

# STRENGTHENING ECOSYSTEM-BASED ADAPTATION TO CLIMATE CHANGE IN SMALL ISLAND DEVELOPING STATES THROUGH CIVIL SOCIETY



A Partnership with the Critical Ecosystem Partnership Fund



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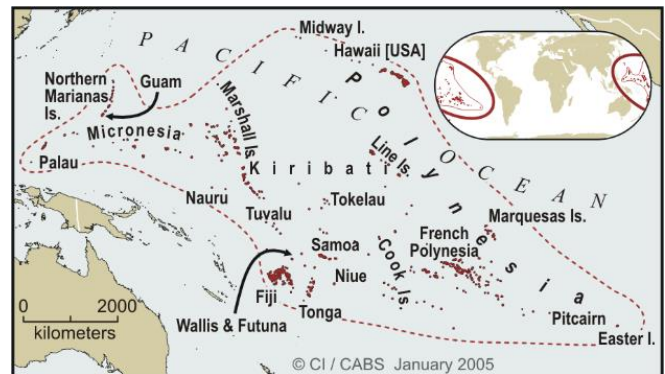


Madagascar and the Indian Ocean Islands Hotspot

FoProBIM founder Jean Weiner and staff on patrol at Caracol, Haiti



Caribbean Islands Hotspot



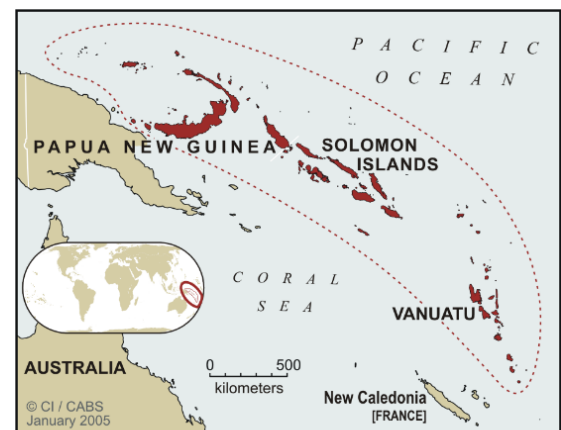
Polynesia - Micronesia Hotspot

## A Proposal to the Green Climate Fund

Increasing climate resilient sustainable development by harnessing the capabilities of Civil Society Organizations

### Expected Impact

- 2.5 million people benefited;
- 3.6 million hectares of critical ecosystems strengthened, restored and protected in 4 biodiversity hotspots covering 29 SIDS/LDCs
- USD162 million of biodiversity conservation funding leveraged
- Build the capacity of over 100 Civil Society Organizations



East Melanesian Islands Hotspot

## The Challenge

Small Island Developing States (SIDS)<sup>1</sup> are particularly vulnerable to the impacts of global climate change. Sea level rise and the increased severity of extreme weather events have significant and profound effects on island populations, agricultural lands and infrastructure, which tend to be concentrated in coastal zones. With one third of their population living on land less than 5m above sea level, the threat of sea level rises and destruction from storm surges means that significant parts of SIDS, and in some cases entire nations, may become uninhabitable<sup>2</sup>. These climate risks, combined with their particular socio-economic situations<sup>3</sup> make SIDS some of the most vulnerable countries in the world to climate change.

Ecosystem-based adaptation solutions to climate change are particularly relevant for SIDS. Ecosystem-based adaptation integrates the use of biodiversity and ecosystem services<sup>4</sup> into strategies to adapt to the impacts of climate change. Ecosystem-based adaptation encourages conservation, improved management and restoration of ecosystems to provide essential services that people need to adapt to climate variability. The aim is to maintain and increase resilience and reduce the vulnerability of ecosystems and people. Ecosystem-based adaptation can be inexpensive to implement relative to infrastructure-based adaptation, and can generate important social, economic and cultural co-benefits. The UNFCCC has recognized the role that sustainable management of natural resources can play in building resilience of socio-economic and ecological systems as part of climate change adaptation strategies.

