

CLIMATE CHANGE ADAPTATION BULLETIN

A Quarterly Update of Activities



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This bulletin is produced by the Environmental Finance Services (EFS) Unit of UNDP's Environment and Energy Group. It provides an overview of EFS' support to countries to affect policy and institutional change for climate change adaptation at the national, sub-national and community levels. It includes updates on a range of topics including the status of on-going projects, new project approvals, performance indicators, project impacts and results, and noteworthy announcements.

To contribute to future editions of the newsletter, please write to adaptation@undp.org

AusAID Supports Adaptation Through Fast Start Financing



Australian Government
AusAID

On 8 September 2011, Ms. Julia Gillard, Prime Minister of Australia, announced Australia's contribution of Aus\$ 7.35 million to the

UNDP-GEF/SCCF-financed initiative **Pacific Adaptation to Climate Change (PACC)**. Thirteen Pacific Island States participate in the PACC project, implemented by the Secretariat of the Pacific Regional Environment Programme (SPREP).

The contribution is part of Australia's International Climate Change Adaptation Initiative. The media release is available [here](#).

For recent updates on the PACC initiative, please see page 8.

UNDP Launches National Climate Funds Guidebook



On 14 September 2011, UNDP officially launched the publication, **Blending Climate Finance Through National Climate Funds: A Guidebook for the Design and Establishment of National Funds to Achieve Climate Change Priorities**.

The Guidebook aims to assist national/sub-national decision-makers, and domestic/international experts working with governments with understanding the key elements of design-

ing an effective National Climate Fund (NCF) based on existing strategies and networks.

This publication is part of a series of guidebooks and toolkits designed to assist countries to prepare and implement green, low-emission and climate-resilient development strategies (Green LECRDS). For more information, please see the [UNDP press release](#).

UNDP's Work in Communities, Livelihoods and Markets

We are pleased to feature in this issue of the Adaptation Bulletin how UNDP's Environment and Energy Group supports community livelihood transition and community-based adaptation across various technical areas of work (e.g. Water, Ecosystems and Biodiversity, Energy, Infrastructure, Transport & Technology, Ozone and Chemicals) as an integral part of UNDP's low-emission and climate-resilient strategy.

Please see pages 2 through 7 for an overview of UNDP's work in this area plus stories from on-the-ground projects and programmes.

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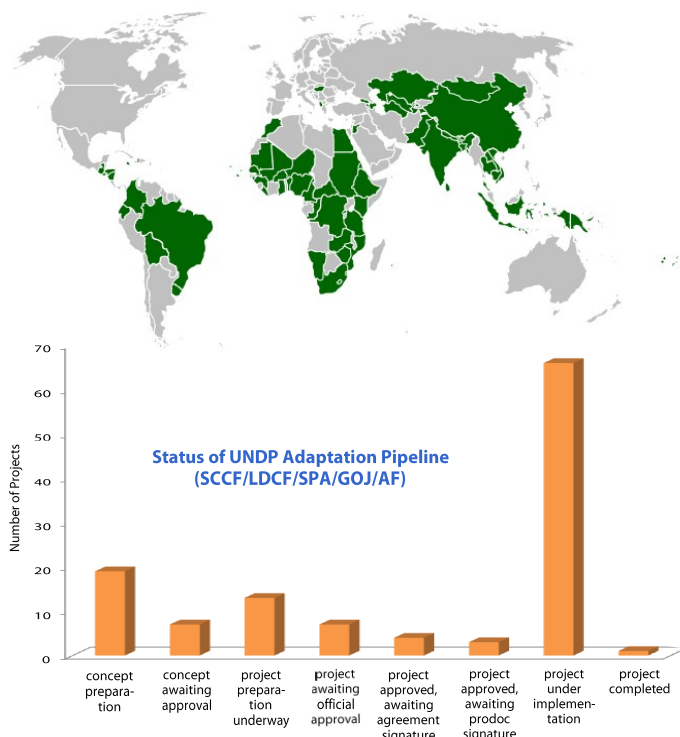
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Quick Glance at UNDP's Adaptation Portfolio (October'11)



UNDP's Work in Communities, Livelihoods and Markets

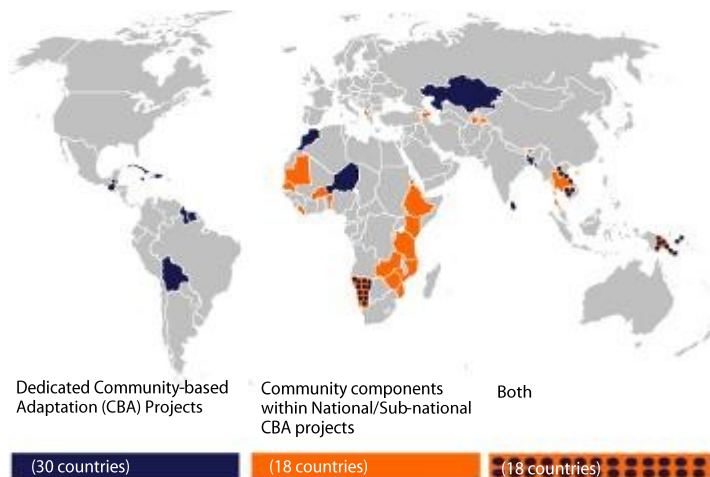
Contributed by: Fumiko Fukuoka, UNDP HQ, fumiko.fukuoka@undp.org

The world's poorest communities are likely to be the most severely affected by the impacts of climate change, and the degradation of grassland, forest, wetland and agricultural ecosystems. At the same time, communities are traditionally chief users and guardians of local natural resources and primary agents in the creation of climate-resilient societies and landscapes. UNDP works with communities to help them maximize their potential as change agents and preserve their livelihoods, which are threatened by these impacts.

