

Ridge to Reef- Grenada Project

Conserving Biodiversity and Enhancing Ecosystems: the Case for Protected Areas for Climate Change Resilience in Caribbean SIDS

Our small island homes are endowed with unique cultures and derive much of our economic, environmental and social well-being directly or indirectly from the rich natural resources within our immediate environment.

Yet, small island developing States (SIDS) face unique challenges and vulnerabilities which have prompted Agenda 21 (chapter 17, section G; 1992), followed by the Barbados Programme of Action (1994) and the Plan of Implementation of the World Summit on Sustainable Development (2002), to call SIDS and islands supporting small communities “a special case both for environment and development.”

In particular, climate change phenomena is anticipated to cause significant shifts in species distributions across SIDS. Undoubtedly, climate change impacts on SIDS biodiversity are potentially catastrophic given the disproportionate number of endemic species and the consequent risk that local extinctions might become global ones.

SIDS, like Caribbean SIDS, host numerous discrete ecosystems, from mountain forests to wetlands and beyond, that provide food, fresh water, wood, fibre, medicines, fuel, tools and other important raw materials, in addition to aesthetic, spiritual, educational and recreational values, that support island livelihoods, economies and cultures. The biodiversity found within island ecosystems also contribute to the maintenance of ecosystem functions and ecosystem stability against climate stress and disturbances. For example they provide defence against natural hazards, support nutrient cycling, facilitate the formation of soil and sand and they contribute to the regulation of climate.

At the same time, the biodiversity found within SIDS is not only of vital importance to island dwellers. Islands are repositories of genetic information whose present-day biodiversity stands as a record of millions of years of evolution. This biodiversity has an inherent value to life all over the world.

Nowadays, the impetus for the creation of Protected areas (Pas) across Caribbean SIDS is not only to maintain iconic landscapes and seascapes and ensure biodiversity conservation, but also to play a key role in building resilience to climate change (Watson et al. 2014). According to Araújo et al. (2011), a common belief is that successful conservation within protected areas is possible when these areas are managed to buffer against the processes that threaten them. However, it is becoming clear that in addition to providing sustainable management of habitats and ecosystems, effective conservation strategies need to adapt to and mitigate the impacts of climate change in order to build resilience across Caribbean SIDS communities.

Sustaining Livelihoods in a Changing Climate

Resilience to climate change across Caribbean SIDS requires conserving biodiversity and enhancing ecosystems through an integrated approach that includes effective strategies for Protected Areas Management.

Ultimately, understanding and managing how species distributions will be affected with future climate change is critical for conservation planning and attainment of the Sustainable Development Goals.

Notably, biodiversity is a crucial component of food security in many SIDS. Furthermore, small islands comprise a high proportion of marine and coastal areas, which are important sources of income.

The continental shelves and coastal ecosystems of many SIDS are also of major economic significance for settlement, subsistence and commercial agriculture, fisheries, and tourism. Coastal ecosystems also fulfill many ecological roles, ranging from shoreline protection to buffer zones from land-based activities and pollution, to feeding, breeding, and nursery grounds to many marine species. Coral reefs provide an estimated US\$ 375 billion per year in goods and services to the world. This includes support for marine fisheries, which provide the principal protein source for many island populations, especially amongst Caribbean SIDS.

The guiding principle for the modern design of Protected Areas includes a co-management approach aimed at capacity development and empowerment of people working towards the conservation and sustainable use of biodiversity and the maintenance of ecosystem goods and services for livelihoods. This approach includes active collaboration with government agencies and local communities jointly involved in the planning, monitoring and evaluation of activities in the PAs.

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The project will provide multiple global and local benefits by strengthening land, forest and reef management processes and eco-systems functions for biodiversity conservation on all terrestrial landscapes and marine and seascapes in Grenada, especially within and around marine and terrestrial protected areas.

In particular, this Project is also designed to support the implementation of key elements of the Grenada System Plan for Parks and Protected Areas (2011) aimed at establishing new, and improving management of existing, terrestrial and marine protected areas, and to help Grenada meet its commitments under the Caribbean Challenge to protect 25% of its near shore habitat and 25% of its terrestrial habitat by the year 2020.

This will be achieved through a multi-focal strategy having a “Ridge to Reef” approach that increases protected areas’ management effectiveness and applies targeted land management practices to include:

- (i) Development of a policy-based legal, planning and institutional /regulatory framework in support of a sustainably managed network of TPAs and MPAs;
- (ii) Development and management of landscapes and seascapes by adopting the approach of integrating SLM and SFM/REDD+ principles and practices as a matter of public policy (integrated approach for managing forest ecosystems, protection and sustainable use of the biodiversity, prevention of land/sea degradation, and integration of peoples livelihood objectives within the management of forest and marine eco-systems.);
- (iii) By piloting SFM/REDD+ and SLM practices in the Annandale/ Beausejour watershed to improve Carbon stocks, reducing deforestation, reducing susceptibility to drought (and forest fires) and consequent land degradation that would impact downstream landscapes and seascapes.

The Ridge to Reef- Grenada Project concept is also being up-scaled through other similar projects being implemented in other Caribbean islands within the framework of “Ridge to Reef” and/ or “Source to Sink” themes in order to enhance resilience to climate change.