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<sup>1</sup> SIDS are a distinct group of 38 UN Member States and 20 Non-UN Members/Associate Members of regional commissions. SIDS were recognized as a distinct group of countries with peculiar social, environmental, and economic vulnerabilities at the 1992 Earth Summit, held in Rio de Janeiro.

<sup>2</sup> UN-OHRLS, 2015. Small Island Developing States in Numbers.

<sup>3</sup> The 'Future We Want' outcome document adopted at the Rio+ 20 Conference of 2012 reinforced that the unique vulnerability of the SIDS countries is due to 'their small size, remoteness, narrow resource and

The Critical Ecosystem Partnership Fund (CEPF)<sup>5</sup> was established in 2000 as a mechanism to enable Civil Society Organizations (CSOs) to support conservation of critical ecosystems<sup>6</sup> within biodiversity hotspots<sup>7</sup>. CEPF's experience is that CSOs are capable of offering useful and timely advice and support on biodiversity conservation to both governments and private sector decision makers. Local, regional, national and international groups can be extremely effective at: (i) bringing global experience and good practice to local contexts; (ii) transferring skills and knowledge to government agencies and the private sector, leading to better policy and business practices; (iii) catalyzing innovation, testing new approaches and responding to emerging challenges and opportunities; (iv) brokering partnerships among traditional and non-traditional conservation actors; and (v) ensuring that conservation programs are beneficial to local people, such as by protecting vital ecosystem services and providing sustainable livelihood options. Despite the potential and capability of CSOs to play an effective role in addressing biodiversity conservation and ecosystem-based adaptation, CSOs are typically under-utilized, under-valued and under-financed by development actors. AFD and the CEPF believe that these same capabilities that have been so effective at achieving conservation outcomes can also be harnessed to contribute to climate-resilient sustainable development.

## The CEPF

The CEPF is a joint initiative of AFD, Conservation International, the European Union, the Global Environment Facility, the Government of Japan, the MacArthur Foundation and the World Bank. The CEPF has granted more

export base, and exposure to global environmental challenges'.

<sup>4</sup> Ecosystem services are the benefits people obtain from nature, such as flood regulation, storm protection, food, clean water, fuel, shelter etc.

<sup>5</sup> For more information visit [www.cepf.net](http://www.cepf.net)

<sup>6</sup> This term is generally used to refer to remaining natural ecosystems within the hotspots

<sup>7</sup> Biodiversity Hotspots are the most biologically diverse yet threatened ecoregions in the world. More precisely, hotspots are distinguished by: (i) harboring at least 0.5% of all species of vascular plants, and (ii) containing 30% or less of their original primary vegetation.

than US\$220 million to over 2,200 grantees in 24 biodiversity hotspots. These grants helped to establish some 14.5 million hectares of protected areas and strengthened the management of biodiversity in 6 million hectares of production landscapes. Since its inception in 2000, CEPF has supported projects that have benefited 32 SIDS. It has supported 333 projects in SIDS, valued at more than US\$30 million. To date, climate change has not been the main focus of CEPF, although a number of grant funded projects have addressed climate change mitigation and adaptation issues. There is clear potential to expand the CEPF's remit by galvanizing CSOs to address ecosystem-based adaptation to climate change. AFD is approaching the Green Climate Fund on behalf of CEPF's Donor Council to explore the feasibility of adding a specific climate change component to CEPF's work through this Project to promote ecosystem-based adaptation interventions by CSOs in SIDS.

- Help governments meet targets related to the U.N.'s Convention on Biological Diversity, Framework Convention on Climate Change, and Sustainable Development Goals.
- Create working alliances among diverse groups, combining unique capacities and eliminating duplication of efforts.
- Achieve results through an ever-expanding network of partners working together toward shared goals.