Through various initiatives, and in alliance with many partners, UNDP's Communities, Livelihoods and Markets Team provides support for the development of inclusive and sustainable low-emission and climate-resilient (LECR) community livelihoods, and also works with communities, the private sector, governments, NGOs and other stakeholders to create community-access to financing opportunities which assist the transition to inclusive and resilient societies. Support to community-based adaptation (CBA) is a priority, along with climate related disaster risk management and emergency relief. (Additional information on the Communities Team is available at <http://www.undp.org/localdevelopment/>).

With its Regional Service Centres and a network of over 160 Country Offices, UNDP is well positioned to invest directly in communities while working with governments, the private sector, and other development partners to link them with the policy development process. Efforts are made to ensure that communication flows both ways between communities and national/sub-national governments and empower communities to participate in policy dialogue. To attain these goals as UNDP, the Communities Team works closely with other technical units, Country Offices and other UN Agencies, providing tools, methodologies and expertise that are unique to work with communities.

UNDP's support to CBA is two-fold: specific community-focused programmes and projects and community-focused components as integral parts of larger national/sub-national level initiatives (as indicated in the map). The following stories - from Bangladesh, Tanzania, Cape Verde, Jamaica, Kazakhstan, Namibia, Mekong and the Small Island



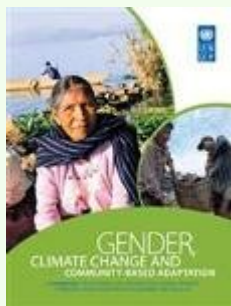
Map of UNDP-supported CBA projects and national/sub-national projects with community components

Developing States (SIDS) in the Pacific, the Caribbean and Africa - feature initiatives with CBA components with financing from the GEF, AusAID, Adaptation Fund, LDCF, SCCF, Government of Japan, Government of Switzerland, and United Nations Volunteers (UNV). These examples include stories on the pivotal role played by the Global Environment Facility Small Grants Programme (SGP) as a delivery mechanism channeling funds directly to communities. The examples also highlight the roles of UNDP Country Offices and their local NGO partners in engaging and empowering communities to participate in local planning and policy dialogue in broader development projects.

While pooling, codifying and disseminating knowledge from these pioneering experiences in CBA, UNDP continues to seek partners and allies to invest in finding innovative solutions at the community level to help them transition to inclusive and resilient societies.

For additional information on UNDP's work in this field, please contact Fumiko Fukuoka, Communities Team Leader, fumiko.fukuoka@undp.org and Nick Remple, Global Technical Adviser - Communities, nick.remple@undp.org

Gender, Climate Change and Community-Based Adaptation (CBA): A Guidebook for Designing and Implementing CBA Programmes and Projects



As part of the CBA Pilot Project funded by GEF-SPA, a Guidebook was published for designing and implementing gender-sensitive CBA programmes and projects. The Guidebook seeks to ensure that forthcoming CBA projects contribute to the achievement of gender equality and women's empowerment by integrating a gendered perspective into CBA programming and project design.

The Guidebook provides simple tools and practical advice on how to take a gender-sensitive approach to planning and implementing adaptation projects and programmes. It will be a useful reference for development practitioners and/or policymakers working in this field.

The Guidebook has been distributed through UNDP Country Offices and international conferences. A copy can be downloaded [here](#).

UNDP-UNV Publish CBA 'How-To' Inclusivity Guidance Report



Without full inclusion and participation of local communities, Community-based adaptation (CBA) would not be possible. Communities are partners, not mere recipients of development aid. CBA projects must reach and include women, youth, elderly, religious and ethnic minorities, persons with disabilities or living with HIV, and any other discriminated groups, because these groups

are disproportionately vulnerable to climate change, but also because they are valuable contributors and act as a primary resource to find pertinent, just and sustainable solutions. They help to reduce and to improve the adaptive capacity of the whole community.

The CBA Pilot project has recently published How-To guidance document which helps communities ensure inclusivity in their community-based adaptation initiatives. A copy is available for download [here](#).

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Reducing Vulnerability of Marginalized Communities to Climate Risks Through Coastal Afforestation (Bangladesh)

Contributed by: Gernot Laganda, UNDP Asia Pacific Regional Centre, gernot.laganda@undp.org



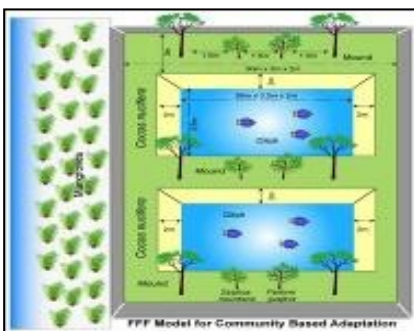
Community Members
Photo: Felicity Woodhams/UNDP

In Bangladesh, many communities are situated close to the shoreline and reliant on subsistence agriculture and fishing for their livelihoods. Rising sea levels and changes in the frequency and intensity of tropical cyclones are raising the severity of flooding, salt water intrusions and erosion. Extreme weather events continue to cause catastrophic losses of lives and livelihoods, overwhelming people's coping abilities in a changing climate.

The UNDP-supported initiative, **Community-based Adaptation to Climate Change through Coastal Afforestation**, which is financed by the LDCF, reduces the vulnerability of marginalized communities in 4 coastal districts (Patuakhali, Bhola, Noakhali, and Chittagong) to climate-induced risks. The project shows how 'business as usual' afforestation activities by the Bangladesh Forest Department can be reoriented to:

- incorporate a climate-resilient mix of mangrove and non-mangrove varieties;
- adopt new planting patterns and techniques to enhance the protective and economic functions of new greenbelts; and
- intertwine livelihood diversification and support actions with new greenbelt plantations to create incentives for communities to maintain their long-term integrity and protective utility.

