments, and mapping the extent of fire damage and degradation. Soil samples were also collected and analysed by the Seychelles Agriculture Agency, which revealed the soils were acidic and required improvement to facilitate optimum plant growth. This baseline information collected was important for TRASS to determine ways to improve the soil prior to replanting, and key to guide the development of a cohesive rehabilitation strategy.

TRASS members and volunteers collected several hundred bags of humus which was then mixed with the red loam soils present on the watershed. Organic fertilizer and chicken manure were also added to increase the nutrient content. Calcium carbonate was also added to neutralize the acidic nature of the soils, to facilitate plant growth. Additionally, more than 2,000 seedlings were produced in the TRASS nursery for the project. This involved collecting and propagating native seedlings and plant cuttings from other forested areas on the island. This nursery is now one of the largest on Seychelles and the only one on Praslin. TRASS was also granted permission from the Public Utility Cooperation to access an adjacent water source to supply water for the nursery, plant maintenance and additional irrigation.



Other key elements of the project included education and awareness, outreach and community dialogues. TRASS organized a series of trainings to build the capacity of their members and local communities so that they could be meaningfully engaged in the rehabilitation work and develop a sense of ownership for the watershed. Trainings focused on field and nursery based plant identification, propagation, planting and soil improvement techniques. Brochures and videos were also produced as key awareness and communication tools.

A plant database was also developed with additional co-financing from the Adaptation Fund. TRASS members and project participants were trained in data entry, analysis and management. This database is a key component for the long-term management of the watershed. TRASS also worked closely with the Seychelles National Park Authority to maintain fire trails and breaks to reduce fire propagation.

Results and impact

In total 2 hectares of degraded land were replanted with 2,322 native plants, and 17 hectares are under additional rehabilitation. More than 20 volunteer organizations and 1,300 community members have participated in TRASS projects to date. A core group of 12 individuals in addition to a peripheral group of 20 were trained to transfer knowledge and know-how



to the wider community. This was a significant benefit resulting from the project- as prior to the project the capacity for effective rehabilitation was relatively low and remained within the hands of a few key individuals. Through the training and workshops, the capacity of the local community was enhanced to ensure that they continue towards the end goal of developing, implementing and sustaining their own solutions to their current problems. Having trained knowledgeable personnel is vital for the success of the TRASS rehabilitation programme, as it ensures sustainability and community ownership.

Replication and scale up

The main project output was the development of a comprehensive Rehabilitation and Management Plan, which was designed to ensure long-term watershed rehabilitation. This plan is now generating further funding and partnership opportunities for TRASS with organisations such as the United Nations Environment Programme, UNDP, the Adaptation Fund and the Seychelles Government, where the plan is being used to scale up rehabilitation efforts on Praslin. The Plan, the database and the enhanced capacity of TRASS have made significant contributions to these sustainable interventions.

The rehabilitation initiative has now been scaled up under GEF US\$31 million Ridge to Reef Project 2020 which aims to enhance the conservation of forest, coastal and marine ecosystems on the islands of Mahé, Praslin and Curieuse. TRASS is one of the key stakeholders in this project and is responsible for the implementation of the rehabilitation activities. The Ridge to Reef Project takes place in various locations, but efforts on Praslin are building on the full complement of experiences that TRASS has accumulated via its initiatives, be they volunteering, propagation and planting techniques, plant identification, and project management.

“The task to make Praslin greener is one that TRASS started but it will take several generations to achieve. What is of great importance is the process of achieving this success by empowering the people to make a difference in their lives where it matters. When TRASS started there were only a few of us, but today TRASS has the biggest volunteer group behind it in the Seychelles and together we will make a difference.”

— Dr Elvina Henriette

Cambodia

Mainstreaming Community Based Adaptation in Cambodia



Grantees
Multiple



Duration
2010-2015

Background

Cambodia is a tropical country in south-east Asia characterised by low-lying flood plains and river basins surrounded by mountains. The economy is largely agrarian, with three quarters of the total population living in rural areas, and most of them engaged in small-scale fishing and rain-fed and subsistence agriculture, with rice being the dominant crop. Drought, irregular rainfall, seasonal changes, and flooding have been affecting agriculture production and food security in these areas and is predicted to intensify in coming years. Reduced food production can lead to poverty, malnutrition and food insecurity, and can negatively affect the livelihoods of thousands of rural farmers. Cambodia's NAPA was developed in 2006 with support from the UNFCCC and identifies adaptation priorities in key sectors including agriculture, water resources, the coastal zone and human health.