#### CEPF results at a glance



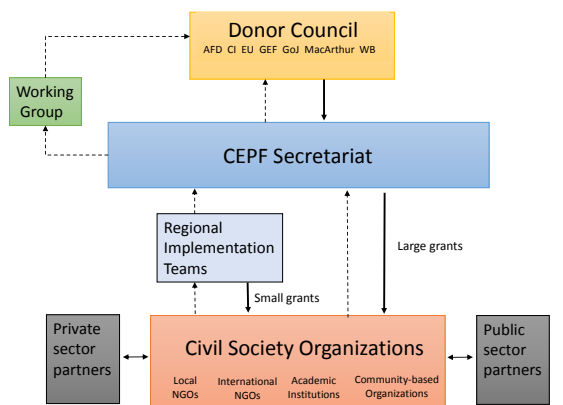
#### The Opportunity

The proposed Project will work in four biodiversity hotspots where CEPF has current or recent investments: the Caribbean islands, Madagascar and the Indian Ocean islands, the East Melanesian islands, and Polynesia-Micronesia. These hotspots cover 29 countries, most of which are SIDS and 6 of which are recognized by the United Nations as Least Developed Countries. Ecosystem-based adaptation measures feature prominently in the national climate strategies, adaptation plans and Intended Nationally Determined Contributions (INDCs) of the countries in the hotspots.

In each of the four biodiversity hotspots, the Project will address the key barriers to greater involvement of CSOs in advancing ecosystem-based adaptation. The Project will use innovative tools and methodologies to direct investments to geographical and thematic areas of highest priority for ecosystem-based adaptation. The project will work through CSOs, help to build their capacity and help them develop partnerships with the private and public sector to achieve ecosystem-based adaptation and biodiversity conservation. The Project will also include a knowledge sharing component to encourage replication of best practice across the hotspots. The Project will include the following five components:

- Developing long-term visions, financing plans and associated strategies for

#### How CEPF grant-making functions



Reporting (dashed arrows), Governance (thin arrows), Funding (thick arrows) and Partnership (two-way arrows)

#### CEPF grants:

- Target biodiversity hotspots in developing and transitional countries.
- Are guided by regional investment strategies—ecosystem profiles—developed with local stakeholders.
- Go directly to civil society groups to build this vital constituency for conservation alongside government partners. Grants are awarded on a competitive basis to implement the conservation strategy developed in each ecosystem profile.

ecosystem-based adaptation in the small island biodiversity hotspots, well aligned with national climate change strategies;

- Supporting ecosystem-based adaptation activities in priority areas;
- Ensuring the financial and institutional sustainability of multi-sector programs for ecosystem-based adaptation, including through enhanced public and private partnerships;
- Quantifying ecosystem-based adaptation impacts through application of cutting-edge science;
- Replicating success through knowledge products and tools for ecosystem-based adaptation.

### Expected Results

The Project is expected to make a significant contribution to the climate change strategies and sustainable development strategies of the countries where it will work. The Project focuses on ecosystem-based adaptation and it will contribute to GCF's paradigm-shift objective of increasing climate resilient sustainable development in the countries within the four biodiversity hotspots.

The Project will:

- Benefit at least 2.5 million people through increased climate change resilience, access to ecosystem services and income;
- Restore or improve management of at least 3.6 million hectares of coastal and terrestrial ecosystems that play a critical role in climate change adaptation in 4 biodiversity hotspots;
- Leverage US\$162 million of funding from biodiversity conservation sources towards climate change adaptation and create synergy with nature conservation initiatives;
- Build the capacity of at least 100 CSOs, thereby enabling them to make further contributions to ecosystem-based adaptation.

### CEPF and Climate Change

The CEPF recognizes that nature based solutions have an important role to play in

adaptation and mitigation efforts to limit the adverse impacts of climate change. Natural ecosystems can help people – particularly the poor in rural and urban areas – adapt to changes in our climate. Sustainably managed rivers, aquifers and floodplains can help ensure water supplies and regulate flooding. Healthy coastal ecosystems such as mangroves and wetlands temper the impact of storms. Thriving grasslands counter drought and flooding. Tropical forests provide wild reserves of food and income during failed harvests. The oceans absorb heat and CO<sub>2</sub> from the atmosphere, helping to stabilize the climate.