The initiative is working with local communities to trial innovative coastal plantation arrangements, using a diversified combination of mangrove species, fruit trees, production timber species and vegetables, to increase livelihood resilience. One trial plantation arrangement is called the **Fish, Forest and Fruit (FFF) Model**, which uses a combination of protective



Fish, Forest and Fruit (FFF) Model

and productive vegetation, mound and ditch land structures and water ponds to provide multiple livelihood benefits to communities. The integration between protective and economic services is providing incentives for local communities to manage these natural resources in a joined-up and sustainable way, reducing new human encroachment on sensitive greenbelt structures.

Over the past 2 years, the project has established new mangrove plots on 3,115 ha of coastal lands and covered 322 km of the coastline with strip plantations. Innovative community-based adaptation models were demonstrated on 55 ha of exposed coastal lands, and 10,461 households were engaged in climate risk reduction and train-

ing measures. 153 district officials and 233 upazila officials have been trained on strategies to reduce climate change risks through locally appropriate, community-based adaptation measures. By the end of the project, 14,350 households in 4 vulnerable districts will be able to draw on the FFF model and complementary adaptation measures (such as improved varieties of agricultural crops and livestock) to manage and protect their natural capital in a changing climate.

For further details please visit:

- the YouTube video, *Empowering People, Renewing the Land: Tackling Climate Change Through Afforestation*, produced by UNDP Bangladesh;
- the video *Himalayan Meltdown – Bangladesh* which has aired on the Discovery Channel
- the *Adaptation Learning Mechanism (ALM) page* dedicated to this initiative.

Mainstreaming CBA Into Integrated Water Resource Management in Pangani River Basin (Tanzania)

Contributed by: Akiko Yamamoto, UNDP East and Southern Africa Regional Centre, akiko.yamamoto@undp.org

This UNDP-supported, GEF/SCCF-financed initiative was one of the first field-based climate change adaptation projects with strong links to basin and national planning and policy. Implemented by the government entity, Pangani Basin Water Board (PBWB), an innovative partnership arrangement was established to facilitate formal technical assistance from the International Union for Conservation of Nature (IUCN), the Netherlands Development Organization (SNV) and the local NGO PAMOJA TRUST. As community partnership is an integral part of this initiative, the project involved local communities in a vulnerability assessment exercise at selected locations, in identifying adaptation measures and subsequently in implementing actions on the ground.

The Water Users Associations (WUA) in the Pangani Basin have played a key role to ensure the voice of communities are heard by policy makers and water resources planners of the basin. The WUA constitutes membership from indigenous communities from various river committees within the catchment. The WUA provides a forum for adaptation activities to be discussed among community members and communicated to the PBWB, which is in charge of water allocation in the basin. The PBWB also receives support from the WUA communities with conflict mediation, monitoring of law violations, and conservation of resources. During the WUA establishment process, the project worked with indigenous communities to study and analyze gaps in their traditional arrangements for water resource management with the aim of developing a more sustainable and resilient system. The project also assisted PBWB to establish 4 WUAs in the basin.

Please also see the following publications for more information on this initiative:

- *Climate Change Adaptation in the Pangani River Basin* - explains how communities were involved in both vulnerability assessment and the selection of adaptation activities
- *Community Participation in Water Resource Management* - about the establishment of the WUA.

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Vulnerability Reduction Assessment - VRA: A Participatory Process for Assessing Vulnerability to Climate Change (Cape Verde)

Contributed by: Oliver Puginier, UNDP Cape Verde, oliver.puginier@undp.org



VRA meeting in Santo Antão
Photo: UNDP/Cape Verde

In June 2011, a Vulnerability Reduction Assessment (VRA) exercise took place under the UNDP-supported, GEF/LDCF-financed project, **Building adaptive capacity and resilience to climate change in the water sector** in Cape Verde. The VRA is a participatory process used in planning for community-based adaptation activities. Project technicians used this approach to measure

perceptions of the population in the intervention areas of the project – on Santo Antão island in the towns of Ribeira da Cruz, and Garça Planalto Leste, and the Island of Santiago Ribeira Seca and Tarrafal.

Communities living in the project intervention areas were asked about:

- the vulnerability of their livelihoods and well-being from climate change or deal with existing climate variability;
- their vulnerability to climate risks in development;
- the extent of barriers to adaptation to climate change;
- confidence in the continuation of activities beyond the project period and to ensure the adaptation process.

Local issues were also discussed at the VRA meetings using a participatory process. The meetings were facilitated by project experts and members of community associations. The association leaders and female heads of households spoke and addressed issues such as drought and the burden that falls on mothers and their children when they spend up to half a day just to look for 20 to 30 liters of water for the household.

At the end of the VRA meetings participants filled out questionnaires and gave quantitative scores for each question. Qualitative information was also recorded.

The results of the questionnaires reflected the participants' initial perceptions and concerns about their vulnerability to climate change. These perceptions will be taken as a reference indicator of the vulnerability assessment at the initial stages of the project. At the project's halfway point, VRA meetings will be conducted again with participants of the same intervention sites to measure the evolution of their vulnerability and, if necessary, redirect some project activities. At the end of the 4-year project cycle, the results will be used to measure the variation between initial perceptions and those at the project's completion.

Community-Based Adaptation Pilot Project

Contributed by: Anna Lisa Jose, UNDP-GEF/CBA, annalisa.jose@undpaffiliates.org

The Community-Based Adaptation (CBA) pilot project is a five-year UNDP-supported global initiative funded by the Global Environmental Facility's (GEF) Strategic Priority on Adaptation, using the

Small Grants Programme (SGP) delivery mechanism. The goal of the CBA project is to strengthen the resiliency of communities in addressing climate change impacts. UNDP partners with the United Nations Volunteers (UNV) programme to enhance community mobilization, recognize volunteers' contributions and ensure inclusive participation around the project, as well as to facilitate capacity building of partner non-governmental organizations (NGOs) and community-based organizations (CBOs). Other partners include the Governments of Australia, Japan, and Switzerland, who provide financing that is delivered directly to communities.