Drawing on lessons from previous SGP CBA projects, in 2010 the Cambodian Community Based Adaptation Programme (CCBAP) was established in partnership with the GEF SGP, UNDP Cambodia, DFAT and the Swedish International Development Cooperation Agency. The CCBAP also aligned to the NAPA and was designed to address gaps not covered in the NAPA, with a particular focus on local community empowerment. The Programme was implemented over the period 2010-2015 with more than US\$4.4 million in funding across 21 provinces.

The main objective of the CCBAP was to reduce vulnerability and increase adaptive capacity of targeted rural communities to manage climate change risks, with a particular focus on drought and flooding. It also aimed to mainstream climate adaptation in commune development planning and document good practices and lessons learnt to influence policy. The CCBAP had four main integrated





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adaptation approaches: improve water resource management and ecosystem restoration; diversify crops and introduce climate-smart techniques to farmers; diversify livelihoods and create economic opportunities for the communities; and raise awareness on disaster preparedness and climate change.

In Cambodia, the development plans at commune level (an administrative unit of a collection of villages) are reviewed every five years and form the foundation of the subsequent district, provincial and national development plans. With this understanding, the CCBAP programme aligned itself with the policy planning and financial processes to ensure that CBA was mainstreamed into these processes.

Adaptation strategies

Main CCBAP activities included:

- development of water schemes to improve irrigation and provide water for rice paddies and agricultural crops amidst drought;
- introductions of crops and seeds with shorter growing and harvesting cycles;
- rehabilitation of wells, ponds and spillways to increase water storage capacity and promote fish breeding;

- reforestation of coastal zones and agricultural lands to buffer saltwater intrusion and address soil erosion; and
- establishment of self-help groups, water-use groups and saving groups tasked with infrastructure, seed bank and home garden management, as well as small-scale business development.

In 2011 the CCBAP organized a national workshop to discuss mainstreaming CBA into sub-national planning. The 197 participants included UN agencies, commune councils, independent organizations, CSOs and local communities, and government ministries and departments. The workshop aimed to strengthen linkages between local, sub-national and national adaptation planning levels, and to share and review the process of mainstreaming climate change adaptation into the Commune Development Plans and Commune Investment Plans. It also facilitated dialogue among these key stakeholders on conducting baseline assessments using tools such as the VRA and plans for scaling up CBA to more communes.

The CCBAP worked closely with the national government and the United Nations Capital Development Fund (UNCDF) to review the existing Commune Development Plan guidelines. Upon the review, CCBAP and UNCDF recognized the gaps of not including and adequately financing CBA in the policy development process and plans. The SGP held several meetings and discussions with the Ministry of Interior and Ministry of Planning to highlight the issue and advocated for inclusion of CBA into national policies. The process was collaborative and took time, but eventually the ministries agreed and established a working group to guide the 2014 Commune Development Planning process to include climate change adaptation.

Several experiences from the SGP and CBA projects were used to develop operational guidelines and tools for the Plans. These tools included the VRA methodology, a participatory project planning



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toolkit, project selection criteria and guidelines, and monitoring and evaluation tools aimed to contribute to capacity development and promote local ownership. The CCBAP also provided training to government officials and field offices to build their capacity in undertaking VRA assessments in each commune.

Results and impact

In total 71 CBA were projects designed and implemented by 52 local NGOs and CBOs, which improved the adaptive capacity and resilience of more than 22,000 families. Around 74 per cent of 113 targeted communes have now integrated climate change adaptation and CBA activities into their Commune Development Plans.

Eighty-six farmer water user groups were formed, and members were trained to maintain the pipes and water storage infrastructure in the various villages. Five seed and rice banks were established with a membership of 3,086 people, and 401 saving groups were set up with 7,057 members, 65 per cent being women. These groups and community governance systems play important roles in managing shared resources, and ensure that systems are maintained and resources are equitably distributed among members.

