COMMUNITY-BASED ADAPTATION IN SMALL ISLAND DEVELOPING STATES, AND MEKONG-ASIA-PACIFIC REGIONS
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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COVER PHOTO
Traditional Asian fishing. Cambodian men on the fishing boat pass the catch of blue crabs to woman. Kep Province, Cambodia.

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In 2009, the GEF Small Grants Programme (SGP) entered a partnership with Australian Government Overseas Aid Program, now assimilated under the Australian Government’s Department of Foreign Affairs and Trade (DFAT). With US$ 12.4 million in funding from DFAT, the objective of this partnership is to improve the resilience of communities in 42 countries, including 37 small island developing states (SIDS).

The three-tier goals of the programme are:

• To reduce the vulnerability and improve the adaptive capacity of local communities to the adverse effects of climate change

• To provide countries with concrete ground-level experience with local climate change adaptation

• To provide clear policy lessons and mainstream CBA within national processes and up-scale practices across scale.
As climate change continues to be one of the existential threats to humanity, local communities are on the front lines of climate change risks due to their dependency on ecosystems services and climate-sensitive resources for their livelihoods. In Small Island developing states (SIDS), local communities that are already subjected to climate change impacts often experience acceleration and/or intensification of its impacts due to their small land area, susceptibility to natural disasters, geographical isolation, limited natural resources and sensitive ecosystems. These communities do not have the resources to combat climate change effects on their own and further degradation of natural resources and ecosystems will increase poverty, hunger and economic inequality.

To this end, the SIDS CBA projects invest in capacity development and awareness-raising interventions aimed at strengthening local communities’ resilience to climate change through sustainable nature-based solutions that optimize environmental, economic and social outcomes. These initiatives contribute to ecosystem and community abilities to bounce back after disaster, climate shocks and risks. Out of the 142 projects implemented, 70 projects have been completed and the achievements to date include:

- 159,773 community members with enhanced resilience to climate change
- 9,754 hectares restored and 4,162 hectares improved
- 134% increase in agricultural/fisheries production
- 266% average increase in weekly income ($84 to $307) of project beneficiaries.

The SIDS CBA Program’s approaches is aligned with the Sustainable Development Goals (SDGs) key objective of “Leave No One Behind”. Its participatory and social inclusion approaches ensure that all community members have a voice and a role irrespective of gender, age, physical/mental abilities, religion and culture; and the Free, Prior and Informed Consent (FPIC) process is applied when working with Indigenous Peoples.

The SIDS CBA multi-focal initiatives (see Figure 2) and cross-cutting approaches lends contribution to several SDGs including SDG 5 (Gender Equality), SDG 6 (Clean Water and Sanitation), and SDG 10 (Reduced Inequalities), SDG 13 (Climate Action), SDG 14 (Life below Water) and SDG 15 (Life on Land). Lastly, its impacts also contribute to SDG 1 (No Poverty), SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 4 (Quality Education), SDG 11 (Sustainable Cities and Communities) and SDG 17 (Partnership for Goals).

**FIGURE 2:**
Thematic focus of SIDS CBA projects implemented from 2009-2016
Successful adaptation not only depends on the realization of adaptation benefits but also on the effective utilization and management of knowledge. As such, knowledge products and tools are systematically produced to capture the sustainable best practices of innovative communities and are leveraged to promote (i.) replication of best practices by other local communities as well as national, regional and global level actors, and (ii.) policy influence. Some examples include:

- **Practitioners’ Guidebook to Establishing a Community-Based Adaptation Programme**
  Developed for local and national-level practitioners interested in community-based adaptation (CBA) to climate change, this guide presents the lessons and practices from the SGP’s CBA projects. It resembles a ‘cookbook’ for conducting the CBA processes in project development and implementation.

- **How to Strategically Plan and Mainstream Community-Based Adaptation at the Local and Sub/National Levels**
  This guidance note is targeted to SGP CBA practitioners such as National Coordinators (NCs), grantees and Programme Assistants (PAs) to effectively integrate CBA innovations into national processes and practices, while using the existing infrastructure and systems of SGP. It can also be used by other practitioners working at the local levels.