Additional information can be found on the CBA pilot project website: www.undp-adaptation.org/project/cba, or by contacting Nick Remple, nick.remple@undp.org, Charles Nyandiga, charles.nyandiga@undp.org or Anna Lisa Jose, annalisa.jose@undpaffiliates.org.

The following stories showcase the impacts and results of the CBA Pilot Project in three of the participating countries—Jamaica, Kazakhstan, and Namibia.

CBA Pilot Project - Jamaica: Reducing erosion and landslide risk through sustainable agriculture



Deforested slopes in a coffee-growing region in Jamaica's Blue Mountains. Hills in these areas are particularly prone to erosion and landslides due to intense rainfall events and hurricanes. Photo: JCDT for UNDP/CBA

Climate change predictions for Jamaica include higher intensity rainfall, longer droughts and increased temperatures. These changes are likely to result in an increase in soil erosion, particularly on steep mountain slopes, which can lead to devastating landslides. In addition, unsustainable land management practices have contributed to the degradation of the ecosystem, altering its traditionally cool and moist microclimate. As temperatures increase, farmers are forced to grow crops at higher altitudes where conditions are more favourable. Because agricultural encroachment is already a pressure on the bordering National Park, further infringement has the potential to cause increased deforestation to the internationally significant area.

Located in the communities of Woodford and Cascade, this UNDP-supported CBA project, **Reducing erosion and landslide risk through sustainable agriculture**, was implemented by the Jamaica Conservation and Development Trust (JCDT). At the start of the project, Woodford and Cascade, both of which are located in close proximity to the Blue and John Crow Mountains National Park, had populations of approximately 1800 and 800 people, respectively. Both communities rely on cash crops - primarily bananas and Blue Mountain coffee - for income. Prior to the CBA initiative, many residents practiced unsustainable slash-and-burn agriculture as a way to clear and fertilize the steep mountain slopes where they farm. Over time, this practice reduced soil quality and caused land degradation that lowered agricultural productivity and jeopardized the safety of the communities.

Building on pre-existing activities of JCDT, this CBA project promoted sustainable agricultural practices using cost-effective soil conservation techniques. In addition, the project introduced alternative livelihood practices, including high-value organic farming and the implementation of greenhouse technology, which requires less land to yield up to three times the crop produced by outdoor farming. Also, according to anecdotal evidence and site-visit reports, this protective

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Community members participate in the construction of a greenhouse to be used for organic farming. Photo: JCDT for UNDP CBA

agriculture technique significantly improves crop quality and minimizes the impacts of decreased rainfall due to the fact that crops are grown in a controlled environment. The project also reduced soil erosion and landslides by reforesting degraded steep slopes. By reducing erosion and introducing ways to maximize profitability of existing croplands, fewer farmers extended cultivation

into protected areas. By raising awareness of the risks associated with climate change, the project increased the resiliency of the communities to climate change and developed sustainable agro-ecosystem management systems.

Partnership was essential to the upscaling of CBA in Woodford and Cascade. JCDT collaborated with two state agencies to implement the project. The Rural Agricultural Development Authority (RADA) provided technical expertise in greenhouse construction, contouring, and other land use management practices. The Forestry Department, under the Ministry of Agriculture, provided co-financing through the provision of trees for planting. In addition to working with local communities, JCDT also sits on the Sustainable Land Management (SLM) Committee, which is currently working on a draft for Jamaica's SLM policy. JCDT made contributions to this draft based on the experiences in the CBA project, and is influencing strategies and outputs with respect to sustainable agricultural practices on the steep mountain slopes located on the eastern end of the country.

As a result of this CBA project, the livelihoods of 35 farmers and their families are now more secure. They have gained new skills (e.g. the use of greenhouse technology, organic farming techniques, and terracing) that lay the foundation for CBA activities to be replicated in other communities dealing with similar risks associated with climate change.

All participants (men, women, and one individual with a disability) were trained in soil conservation techniques and successfully integrated them into their own agricultural fields. To date, 10 hectares of land have been restored and another 40 hectares are sustainably managed. Community members are now more aware of alternative means of farming and pest control. By using new agricultural methods on existing croplands, farmers increased profitability, improved crop turnover and diversified their crops, thereby reducing the need to create new agricultural plots up slope.

Communities also benefited through the construction of two greenhouses which were built using proceeds from greenhouse crops. This protective agriculture technology increased income generated in the communities and provided a steady flow of crops for the market, thereby improving food security in the area. The project generated an income of approximately J\$ 45,000 (US\$ 530), benefiting the 35 families directly and, as a result of the knowledge shared, it has further impacted approximately 250 people. This figure is expected to increase as farmers benefit from farmer-to-farmer knowledge, become better acquainted with the technology, and make necessary adjustments to achieve full efficiency.

Furthermore, in an effort to help mitigate soil erosion and landslide threats, the project used co-financing to plant approximately 4,500 indigenous fruit trees on degraded slopes, approximately 1,000 of which were contributed by CBA. In addition to reducing the risk of

landslides, the trees have provided an additional source of income for local farmers—generating approximately J\$ 45,000 (US\$ 530).

For additional information on this Jamaica CBA project, please contact: Hyacinth Douglas, hyacinth_d@unops.org or Michelle Curling-Ludford, michelle.curling-ludford@undp.org.

CBA Pilot Project - Kazakhstan: Adaptation of farmers' agricultural practices in response to intensified climate aridity in Akmola Oblast



Before and After the CBA project Photo: Katerina Yushenko/UNDP CBA

In Northern Kazakhstan, a UNDP/GEF-SPA financed CBA project is located in the Arnasay settlement, which is 50 kilometers away from the country's capital, Astana. The project site is the nation's agricultural center. Its steppe ecosystem is frail and subject to harsh weather conditions. The area is threatened by increased summer evaporation and drying winds that weaken already fragile soils and diminish water resources. Winter snows are melting faster, posing an additional risk when accompanied by strong winds that dry out soils and cause erosion. It will become increasingly difficult for farmers to preserve winter moisture for agricultural use and they will be less able to rely on the nearby Astana Reservoir, as its reserves are shrinking. The combination of greater precipitation with warmer winters, earlier snow melting, and spring night-frosts will impact traditional farming practices and calendars.