A total of 76,141 metres of water canals, 9 dams, 16 water gates and 4 spillways were rehabilitated. This improved capacity to irrigate a total of 35,878 hectares of rice fields during the rainy season, and 13,267 hectares during the dry season. Two water-pipe systems were installed, improving water supply to seven villages. In addition, 4,870 hectares of land were restored to their original state and another 2,762 hectares are under improved land management. This has led to more productive home gardens and

livestock farms, improvements to health, living conditions and improved saving potential for the families.

“In the past sometimes we had to borrow from others to fill the gaps. But now we can save money as we can grow rice more often...and with the saved money we can also send our children to school to further their education.”

— Lim Savoeun

Mainstreaming, policy and scale up

In recognition of the importance of mainstreaming CBA into the Commune Development Plans, the Government of Cambodia formed an Integration Working Group at the district level to ensure that sufficient national funds were allocated to sustaining the CBA work. NGOs and donors came together with the government to plan and prioritize distribution of funding and projects among the communes.

The CCBAP was able to successfully mainstream CBA into the national policy planning processes, and engaged with the National Climate Change Committee to ensure that CBA innovations were included in long-term policy implementation. Learnings and successful results from the CCBAP projects and the pilots have already been replicated in other communes in Cambodia through other UNDP-GEF full sized projects.

As a result of the collective dialogues, advocacy work, partnerships and knowledge sharing, in 2014 the Government launched the Cambodia Climate Change Strategic Plan 2014-2023 along with 15 Climate Change Action Plans that further detailed the executive missions of ministries with regard to climate change.

Sri Lanka

Addressing land degradation and improving livelihoods in Serupitiya Village, Sri Lanka



Grantee

Ekabadda Praja Sanwardana Kantha Maha Sangamaya



Duration

2010-2012

Background

Serupitiya is a rural hillside village located in Sri Lanka's Central Province, where the terrain is steep and susceptible to severe soil erosion and land degradation. Villagers primarily depend on rain-fed small scale agriculture as their main source of income. Most of them live below the poverty line, with 60 per cent depending on government welfare programmes and 98 per cent of households in debt.

Although Serupitiya is adjacent to a large hydro-electric reservoir, the community is largely cut off from most government services and lacks access to a regular water supply to meet basic domestic and livelihood needs. Monsoon rains provide the community with water from October to February, after which the severe dry season

sets in, drying up streams and other sources of surface water. The village frequently suffers the effects of strong winds, heavy rains, soil erosion and landslides, all of which affect their small farms and vegetable production. Vegetable prices often plummet during the dry season due to oversupply, leaving the farmers bereft of their single annual income source. Moreover, crop yields have been declining steadily due to the poor quality of the eroded soils and erratic rainfall patterns. In addition to climate challenges, many villagers also use degrading agricultural practices and harmful chemicals, which further contribute to erosion and degradation. During the long dry months, men migrate out of the village to work in irrigated rice fields downstream, leaving women and children to fend for





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themselves during this vulnerable period. Home-based self-employment avenues are very limited in the village, and the lack of water prevents women from doing home gardening, food preparation for sale and additional livelihood activities.

In 2010, the Ekabadda Praja Sanwardana Kantha Maha Sangamaya group began a CBA project in Serupitiya village to address climate change and these land degradation challenges. A VRA exercise was first conducted with 85 households, along with key local officials from the village administrative office, the Agrarian Services Extension office, the Samurdhi (welfare) officer, and other NGOs and volunteer organizations working in the area. The results of the VRA clearly showed that the target population faced substantial risk to their livelihood from current climatic conditions, and that, if the situation were to worsen, they would be in need of alternate incomes. The exercise also demonstrated the extent of marginalization and disconnection between the community and service providers, especially the government administration.

Adaptation strategies

The main objective of the project was to address land degradation and erosive cultivation practices. The strategy was to introduce land protection measures with community participation, as well as more stable year-round income sources to the community. This was done through three main components: land survey and demarcation for erosion control; introduction of different perennial crops for stable income; and introduction of livestock rearing as an alternate income source.

