

# INTEGRATING WATERSHED AND COASTAL AREAS MANAGEMENT IN THE CARIBBEAN SMALL ISLAND DEVELOPING STATES (IWCAM)



## Project Information

### Implementing Agencies:

UNEP, UNDP

**Executing Agencies:** CAR RCU,  
Caribbean Environmental Health Institute  
(CEHI) and UNOPS

**GEF Strategic Priority/Objective:** IW 3

**Geographical Scope:** Regional –  
Caribbean

**Participating Countries:** Antigua &  
Barbuda; The Bahamas, Barbados; Cuba;  
Dominican Republic; Grenada; Haiti,  
Jamaica; Saint Kitts & Nevis; Saint Lucia;  
Saint Vincent & the Grenadines, Trinidad  
& Tobago

**Project Duration:** May 2006 – June 2012

**GEF Financing:** \$13,782,691

**Total Co-financing:** \$98,329,493

**Total Project Cost:** \$112,112,184

**Website:** <http://www.iwcam.org/>

## Problems Faced by the Region

The Caribbean region is of critical importance to global biodiversity from the point-of-view of the uniqueness of its species and habitats. The watersheds and coastal areas of the Caribbean contain some of the world's most diverse and productive habitats and encompass extensive areas of complex and unique ecosystems. The coastal areas include mangroves, coral reefs, sea grass beds and river deltas, which are important sources of food production and support a variety of economic activities such as fisheries, tourism and the related uses of recreation and transportation.

Many Caribbean species are endemic only to this region. Some 30% of these are now considered to be either destroyed, or at extreme risk from anthropogenic threats. Another 20% or more are expected to be lost from the Caribbean over the next 10–30 years if significant action is not taken to manage and protect them above and beyond existing activities. Natural resources in the Caribbean are exposed to various stresses such as aquifer degradation, loss of watershed, coastal erosion and reduction in surface water quality. Caribbean Small Island Developing States (SIDS) need to plan and manage their aquatic resources and ecosystems on a sustainable basis.

## Solutions Proposed by the Project

The UNEP/UNDP–GEF IWCAM aimed at fostering the integrated management of water and coastal area resources, the hard, long but necessary way to sustainable development in SIDS (particularly in the smaller and the low lying islands). The objective of the project was to “*strengthen the commitment and capacity of the participating countries to implement an integrated approach to the management of watersheds and coastal areas with a long-term goal of enhancement of the capacity of the countries to plan and manage their aquatic resources and ecosystems on a sustainable basis*”. The project was articulated into five components and adopted a blend of regional facilitation mechanisms and country-based on-the-ground demonstrations of good practices and simple technological solutions:

Component I Demonstration, capture and transfer of best practices

Component II Development of IWCAM process, stress reduction and environmental status indicators framework

Component III Policy, legislation and institutional reforms

Component IV Regional and national capacity building and sustainability

Component V Regional project management and coordination

### Main Results and Achievements at project closure (January 2012)

#### Component I: Demonstration, capture and transfer of best practices

Nine demonstration projects in eight countries were executed targeting national and regional hotspots. Achievements of some of these are briefly described below:

*Antigua* A Membrane Bio-Reactor (MBR) sewage treatment plant with the capacity to treat 20,000 gallons per day of sewage was installed

*The Bahamas* A Land and Sea Use Plan for the island of Andros was prepared and accepted by local communities, thanks to extensive local consultations

*Cuba* 42 acres of sustainable farmland at the Sabatina Farm, divided between natural forest, agro-forestry, subsistence farming and commercial crops, helps the surrounding ecosystem recover from past unsustainable land practices.

*Dominican Republic* Mitigation of Impacts of Industrial Wastes on the Lower Haina River Basin and its coast: policy incentives were created in coordination with the established Project Management and Administrative Unit

*Saint Lucia* A participatory approach towards watershed management: The project resulted in the fast-tracking of the Water Resource Management Agency, the preparation of a Strategic Plan and facilitated the establishment of a legitimate community-based NGO dedicated to continuing the sustainable management of the Fond d'Or Watershed.

*Trinidad and Tobago* Land-Use Planning and Watershed Restoration in the Courland Watershed and Buccoo Reef Area in Tobago. Through the only Demoproject managed by an NGO, the Buccoo Reef Trust, worked with CBOs to execute a range of activities including reforestation and coral reef monitoring.

#### Component II: Development of IWCAM process, stress reduction and environmental status indicators framework

Thanks to an effective dissemination of experiences and stakeholder involvement effort, a well-developed and somewhat innovative communication strategy, and a proactive Project Coordination Unit (PCU), the project was able to foster the replication of successfully tested practices. This led in a number of cases to actual replication of management approaches and technologies: Jamaica and its

WAMM nation-wide policy replicating/adopting the lessons learned in Portland, the application in Grenada of the IWRM approach tested in St Lucia, etc.

Early in the project, an evaluation of existing country indicators found them to be lacking in depth. A series of 149 indicators were subsequently developed, and these are in the process of being tested in a Barbados pilot program. Some of these indicators included monitoring capabilities and laboratory improvement.

#### Component III: Policy, legislation and institutional reforms

As a result reforms in policy, legislation and institutional arrangements in support of IWCAM took place in all 13 participating countries and new policies were set in several Participating Countries with Antigua & Barbuda, the Bahamas, Barbados, Cuba, Dominica, Grenada, Jamaica, St. Lucia, St. Vincent & the Grenadines, and St. Kitts & Nevis incorporating Integrated Water Resources Management (IWRM), which in the context of Caribbean SIDS, is being promoted as IWCAM.

Regional and National Inter-sectoral Committees – PSC and NICs were created and given permanent status and responsibility for regional and national level IWCAM strategy and coordination.

The IWRM Informal Working Group for the Caribbean was absorbed into the CARICOM Consortium for Water and several national committees established and resourced allocated to carry out responsibilities in support of IWCAM. Developed IWRM plans can be found at <http://www.iwcam.org/documents/iwr-roadmaps>

#### Component IV: Regional and national capacity building and sustainability

The project led to the elaboration of an important Policy Toolkit which details possible improvements at every level of policy (locally, regionally and nationally). The toolkit, named 'Toolkit for Institutional, Policy and Legislative Improvements: IWCAM Approach in Caribbean SIDS' is translated into a concrete set of policy reforms submitted under the LBS Protocol which has to date been ratified by Antigua/Barbuda, the Bahamas, Saint Lucia and Trinidad and Tobago, with the Dominican Republic, Grenada, Dominica and Jamaica being very close to ratification.

#### Component V: Regional project management and coordination

Many stakeholders were brought into the fold of the IWCAM-related activities in order to ensure the sustainability of the outcomes, and education and training workshops were regularly organized for the communities and institutions involved to continue with IWCAM principles.



**Follow-up Project** The next step within the IWCAM framework is formalized into a project entitled 'Integrating Water, Land and Ecosystems Management (IWECO) In Caribbean Small Island Developing States'. The project focuses on catalyzing multi-state cooperation to balance conflicting water uses in transboundary surface and groundwater basins while considering climatic variability and change. The project also looks at multi-state cooperation to rebuild marine fisheries and reduce pollution of coasts and Large Marine Ecosystems (LMEs) while considering climatic variability and change.