The CBA project was developed through a participatory process carried out by Akbota Public Foundation, a local NGO. It is being implemented within the local community to help residents improve the sustainability of their livelihoods.

The Arnasay village, consisting of 2100 participants or 220 households, have directly benefited from the adaptive practices introduced in this CBA initiative. The total irrigated area is now approximately 7000 hectares due to effective water management. Demonstration plots of 12 local members are now equipped with the drip irrigation system as result of the project, and 24 local community members' households have used the drip irrigation system. Yields have doubled with the drip irrigation system, while water consumption has decreased twice. This system can be easily installed and be easily collected from water filters, fittings, and drip tapes. Drip irrigation system allows for maximum results and the most efficient use of available water for irrigation with a minimal cost. For major agricultural producers, the transition to a ground-level irrigation from the soil surface irrigation have led to saving water consumption as well as switch to high-quality watering at a lesser costs. By converting sprinkler height from -2.5 to -3.7m from the soil surface, evaporation of water has decreased by 30% and has protected the sprinkler water jets from being demolished by strong winds.

Additionally, winter wheat growing in the area is now about 5000 hectares, and cereal crop for wheat production, using the technology of winter crop cultivation, has increased by 15%. All these environ-

(Continued from page 5)



Drip irrigation, installed in local communities' backyards have led to increased yields.

mental benefits have increased the producers' incomes by 30% as compared to their income level in 2008, before the CBA project. With the adaptive practices in effective irrigation and land management learned from the project, irrigated lands and crop production have both increased. These have led to the local communities' resiliency to climate change as well as to increased security in their livelihoods.

For the sustainability of the project, new adaptive farming systems and associated benefits are shared with other local community members. The benefits include saving money through cost reduction on irrigation water and electricity, reducing physical labor due to automation of irrigation, and increased yields and profits from sale of crops. Through demonstration plots, communities in Arnasay will be able to share knowledge on the effective water saving technology and experiences gained. In addition, powerful economic incentives to continue to use the new adaptive approaches to agriculture will be developed. In this regard, a collective transition to drip irrigation in the villages of the district was included in state budgets starting this year.

The SGP National Coordinator in Kazakhstan oversees the day-to-day management of project activities. In addition, the SGP National Coordinator has actively pursued national policy influence in Kazakhstan through round-table meetings with government officials and other experts via demonstrations of the CBA projects. Exchange visits and lessons learned have also been shared with other Central Asian countries. Funding from the Government of Switzerland has contributed to capacity building and knowledge product development in Kazakhstan, and has allowed policy influence activities in both Kazakhstan and Central Asia.

For additional information on this Kazakhstan CBA project, please contact Katerina Yushenko, katerina.yushenko@undp.org

CBA Pilot Project - Namibia: Approaching community adaptation to climate change holistically by using multiple coping strategies

In Namibia, the CBA project is implemented by a local non-governmental organization called Creative Entrepreneurs Solutions (CES).

The CBA project supports the communities living in the Omusati, Ohangwena, Oshikoto, Oshana and Kavango regions of northern Namibia. A majority of the community members are subsistence farmers who depend on rainfed crops and livestock rearing both for subsistence and income. Climate change poses significant challenges to the poor and marginalized communities of these areas as it negatively affects food and water security, which in turn, jeopardizes livelihoods and other obvious knock on effects.



Siya Group Chairperson, Teodora, with the pearl millet harvest.
Photo: Marie Johansson/CES for UNDP CBA

This project advances local climate change coping strategies that are inter-linked to create a holistic approach to community-based adaptation. Strategies include: awareness-building interventions on climate change; coping strategies and nutritional needs; social mobilization of community members into Self Help Groups (SHG), which allow members to take charge of their own development; savings and lending; and ensuring water and food security through flood and



Setting up a micro drip irrigation system at the Onamulunga Combined School. Vegetable seed is planted in 40 litres poly bags allowing the user to control a local soil/ compost/manure mixture in the bags and thus controlling soil fertility and soil quality.
Photo: Andreas Tweendeni/CES for UNDP CBA

rain harvesting for agricultural irrigation, livestock, and fish farming. In addition, dryland crop production is improved through composting, bio, char, crop rotation and conservation agriculture. Increased usage of improved drought resistant pearl millet varieties (the national staple food called "Mahangu") rice, mushroom, and sweet stem are used for human nutrition as well as fodder security to boost availability of protein nutrition and incomes. Lastly, the use of energy efficient stoves and agroforestry combined with general reforestation techniques help sustain food security and income generation with no adverse impacts to the land and other natural resources.

This CBA project is delivered thru the UNDP Small Grants Programme (SGP) allowing for a fast, flexible and proven mechanism to reach communities and civil society at the local level and using its National Steering Committees for decisions on grant making, as well as the infrastructure and technical expertise of its National Coordinators. In addition, UNV partners with UNDP to enhance community mobilization, recognize volunteers' contribution and ensure inclusive participation around the project, as well as to facilitate capacity building of partner NGOs and community-based organizations (CBO).

Women and young people are among the community members who have volunteered their time, labor, materials, and knowledge during project implementation. The sustainability of the project is ensured through training and awareness-raising programs that increase residents' skills and knowledge in sustainable water harvesting, food and fodder security, agro-forestry and reforestation techniques, nutrition and entrepreneurship. The UNV assigned to this CBA project maintains high motivation levels within the community.