The land survey was the largest scientific undertaking under the project. It covered the farm plots of every beneficiary and was conducted by an expert team

from the Department of Agriculture, Natural Resources Management Centre. The survey identified the soil type, slope category and contours for each farming plot and recommended specific crops, soil amendments and rehabilitation measures based on this. Each farmer retained a copy of the land survey data sheet and the project mobilisers worked with them to interpret the map and its recommendations. The project provided funds for each household to implement these measures, covering labour and material costs. The work took place in the off-season, providing farmers with additional income during the dry months.

The technical advisors to the project team introduced several high-value perennials with good market demand to improve agricultural diversity and income generation. These included vanilla, cinnamon and peppers, among others. Through a complementary government-funded initiative, the households received coconut and cashew plants and, due to the popularity of these crops, the project supported their further distribution among the community.

Prior to the project, Serupitiya did not practice livestock rearing. However, after consultations and discussions with the village, community members expressed interest in it for milk production, which has now become the most popular and successful alternate income source. The project helped the community to organize themselves into a local group for milk farming, which was then supported by the government through the local veterinary officers, and by MILCO, Sri Lanka's largest manufacturer of milk products. The project funded the initial purchase of 15 cows and their calves have been distributed to other members of the community. Today, there are 23 milk-producing households that earn US\$5 per day. The livestock were also insured through the government veterinary insurance scheme.

Results and impact

The project was implemented over a two-year period and the main benefits included community mobilization, socio-economic benefits, livelihood diversification, and soil and land restoration.

When the project baseline was conducted, there were no community-based organizations in Serupitiya. Through the project, significant community empowerment was achieved, which enabled the villagers to organize themselves into two community-based organizations. The Milk Farming Society, which supports the key livelihood diversification programme in the village, is a strong society that includes almost half of the project's households as members. The other is the women's organization, established by the local NGO to promote financial security for rural women via village savings groups. Most women had never owned a savings book all their lives. This platform is also used to deliver programmes on health, sanitation, kitchen gardens and efficient water use to village women.

Farmers adopted the recommendations of the land survey and a total of 177 hectares of land were rehabilitated with soil conservation measures, including the use of terraces, hedges, contour drain, vegetative fences and stone bunds. Soil conservation impacts were noticeable immediately after the monsoon rains following implementation, and some bunds and drains trapped over one foot of topsoil. Farmers outside the project site began requesting the local authorities to conduct surveys and soil conservation strategies on their farms. Home gardening was introduced to 200 households and 36 families are already using home garden produce for consumption and sale. A post-project survey found that composting increased from 14 per cent of households before the project to 80 per cent after it.

In terms of economic impact, 17 families received a free cross-bred cow and 14 families are now earning between US\$60-90 per month through milk sales. A milk chilling center was established with government

co-finance to support the Milk Farming Society. Since then, the group has embarked on two new community development initiatives, including a drinking water project for a nearby village. Today, 58 families are benefitting from the sale of home garden produce and perennial crops, such as cashew and coconut. All home gardens have more than five perennial crop types, ensuring domestic food security and income during periods of climatic uncertainty.

Gender

The implementing NGO was led by female officers, who executed several additional activities focused on women's needs and on improving their participation. This included the savings and credit society, which did not exist prior to the project and now has more than US\$2,000 saved in the bank. Women in the village now have increased knowledge and skills about nutrition and health, awareness of kitchen management and smoke-free kitchen maintenance, as well as children's health. Women also participated fully in the core activities of the project, including livestock farming, home gardening and soil conservation.

Scale up and replication

The Divisional Secretariat has followed the project success and recommended the approach for up-scaling through government sponsored rural development programmes. In addition, a US\$7.5 million climate adaptation initiative is scaling up this CBA project's proven approach for soil and land conservation in rain-fed farmlands in the entire Walapane Division. The initiative is funded by the Adaptation Fund and implemented by the Ministry of Environment, in partnership with UNDP and the World Food Programme.

This project has not only significantly improved the livelihoods and well-being of Serupitiya village, but also enhanced its collaboration and connectivity with local and national agencies, as well as with community groups working in the area.