By funding conservation efforts implemented by civil society in the world's biodiversity hotspots, the CEPF is already making a major contribution to this goal. For example, CEPF supported 7 percent of the global expansion of terrestrial protected areas during the period 2001-2010. However, currently CEPF's focus remains biodiversity conservation and more could be achieved with a greater targeting of civil society action towards achieving ecosystem-based adaptation.

CEPF's work on climate change has already supported:

- Improved scientific understanding of climate change and ecosystem-based adaptation options that leads to enabling policies;
- Land management to prevent GHG emissions and increase absorption;
- Improved land use management to maintain ecosystem service provision and to diminish the impacts of extreme weather events;
- Species focused conservation for species highly threatened by climate change;
- Market-based mechanisms to encourage improved ecosystem management;
- Supporting sustainable, resilient livelihoods to that reduce risk to households;

Some effective examples of CEPF's work on climate change are provided in the following case studies. When taken to scale, actions such as these will help to address the climate challenge using nature-based solutions and they will build necessary bridges between global climate and biodiversity initiatives.

## Caribbean Islands Biodiversity Hotspot

Jamaica's Hellshire Hills and Portland Ridge key biodiversity areas include an important watershed that provides communities with fresh water, serves as habitat for many fish species and the last population of the Critically Endangered Jamaican iguana (*Cyclura collei*), and supports mangrove wetlands. CEPF grantee Caribbean Coastal Area Management Foundation (C-CAM) facilitated a climate change risk assessment for Portland Ridge and Hellshire Hills as part of the preparation of a management plan for the Portland Bight Protected Area. This is the first such plan in Jamaica to factor in climate change. The assessment determined that two of the major expected climate risks are a decrease in freshwater and coastal sedimentation and saline intrusion.

### Results

- Completed Jamaica's first land management plan to include a climate change risk assessment.
- Developed an action plan that provides strategies on climate change adaptation and mitigation, land use and development zoning, and afforestation and reforestation initiatives. Implementation is underway.

## Caribbean Islands Biodiversity Hotspot

In Haiti, the impacts of climate change already damaged agriculture in the Southeast Department community of Michineau, which is part of the Massif de la Selle Key Biodiversity Area. Increased temperatures and change in rainfall patterns combined with extreme weather events and deforestation to cause erosion, loss of arable soil and mudslides. With support from CEPF, NGO Agronomes et Vétérinaires sans Frontières and local partner Coordination Régionale des Organisations du Sud-Est (CROSE) built on work with local farmers that they began in 2007.

### Results

- Reforested land and installed anti-erosion devices such as stone walls and grass strips.
- Evaluated local biodiversity.
- Developed a management plan.
- Established long-term protection of 5 hectares of forest and reforestation of 20 hectares. Since 2007, the area has seen a 17.2 percent increase in forested land.

## East Melanesian Islands Hotspot

On the island nation of Vanuatu, in Tafea Province, the New York Botanical Garden is working with local communities to conserve forests and develop water supply systems from them. Destruction and fragmentation of natural habitats such as forests, as well as expansion of invasive species and the change from subsistence farming to consumer-style cash economies are combining to make Vanuatu more vulnerable to the impacts of climate change and associated extreme weather.

The project seeks to conduct baseline surveys of plant species to document biodiversity and traditional knowledge related to it, and to build local capacity for related research among key government, scientific, cultural and community-based institutions.

### Results

- Worked with customary landowners in eight villages to identify forest-based sources of clean water.
- Established systems to restrict damage to seedlings by non-native herbivores.
- Identified areas for rehabilitation as agro-forests.
- Planned conservation areas to improve water catchment from these forested areas, including by installing new water supply systems where these have been badly damaged or destroyed by Cyclone Pam.