Among the CBA-funded communities is the Siya group based in Kavango. Food security in Kavango is next to zero after September, when households have consumed the small crop yields. The CBA project introduced a distinct method of conservation agriculture, the CONTILL, to the region. Along with multifocal areas on adaptation, including water harvesting, crop rotation, improved soil nutrition, and use of energy efficient stoves, the project is already yielding results. In June 2010, the first harvest for pearl millet increased from an average of 70kg per hectare to 570kg. In addition, the Siya group generated cash incomes from their maize harvest, and is planning to sell cooking oil they extract from the sunflower harvest.

Furthermore, as all CBA projects engage community members, the 9th and 10th grade pupils, of the Onamulunga Combined School are learning about conservation agriculture for dry land crops, soil improvement techniques and micro drip irrigation of vegetables, as well as climate change and its impacts. The CBA project is assisting the school to reach the intended objectives of teaching life science,

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adaptation and agriculture.

The Government of Japan is a co-financing partner for this CBA project, as well as to other CBA projects in Namibia and Niger. The activities supported by these funds include soil conservation, water harvesting, and development of the country-level CBA portfolio, including capacity-building for prospective NGOs. It is foreseen that these activities will contribute to the gathering and leveraging of lessons for effective policy impact at national levels. Other partners include Green Life Trust, Ministry of Agriculture, Water, and Forestry, Agro-economic Board, Royal Institute of Technology (Sweden).

His Excellency Hifikepunye Pohamba, President of the Republic of Namibia, has advocated this CBA project to the National Assembly. Upon his visits to the project sites, President Pohamba praised the project's local participants for their efforts in heading one of the most promising agriculture/adaptation projects in the country.

For additional information on this Namibia CBA project, please contact Nickey Gasseb, nickeyg@unops.org

AusAID Teams Up with UNDP to Support CBA in Mekong Countries and Global Small Island Developing States

Contributed by: Terence Hay-Edie, terence.hay-edie@undp.org and Charles Nyandiga, charles.nyandiga@undp.org



Australian Government
AusAID

The AusAID-UNDP partnership started with support to the 5-year **Mekong Asia Pacific Community-Based Adaptation (MAP CBA) Programme**. The six million Australian dollar MAP CBA, delivered through the "fast-and friendly" UNDP-implemented SGP mechanism, was kicked off in 2009 to assist 20 countries, namely, Cambodia, Laos, Sri Lanka, and Vietnam; and in the Pacific: Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor Leste, Tokelau, Tonga, Tuvalu, and Vanuatu. MAP CBA has placed special priority on the needs of highly vulnerable groups, including women, children and the disabled, within the wider International Climate Change Adaptation Initiative (ICCAI) funded by the Government of Australia.

The project assists with community-based actions that seek to reduce the vulnerability of poor and marginalized local populations to the adverse effects of climate change; increase the resiliency of communities to cope with and integrate changing climatic conditions into their local development scenarios; as well as develop concrete ground-level experience in climate change adaptation for dissemination between participating countries in the Asia Pacific region. Lessons learned from these community-led projects will be leveraged to promote the horizontal replication of successful community practices, and also integrated into national and sub-national policies that reduce vulnerability to climate change impacts.

Each of the participating MAP CBA countries has prepared a Country Programme Strategy (CPS), a comprehensive document that outlines the country profile, baseline impacts assessments, key adaptation focus areas, and strategies to address the particular niche for community-based actions. The development of a nationally-owned CPS



Workshop participants discussing sea-level rise in Samoa
Photo: Terence Hay-Edie, UNDP-GEF/SGP

is a valuable planning process that increases local understanding to climate change and builds capacity to support community-based adaptation.

Currently there are approximately 53 MAP CBA project proposals under implementation or in the pipeline. Common project themes include: developing saline-resistant agriculture and ecosystems, combating coastal soil erosion, improving food security, and securing water resources. In Cambodia, for example, a project titled, "Improved Water Resource Access and Management for Better Farming in Drought Prone Communities" focuses on irrigation systems to improve local water resource management. With seven MAP CBA projects on the ground, Cambodia is able to assist households in increasing their agricultural productivity, finding alternative livelihoods, and improving living conditions for as many as 47,000 households.

In 2011, considering the urgent needs for CBA in island nations globally, AusAID expanded its partnership with UNDP to build on the MAP-CBA and support the **Small Island Developing States Community-Based Adaptation (SIDS CBA)**. This five-year (2011-2016) initiative with a grant of six million Australian dollars aims to enhance the resiliency of communities to address climate change impacts and to conserve natural resources and ecosystems on which communities are dependent. There are 51 small island developing states that, in spite of their geographical and cultural diversity, share similar economic and sustainable development challenges including low availability of resources, small but rapidly growing populations, geographical remoteness, susceptibility to natural disasters, excessive dependence on international trade, high transportation and communication costs, and costly public administration and infrastructure. Of these 51 countries, SIDS CBA will target 38 countries from the Caribbean, Pacific, Indian, and Atlantic Ocean regions. They are:

- **Caribbean** - Antigua & Barbuda, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, Trinidad and Tobago;
- **Pacific** - Cook Islands, Fiji, Federated States of Micronesia, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu;
- **Other SIDS in Atlantic and Indian Oceans** - Cape Verde, Comoros, Guinea Bissau, Maldives, Mauritius, Sao Tome & Principe, Seychelles, Timor-Leste

The SIDS CBA, also delivered through UNDP-implemented-SGP mechanism, will build on local knowledge and methodologies developed by previous CBA projects across the globe to further promote high impact and sustainable initiatives. Lessons learned from SIDS CBA projects will be used to enhance national and sub-national level policies. A concerted attempt will be focused on mainstreaming lessons and practices while at the same time continuing to develop local hands-on expertise in adaptation that can support replication and up-scaling in communities and other SIDS experiencing similar conditions.