SECTION 3

Lessons Learnt and Conclusion



Lessons Learnt

This publication highlights how communities can be key drivers and actors in developing and testing CCA and CBA techniques and approaches. It also presents the SGP's experiences and lessons that can be adopted and utilized by other communities, governments, donors, the private sector and other partners in accelerating climate ambition and action. The following lessons were generated over the 10-year implementation period of the CBA programme:

Education, awareness, and capacity building

Although there has been a significant increase in general awareness regarding climate change over the last years, many local communities and stakeholders are still largely unfamiliar with the technical terms and concepts. It is important to explain climate change using locally relevant terms and examples, as opposed to highly technical terms and presentations, when implementing community-based initiatives. Breaking down complex climate terminology and using videos, graphics, photos and other interactive, 'hands-on' and locally appropriate approaches can help to increase understanding and awareness of climate change and adaptation techniques.

Capacity building extends beyond awareness raising and knowledge building and aims to empower people by developing new competencies and skills. Capacity building should not just be one-off trainings but should be integrated throughout the project cycle, and should continue even after the project ends. These trainings and workshops should be adapted and customized based on the local context. Capacity building should not only focus on local communities but should also extend to other local actors and national stakeholders. This also helps to create linkages and strengthen relationships among all stakeholders and partners.

Increased knowledge and capacity helps to substantially improve community support, active participation, dialogue and sustainability of CBA projects.

Local culture and traditional knowledge

While poor, rural, natural resource-dependent communities often lack formal training and education, they usually have in-depth knowledge and understanding of their local environment, as they have relied on these territories to support their



livelihoods for generations. Indigenous Peoples and local communities are often keen observers of environmental changes and many have been adapting and adjusting to changes in their environment for decades. As such they possess detailed knowledge, memories and experiences in these areas that should be utilized in CCA work. For adaptation efforts to be effective traditional knowledge should complement and enhance scientific approaches to project design and policy implementation.

Local culture, traditional practices and customs, and local governance systems also play important roles in ensuring community cohesion, mobilization and adoption of new practices. When these traditional governance systems are integrated into CBA project design, implementation and monitoring, then community participation and ownership can increase, improving the success and sustainability of the initiatives. Climate change and adaptation should be framed in a way that takes traditional customs and practices into account.

Partners not beneficiaries

Too often, local communities and actors are viewed as passive recipients of grant and donor funding, and their unique skill sets, knowledge and expertise are often underestimated. Indigenous Peoples and local communities should be valued as leaders, critical-change agents and partners for transformational climate change adaptation. This necessitates a shift in thinking and perception by the international community, donor agencies, governments, the private sector and even civil society.

Recognizing community diversity and cultural sensitivities

Often local communities are perceived as uniform and cohesive: single groups with shared customs, traditions, ambitions, values and ethics. However



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communities are diverse and dynamic and there are often as many similarities as there are differences⁷. Wealth and resources, education, age, gender, ethnicity, among others can create unequal and often unfair distributions of power and rank within a community. Understanding these distinctions and taking the time to learn about them are key to successful locally relevant interventions.

Some traditional customs may even exclude women and young people from decision making and meetings. As such it is important that these differences and nuances are identified to ensure inclusive and participatory adaptation that is truly locally informed and led. This means ensuring that the most vulnerable, whose opinions many times do not count, are proactively brought into the management and decision-making process early on. Women, youth, persons with disabilities, the elderly, and other marginalized groups must have a strong voice and play an active role. Community diversity requires that strategies and activities are customized to ensure active engagement of all groups in a community. For example, in Papua New Guinea, traditional governance systems are still male-centred, so CBA projects held separate meetings with women and youth groups to ensure that their vulnerabilities, concerns and opinions were included in the design and implementation of projects.

Utilizing the VRA Methodology

The VRA methodology is a useful tool for enhancing community capacity, fostering local ownership, and capturing emerging lessons learnt during project implementation. The methodology has been highly effective in raising local awareness on climate change risks, identifying community needs and capturing local knowledge and ideas. It also facilitates adaptive management and adjustments during the project implementation cycle, ensuring that projects remain locally relevant. However, the methodology's reliability and consistency in terms of generating quantitative measurements requires improvement as the data collected is often qualitative and perception-based. Greater emphasis should be placed on training stakeholders, practitioners, and community members on the methodology to ensure consistency in data collection and improve its effectiveness. Scientific assessments should be used in combination with locally led VRAs to improve its use.