- **Jamaica Case Study** – Communities’ water harvesting adaptive practices contributes to local policies and national policy on rainwater harvesting.

- **Mauritius Case Study** – Women’s group receives GLISPA’s 2013 Island Bright Award for innovative solutions that advance conservation and sustainable development in its island communities.

- **Samoa Case Study** – Local communities had access to water amidst 3-month droughts that affected the whole island of Samoa in 2011.

- **Sri Lanka Case Study** - Land restoration and livestock farming increased livelihood sources of welfare-program dependent communities by +/-350%.
PARTICIPATING COUNTRIES

- CARIBBEAN REGION
- ATLANTIC/INDIAN OCEAN REGION
- MEKONG AND ASIA REGION
- PACIFIC REGION
PROJECT EXAMPLES

The following examples provide a snapshot of how SIDS CBA projects is able to examine, at close quarters, the interplay of human and environmental interactions, and resilience. The demonstration sites and multi-level stakeholder consultation meetings serve as a platform from where theories can be translated into action and provide an enabling environment for communities, CSOs, government authorities and international agencies to reinforce synergies and reduce overlaps, while ensuring that together, their different actions generate the positive impacts needed.
In central Sri Lanka, the Serupitiya village rely on vegetable farming for their livelihoods. Situated on steep slopes and much eroded lands with little access to potable and irrigation water, the villagers are extremely dependent on rainfall for agricultural yields. However, rainfall variability and unpredictability has diminished agricultural reliability. 98% of the village population are in debt from borrowing funds for cultivation purposes, with 60% relying on “Samurdhi” – the government welfare program which provides 3,000 Sri Lankan Rupees (US$ 22) a month for a family of four.

The villagers were trained in sustainable land management to restore their land and diversify their livelihoods options for year-round food/water security and income stability. The villagers rehabilitated a total of 437 acres of land and established over 200 home gardens. As a result, an average family income increased by 42% (from 3,000 LKR to 7,000 LKR). Livelihood options were further expanded by the newly-introduced milk farming which was strongly supported by the government’s local veterinarians and MILCO, the country’s biggest manufacturer of milk products. Earnings from milk sales (8,040 – 12,060 LKR per month) further supplemented the average family income by an additional 15%-72%. The increase from both livelihood sources was 300% to 435% to the baseline average family income of 3,000 LKR. Additionally, a savings-and-credit scheme now exists in the Serupitiya village.

GUINEA BISSAU

70% of the Guinea Bissau’s population are rural-based and are natural resources-dependent, with agriculture generating 56% of the GDP from rice, cashew and livestock. Land degradation from sea-level rise and saltwater intrusion have degraded many lands and the infrastructures that protect them. As such, a CBA project supported over 100 families of the Bor community to rehabilitate water drainage systems and river banks to prevent saltwater inundation in bolanhas or rice paddies. This 8-month project that started implementation in March 2016 resulted in restoring over 130 hectares of land and recovering 90% of the rice paddies, leading to a 50% increase in rice production and a 357% increase in the average annual income from US$2,233.53 to US$10,210.43.
In Cape Verde’s Santiago Island (home to 50% of Cape Verde’s population and most important agricultural center), the Longueira and Covoada communities are highly dependent on livestock and rain-fed small scale agricultural farming. Increased incidences of droughts and variable rainfall have led to unreliable water access from springs and severely eroded agricultural lands. Moreover, the high costs of micro-irrigation systems limit their potential to cope. As such, water insecurity, agricultural unreliability and health hazards pervaded the area.

The communities were able to farm even during droughts by installing micro-irrigation systems, constructing a 50 m³ water tank in Longueira, rehabilitating a community well in Covoada and using drought-tolerant species with high market value to restore their agricultural lands. Increased water availability and agricultural reliability have resulted to increases in average monthly incomes ranging from 258% to 1115%. While the male farmers’ monthly incomes increased from US$ 89 to US$ 319 (+258%), the average income of the women farmers soared from US$ 26 to US$ 315 (+1115%), including two women with no previous stable income and now earning approximately US$ 135 per month. Additionally, water conservation from using micro-irrigation systems lowered household water expenses by 85% from US$17/month to US$2.5/month and thus, increasing the disposable income of the community members.