For further information on CBA, please contact: Nick Remple, nick.remple@undp, Terence Hay-Edie (MAP CBA), terence.hay-edie@undp.org and Charles Nyandiga (SIDS CBA), charles.nyandiga@undp.org

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Portfolio Updates per Region

Africa

Guinea

A mission took place in July under the LDCF-financed project, **Increased Resilience and Adaptation to Adverse Impacts of Climate Change in Guinea's Vulnerable Coastal Zones**. The mission helped to establish a baseline for climate change impacts in Kaback, Kakossa, Koba, and Kito.

The first mission is part of establishing the baseline of the impact of climate change in the sites of Kaback Kakossa, Koba and Kito. According to the inventory, established in July 2009, rising sea levels should result in the flooding of a large area of mangrove forests, leading to final destruction of some of them. The mangrove sites identified as being particularly vulnerable to the impacts of climate change include: Koba, Kito and islands of Kaback and Kakossa will suffer severe losses.

Asia

Lao

The Lao project, **Improving the Resilience of the Agriculture Sector to Climate Change Impacts**, which was launched in May of this year (see Adaptation Bulletin, [Issue 6](#)), recently held its first Workshop for stakeholders to discuss the project's strategy. The workshop was featured in the *Vientiane Times*. Please click [here](#) for the full article.

The concept document for the LDCF-financed project in Lao, **Effective Governance for Small Scale Rural Infrastructure and Disaster Preparedness in a Changing Climate**, was approved by the GEF Secretariat in July. This will be Lao's second UNDP-supported NAPA follow-up initiative. Preparatory work to design this project will commence shortly.

Maldives

Two full initiatives, **Increasing climate resilience through an Integrated Water Resource Management Programme in HA. Ihavandhoo, ADh. Mahibadhoo and GDh. Gadhdhoo Island**, financed by the Adaptation Fund, and **Increasing Climate Change Resilience of Maldives through Adaptation in the Tourism Sector**, financed by the LDCF, were endorsed by the GEF and AF Secretariats in August and June, respectively. For additional information on the Tourism project, please see the [article](#) in Minivan News.

Mongolia

The full project, "Ecosystem Based Adaptation Approach to Maintaining Water Security in Critical Water Catchments", was endorsed by the AF Secretariat in August.

Nepal

The concept document for the LDCF-financed project in Nepal, **Community Based Flood and Glacial Lake Outburst Risk Reduction**, was approved by the GEF Secretariat in July. This is Nepal's first follow-up to its NAPA. Preparatory work to design this project is underway.

Europe and Central Asia

Turkmenistan

The full project, **Addressing climate change risks on water resources**

for farming systems in Turkmenistan at national and community level, was endorsed by the AF Secretariat in August.

Latin America & Caribbean

Honduras

The UNDP-supported project, **Addressing Climate Change Risk on Water Resources in Honduras: Increased Systemic Resilience and Reduced Vulnerability of the Urban Poor**, financed by the Adaptation Fund, was launched in Tegucigalpa on 11 June 2011. Leading the event were: Rigoberto Cuellar, Minister of Natural Resources and Environment; Yannick Glemarec, UNDP/GEF Executive Coordinator and Director of Environmental Finance; Jose Eguren, Officer-in-Charge, UNDP Honduras; and Luca Renda, Deputy Resident Representative, UNDP Honduras.

The objective of the project is to increase resilience to climate change water-related risks in the most vulnerable population in Honduras through pilot activities and an overarching intervention to mainstream climate change considerations into the water sector. For more information, please see the [article](#) from *La Tribuna*

Pacific

Solomon Islands

On 5 July 2011 an Inception Workshop was held to launch the first Adaptation Fund financed project in the Pacific. The project, **Enhancing resilience of communities to the adverse effects of climate change in agriculture and food security**, aims to strengthen the ability of communities to make informed decisions and manage likely climate change driven pressures on food production and management systems. Seven regions will be targeted to implement the community based activities.

Among the speakers at the Workshop were Rence Sore, Permanent Secretary of Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM), and Akiko Suzuki, Deputy Resident Representative of UNDP Solomon Islands. For more information, please see the [article](#) in the *Solomon Star*.

The UN Secretary-General, Mr. Ban-Ki Moon, was briefed on this project during his visit to the Solomon Islands in early September. Please click [here](#) for the full press release posted on the UNDP Fiji Multi-Country office website

Pacific Region

During 8 to 12 August, Vanuatu hosted the second multi-partite review meeting for the UNDP-supported SCCF-financed project, **Pacific Adaptation to Climate Change (PACC)**. The thirteen participating Pacific Island states, regional partners, and stakeholders discussed experiences and lessons learned from carrying out various PACC initiatives involving water resources management, food security, and coastal zone management. For more information, please see the [article](#) in the *Solomon Star*.

During the 15th Micronesian Chief Executives' Summit, the representatives of the islands supported the initiative of having the **PACC** project become the climate change adaptation framework for the sub-region, as an extension of the Micronesia Challenge Framework. For more information, please go to the [article](#) posted on the GEF website.

Additional updates can be found on the PACC project [website](#).