Time, patience, flexibility

Adaptation is process-driven and requires long-term engagement along a range of actions, including planning, implementation, monitoring, evaluation, and learning. Investments and tangible results are often not immediate; they require dedication and persistence by all stakeholders. CBA involves observation and continuous monitoring and evaluation to determine if strategies are working, and strategies may need to be adjusted based on learnings and on-going climate challenges. Therefore, project proposals, workplans, budget and timelines need to be practical and flexible and contingency measures should always be considered. A one- or two-year project may not be realistic or feasible for achieving desired community adaptation outcomes. The elements of risk, delays, and failure must always be carefully considered when designing CBA interventions, especially in countries that are fragile and disaster-prone.

Community engagement is crucial to CBA project success but takes time, and necessitates significant capacity building, training and understanding of local contexts. CBA may also require adjustments to longstanding behaviour and traditional or cultural practices. These types of transitions require respect for local culture and understanding that people may be hesitant to make changes. While this requires patience and flexibility, active community engagement is crucial to success since it ensures community ownership in the long-term.

Working with government agencies, national partners and other stakeholders can often be and time-consuming and is often a major challenge for civil society and community groups with limited capacity and experience. However, nurturing these relationships and partnerships is crucial to ensuring the sustainability of interventions and broader adoption of CBA practices.

Multi-stakeholder partnerships

Durable partnerships with government officials, the private sector, civil society, other UN agencies and international organizations, established at the outset and expanded throughout the projects, ensure that interventions will be sustained even after project activities are completed. There must be a clear logical plan to incorporate the benefits of the projects into the longer-term vision and activities of all partners, especially the government.

Mainstreaming CBA and influencing policy

CBA projects are unlikely to have systemic impacts unless they are linked to national adaptation efforts and take place in a positive enabling environment. CBA projects can be vital for informing effective national adaptation policies: community project successes, challenges and learnings can help to strengthen the approach and design of national projects. Thus, to be truly effective CBA projects need to be aligned to national policy, and national adaptation strategies must actively consider community-level needs and perspectives. Policy dialogues and advocacy should also begin from the early design stages of CBA projects.



The earlier technical experts, policymakers, and government agencies are brought into the project, the easier it will be to influence decision making and secure support for specific policy measures.

Landscape approach

CBA projects can also be planned and implemented using a landscape approach. This ensures greater connectivity and synergies among projects implemented in a particular geographic area with similar climate change challenges. In this way collective project results and benefits can be amplified to achieve a greater impact and can also facilitate better sharing of knowledge and learnings. This approach can also encourage greater support and engagement from key local and national stakeholders, donors and other partners.

Project monitoring

Project monitoring should continue even after the end of CBA projects to ensure that adaptation measures are being sustained. Often there are insufficient funds and capacity to do this after small-scale projects end, but this aspect of monitoring and evaluation can be taken up by local agencies, government partners and even academic institutions. This will also help to continue relationship building after project implementation.

Conclusion

Climate change continues to have compounding effects on all aspects of the economy and society and threatens the resilience of life-sustaining systems on our planet. Over the last decade there has been growing momentum for climate action at the international, regional, and national levels. While this is promising, much more is needed from the global community to address the current climate crisis and future impacts. The IPCC Special Report on the Impacts of Global Warming of 1.5°C⁸ emphasises that urgent and transformational adaptation action is needed now to reduce climate-related risks.

Communities and vulnerable groups are often very innovative and agile in developing solutions that are locally appropriate and relevant to their context and situation. For them adaptation is not an option but a necessity, to sustain their lives, livelihoods and well-being. However, there are insufficient opportunities and enabling environments for

communities to participate in effective decision making, and resources are rarely available to fund locally led adaptation solutions. The IIED⁹ estimates that less than 10 per cent of international committed climate funds finance is dedicated to local action, and less than 2.5 per cent of humanitarian aid goes to local actors.