**Women empowerment initiatives achieved more than gender parity, but also contributed to economic growth.**

Women’s average monthly income is now closely aligned (US$ 315) to their male counterparts (US$ 319).
The Matafa’a village relied on a water source located in a coastal hazard zone and contaminated by runoff from a nearby cattle pasture. Population growth and unsustainable land management practices such as the use of toxic chemicals in farming and fishing activities contributed to the deterioration of the ecosystems the village relied on. Furthermore, increasingly variable rainfall, floods and extreme droughts have resulted in water scarcity and poor water quality. With no regular supply of clean water, the village faced health problems, diseases (such as typhoid fever), dwindling river fauna, diminished productivity of agriculture and livestock, and degradation of land and soil. The elderly, women and children were most affected as they are responsible for gathering water for their families.

A cost-efficient and environmentally sound gravity-fed water system was installed in the mountain zone and pipes were adducted to people’s homes. Reforestation with native species have prevented soil erosion in the coast and in the watershed. As such, the springs emanating from the mountains feed into a small stream that has not been affected by prolonged drought periods. In September 2011, while the whole country experienced droughts and severe water shortage for three months due to El Niño, the Matafa’a village had water, attributed to the efforts of the project activities to ameliorate the environment and improve its conditions. Thus, the water system coming out of the watershed is deemed climate resilient since the river is flowing throughout the year. Today, all the houses from the village have access to clean water. Additionally, since this is a community-managed water scheme, the Matafa’a community members do not pay water bills to the government unlike their neighbouring villages. The village also set up a monthly ‘user fee’ of W$10 per household to cover maintenance costs. A penalty of $100 will be paid to the village council for any unreported leaking pipe/s in any community member’s house. The Independent Water Scheme Association (IWSA) remains to be a partner and responsible for maintenance, installation of new water filters to address any bacterial issues and maintain the water quality in the village homes.

After the project, children have more time for school — searching for water and carrying it back to their homes over long distances is now seen as a hardship of the past.

The new water source in Matafa’a village.

Old water source in the Matafa’a village located in a coastal hazard zone.
As patterns of temperature, precipitation and weather events change, the delicate balance of climate and life is disrupted. In various communes throughout Cambodia, droughts, saltwater intrusion, floods, increasing temperatures and variable rainfall threaten the agriculture and fisheries that many local communities rely on for their livelihoods. As such, over 33,000 local community members from the Sna Ansar Commune, Sangkat Banteay Dei, Chantrea district, Ream commune and Baklang Commune tackled the situation by (i.) developing new water schemes to provide irrigation water for rice paddies and agricultural crops amidst droughts, (ii.) rehabilitating water dams to increase the effectiveness of lakes, water channels and tributaries and enable a sustainable environment for fish breeding, (iii.) reforesting coastal zones and agricultural lands to buffer saltwater and address soil erosion, (iv.) establishing Self Help Groups (SHG) tasked with seed bank and home garden management as well as the development of small-scale business. As a result, 4,870 hectares of land were restored to its original state and the state of another 2,762 hectares were improved, which in turn, increased agricultural and fisheries reliability. As such, over 16% of the community members had a 38% increase in their average monthly income from US$741 to US$1022. Additionally, 59% of the community members have access to clean potable water and basic sanitation as a result of the restored community ponds and efficient water-use trainings. Lastly, of the 14,798 children in these projects, approximately 90% of the children (i.e. 13,303) are now going to school as a result of better livelihoods of their families and the free boat transportation to/from school provided by the projects. Before the projects, only about 60% (i.e. 8,879) of the children were attending school.

CONCLUSION

These project examples from a few participating countries indicate the different typologies of initiatives and measures that communities can undertake to increase their resilience to climate shocks. The CBA projects have provided impetus and models for going to scale, enabling SGP to implement projects that are regional and global in nature. Lessons learned from working with regional and global grants have demonstrated that larger impacts can indeed be stimulated by small projects. Further investments on SGP’s work on policy dialogues, peer-to-peer replications, linking up with national level programs supported by governments and donors can also provide opportunities to amplify these innovative, small scale projects to have larger impacts.