Status of UNDP-supported Adaptation Initiatives

REGION	COUNTRY	SOURCE OF FUNDS	GRANT (US\$)	REGION	COUNTRY	SOURCE OF FUNDS	GRANT (US\$)	
CONCEPT PREPARATION (by Country with UNDP support)				PROJECT UNDER IMPLEMENTATION (by Country with UNDP support)				
Africa	Burkina Faso	LDCF	TBD	Africa	Benin	LDCF	3,410,000	
	Burundi	LDCF	TBD		Burkina Faso	GOJ/LDCF	5,801,000	
	Central African Republic	LDCF	TBD		Cameroon	GOJ	3,000,000	
	Gambia	LDCF	TBD		Cape Verde	LDCF	3,000,000	
	Lesotho	LDCF	TBD		Comoros	LDCF	3,100,000	
	Malawi	LDCF	TBD		Congo	GOJ	2,975,000	
	Mali	LDCF	TBD		Democratic Republic of Congo	LDCF	3,000,000	
	Mauritania	LDCF	TBD		Ethiopia	GOJ/SCCF	7,477,749	
	Niger	LDCF	3,750,000		Gabon	GOJ	2,465,000	
Sao Tome & Principe	LDCF	TBD	Ghana		GOJ/SCCF	4,427,000		
Arab States	Morocco	AF	TBD		Guinea	LDCF	2,970,000	
Asia	Lao	LDCF	TBD		Guinea Bissau	LDCF	4,000,000	
	Sri Lanka	AF	TBD		Kenya	GOJ/SCCF	6,469,726	
	Timor Leste	LDCF	4,600,000		Lesotho	GOJ	2,975,000	
Pacific	Kiribati	LDCF	TBD		Liberia	LDCF	2,900,000	
	Niue	AF	TBD		Malawi	GOJ	3,881,580	
	Solomon Islands	LDCF	TBD		Mali	LDCF	2,340,000	
	Tonga	AF	TBD		Mauritius	GOJ	2,987,004	
	Tuvalu	LDCF	4,200,000		Mozambique	GOJ/SCCF	3,947,620	
	Vanuatu	LDCF	TBD		Namibia	GOJ/SPA	3,940,000	
	Vanuatu	AF	TBD		Niger	GOJ/LDCF	6,500,000	
CONCEPT AWAITING APPROVAL (by GEFSEC or AFB)					PROJECT AWAITING OFFICIAL APPROVAL (by GEFSEC or AFB SEC)			
Africa	Guinea	LDCF	3,716,364		Africa	Ethiopia	LDCF	5,308,000
	Mali	AF	7,864,837			Mozambique	LDCF	4,433,000
	Sierra Leone	LDCF	2,940,000			South Africa	SCCF	3,536,000
Asia	Bangladesh	LDCF	3,000,000		Asia	Sri Lanka	SCCF	3,400,000
	Myanmar	AF	7,289,425			Europe and Central Asia	Georgia	AF
Latin America and Caribbean	Colombia	AF	9,217,000		Latin America and Caribbean	Guatemala	AF	5,000,000
Pacific	Samoa	LDCF	1,950,000		PROJECT APPROVED, AWAITING AGREEMENT SIGNATURE (by AFB SEC & UNDP)			
PROJECT PREPARATION UNDERWAY (by Country with UNDP support)					Arab States	Egypt	SCCF	4,000,000
Africa	Central African Republic	LDCF	2,780,000	Morocco		GOJ	2,975,000	
	Seychelles	AF	5,950,000	Sudan		LDCF	3,300,000	
	Swaziland	SCCF	1,670,000	Tunisia		GOJ	2,975,000	
Arab States	Djibouti	AF	4,294,000	Asia		Bangladesh	LDCF	3,300,000
Asia	Indonesia	SCCF	5,000,000			Bhutan	LDCF	3,445,000
	Lao	LDCF	4,700,000			Cambodia	LDCF	1,850,000
	Nepal	LDCF	6,300,000			India	SPA	200,000
	Papua New Guinea	AF	6,530,000			Lao	LDCF	4,445,000
	Vietnam (ADB lead)	SCCF	1,400,000			Maldives	LDCF	6,135,000
Latin America and Caribbean	Brazil	SCCF	2,650,000		Pakistan	AF	3,600,000	
Pacific	El Salvador	AF	5,000,000		Thailand	SCCF	869,090	
	Fiji	AF	5,280,000		Europe and Central Asia	Albania	SPA	975,000
PROJECT AWAITING OFFICIAL APPROVAL (by GEFSEC or AFB SEC)					Europe and Central Asia	Armenia	SPA	900,000
Africa	Ethiopia	LDCF	5,308,000	Tajikistan		SPA	950,000	
	Mozambique	LDCF	4,433,000	Global	Adaptation Learning Mechanism	SPA	724,000	
	South Africa	SCCF	3,536,000	Community-based Adaptation (10 Countries)	SPA	4,525,000		
Asia	Sri Lanka	SCCF	3,400,000	CC & Health (with WHO) (7 Countries)	SCCF	4,500,000		
	Europe and Central Asia	Georgia	AF	4,900,000	Ecuador	SCCF	3,000,000	
Latin America and Caribbean	Guatemala	AF	5,000,000	Latin America and Caribbean	Haiti	LDCF	3,500,000	
Pacific	Cook Islands	AF	4,500,000		Honduras	AF	5,180,000	
	Samoa	AF	8,732,000		Nicaragua	AF	5,070,000	
PROJECT APPROVED, AWAITING AGREEMENT SIGNATURE (by AFB SEC & UNDP)					Latin America and Caribbean	Uruguay	SPA	975,000
Africa	Mauritius	AF	8,405,000			Pacific	Regional (13 Pacific Islands)	SCCF
	Maldives	AF	8,285,000	Samoa	LDCF		4,450,000	
	Asia	Mongolia	AF	5,069,000	Solomon Islands	AF	5,100,000	
Europe and Central Asia	Turkmenistan	AF	2,700,000	Tuvalu	LDCF	3,300,000		
PROJECT APPROVED, AWAITING PROJECT DOCUMENT SIGNATURE (by Country)				PROJECT COMPLETED				
Africa	Eritrea	AF	6,010,000	Europe and Central Asia	Hungary	SPA	985,000	
	Liberia	LDCF	2,382,000					
Europe and Central Asia	Azerbaijan	SCCF	2,700,000					

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www.undp.org/climatestrategies/climatestrategies_adaptation.shtml

NOTES

AF-Adaptation Fund; GEF- Global Environment Facility; GOJ- Government of Japan; SPA- Strategic Priority on Adaptation (GEF Trust Fund); LDCF- Least Developed Countries Fund (UNFCCC Fund); SCCF- Special Climate Change Fund (UNFCCC Fund). The column on funding reflects resources leveraged by UNDP as grants to countries.