Building the resilience of local communities to climate shocks and disasters is not only an ethical imperative but can also have positive impacts on the environment, the economy, and well-being, as well as reduce inequalities and contribute to the Sustainable Development Goals of Agenda 2030. Not only are climate resilient communities better able to cope with climate change impacts, but this improved resiliency is also applicable to other shocks and stressors, such as current and future pandemics, and economic and social crises. This enhanced resilience is particularly vital for vulnerable and marginalized communities.



It is essential that community-based adaptation is mainstreamed into overarching climate change adaptation strategies, programming and policies, and local actors must be given platforms to voice their opinions and share their experiences, traditional and cultural knowledge, solutions and learnings. The Global Commission on Adaptation¹⁰ has found that when decision making and finance are directed to local actors, adaptation actions are more successful and sustainable in the long term.

Locally led adaptation was a central theme at the Climate Adaptation Summit 2021 and eight principles¹¹ were developed to ensure that local communities are at the core of future climate change adaptation efforts. The principles aim to deliver a climate-resilient future that is guided by inclusive engagement and participation, equity and social justice. The impetus for community-based adaptation is increasing and more than 40 governments, leading institutions and agencies have already committed support to this renewed focus on locally led adaptation.

Since 2009 the GEF SGP's CBA programme has provided financial and technical support directly to local communities to build their adaptive capacity to the adverse impacts of climate change. Communities across 41 countries have been testing and piloting innovative techniques and approaches that address their specific needs and priorities. The project examples presented in this publication present convincing evidence that modest grant funding invested at the community level can yield significant positive results across several development priorities. Local communities and CSOs have also contributed significant co-financing (in-kind and cash) to these projects, which helps to promote ownership and sustain long-term impacts. The CBA programme has empowered local communities and actors to take action and has highlighted the importance locally led adaptation. Significant learnings and best practices have been generated by the programme and are being scaled up and replicated by governments, donors and various partners at the national, regional and international levels.





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One such initiative is the collaboration with the Adaptation Fund-EU-UNDP Innovation Small Grant Aggregator Platform (ISGAP), which provides grant funding between US\$ 120,000 to 250,000, and aims to support the development and diffusion of innovative adaptation practices, tools, and technology to enhance climate resilience in vulnerable countries. In this context, SGP has conducted a study to assess successful CBA projects for potential upscaling through the ISGAP and other platforms. ISGAP also focuses on knowledge dissemination and provision of technical and business development capacity building, incubation, and acceleration support to countries. The CBA programme's best practices and experiences will also be integrated into UNDP's related portfolio going forward.

Climate change adaptation is a cross-cutting theme across the SGP's current and future work and strategic programming, and the SGP will continue to invest resources and expertise into this crucial area of development. CCA has been mainstreamed into SGP's Operational Phase 7 Strategic Initiative on sustainable

agriculture, fisheries and food security. This Initiative aims to promote sustainable land and forest use, climate-smart agriculture and agro-ecology, coastal zone management and water resource management with an emphasis on resilient livelihoods, food and water security. The lessons learnt from the CBA programme will be integrated across SGP's portfolio of projects across the 127 countries that the SGP is currently active.

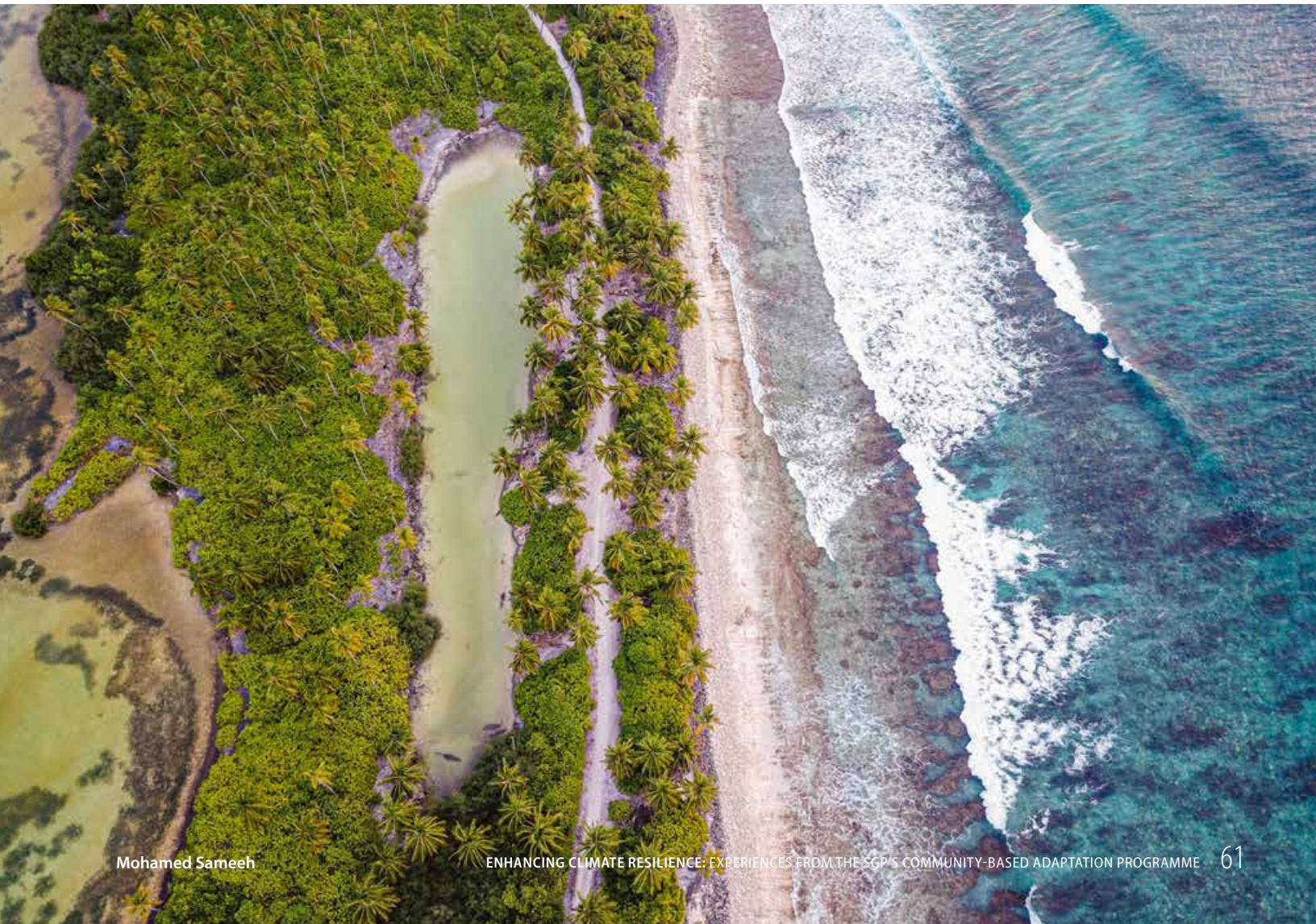
SGP will actively promote knowledge sharing and replication of CBA approaches and tools through the South-South Innovation Programme across SGP countries. Evidence of this is already taking place as illustrated by south-south exchanges between St. Lucia and Nauru on the CBA funded solar powered mobile desalination water security project. Belize has also shared knowledge and conducted trainings on sustainable seaweed farming and with communities in Mauritius and Colombia; and Cuba has been a centre of excellence on climate-smart agriculture-conducting exchanges with Jamaica, Belize and the Pacific.

SGP's CSO-Government-Private Sector Policy Dialogue Platform will continue to facilitate inclusive discussions and promote a space for climate change advocacy and raise support for climate action, CBA and locally led adaptation. These platforms have a strong focus on networking and partnership building, and will provide opportunities to discuss possible shifts in relevant policies and practices as well as encourage strong partnerships with the private sector and other national stakeholders to scale up and commercialize successful projects moving pilot innovations into the mainstream.

SGP will strengthen collaboration with the UNDP, GEF, the Australian Government and other donors and partners to mainstream CBA to other relevant programmes and projects, and will continue to contribute to the body of knowledge on CBA by documenting and sharing lessons learnt and best practices from SGP's global portfolio.

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