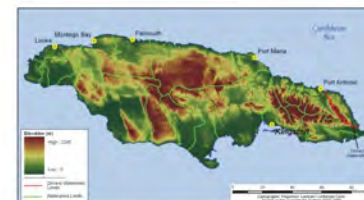
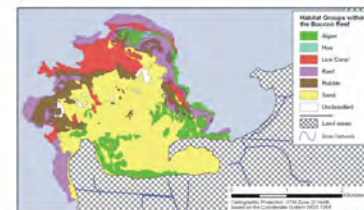


GEF IWCAM ATLAS

Integrating Watershed & Coastal Areas Management

Caribbean Small Island Developing States



GEF IWCAM ATLAS

Project Leadership:

The Global Environment Facility - Integrating Watershed and Coastal Areas Management
(GEF -IWCAM)

<http://iwcam.org/>

Project Execution:

United Nations Environment Program -Caribbean Regional Coordinating Unit
(UNEP-CAR/RCU)

<http://www.cep.unep.org/>

Christopher Corbin-AMEP Programme Officer, UNEP CAR/RCU

Sanya Wedemier-Graham- AMEP Programme Assistant, UNEP CAR/RCU

GIS-Processing and Layout:

Dr. Andreas Mende

Geo-Resiliencia S.A. (Costa Rica)

(amende@racsa.co.cr)

General Introduction.....	1
<i>Part I: Demonstration Projects.....</i>	3
Antigua and Barbuda.....	4
Bahamas.....	8
Cuba.....	11
Dominican Republic.....	14
Jamaica.....	18
Saint Kitts and Nevis.....	22
Saint Lucia.....	24
Trinidad and Tobago.....	28
<i>Part II: Hot Spot Assessments and Pilot Projects....</i>	33
Barbados.....	34
Dominica.....	36
Grenada.....	39
Haiti.....	43
Saint Vincent and the Grenadines.....	45

General Introduction

The Global Environment Facility (GEF) funded Integrating Watershed and Coastal Areas Management in Caribbean SIDS (GEF-IWCAM) Project

Participating Countries

The GEF IWCAM project had thirteen (13) participating Caribbean Small Island Developing States (SIDS); Antigua & Barbuda, the Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, and Trinidad & Tobago.

Implementing Agencies

United Nations Environment Programme (UNEP); United Nations Development Programme (UNDP).

Executing Agencies

UNEP Caribbean Regional Coordinating Unit (CAR/RCU); Caribbean Environmental Health Institute (CEHI); United Nations Office of Project Services (UNOPS).

Funding

GEF Grant: US \$13.99 million

Co-finance: US \$98.27 million

Project Cost: US \$112.26 million

Duration: June 2005 December 2011

Overview

Caribbean Small Island Developing States (SIDS) are characterized by small sizes and limited resources for development. There was an unsustainable sectoral approach to the management of their watershed and coastal resources. This resulted in the degradation of the environment and overexploitation of natural resources. Problems included diminishing freshwater supplies, degraded freshwater and coastal water quality, inappropriate land use, and poor sanitation.

SIDS were, as such, a priority for the introduction of integrated watershed and coastal areas management approaches

Project Description

The GEF-IWCAM Project's overall objective was the strengthening of the commitment and capacity of the participating countries to plan and manage their aquatic resources and ecosystems on a sustainable basis. Project activities focused upon improvements in integrated freshwater and coastal areas management on each island. Over a five-year period, the Project:

- Undertook regional management, coordination and evaluation of IWCAM objectives;
- Demonstrated technological and management approaches through execution of nine Demonstration Projects in eight of the Participating Countries;
- Assessed existing policy, legislation and institutional structures in support of IWCAM and promoted reforms within selected areas;
- Identified indicators for measuring IWCAM efficacy and implemented a programme of measurement and monitoring which will drive policy reforms; and
- Established networks, shared knowledge, and developed partnerships within the Caribbean SIDS for IWCAM.



Caribbean Islands - Overview Map



Part I: Demonstration Projects



Antigua & Barbuda - Introduction



McKinnon's Pond, Antigua Demo site

Mitigation of Groundwater and Coastal Impacts from Sewage Impacts from St. John's

McKinnon's Pond, located north of the capital, St. John's, is a coastal wetland and an important site for migrating birds, resident birds and water-fowls. It is also an important spawning habitat and nursery area for juvenile fish and shellfish. The majority of households in MacKinnon's use septic tanks, but the lack of regular pumping often resulted in septic failure and overflow, causing untreated effluent to go directly into drains. Most of this effluent drains into Mc Kinnons's Pond and the St. John's Harbour causing high levels of marine pollution. The construction of a road to link hotels and entertainment facilities at the northern and southern ends of the Pond resulted in an embankment that eliminated the natural link and connection of the Pond with the sea, impacting the wetland significantly.

The primary objective of the demonstration project was to address the issue of sewage and its impacts on the NW Coast of the Parish of St. John's.

The main project partners included the: Environment Division - Ministry of Agriculture, Lands, Housing and the Environment, Central Board of Health - Ministry of Health, St. John's Development Corporation, Antigua Public Utilities Authority (APUA) and residents and business owners (including hotels) in the Mc Kinnon's area.

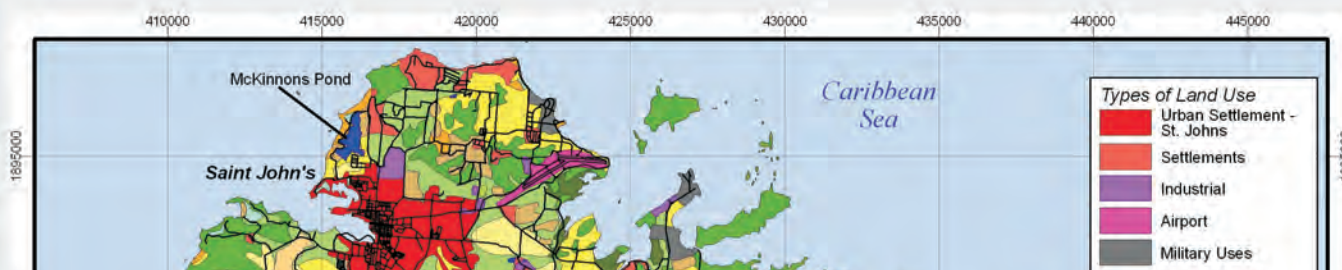
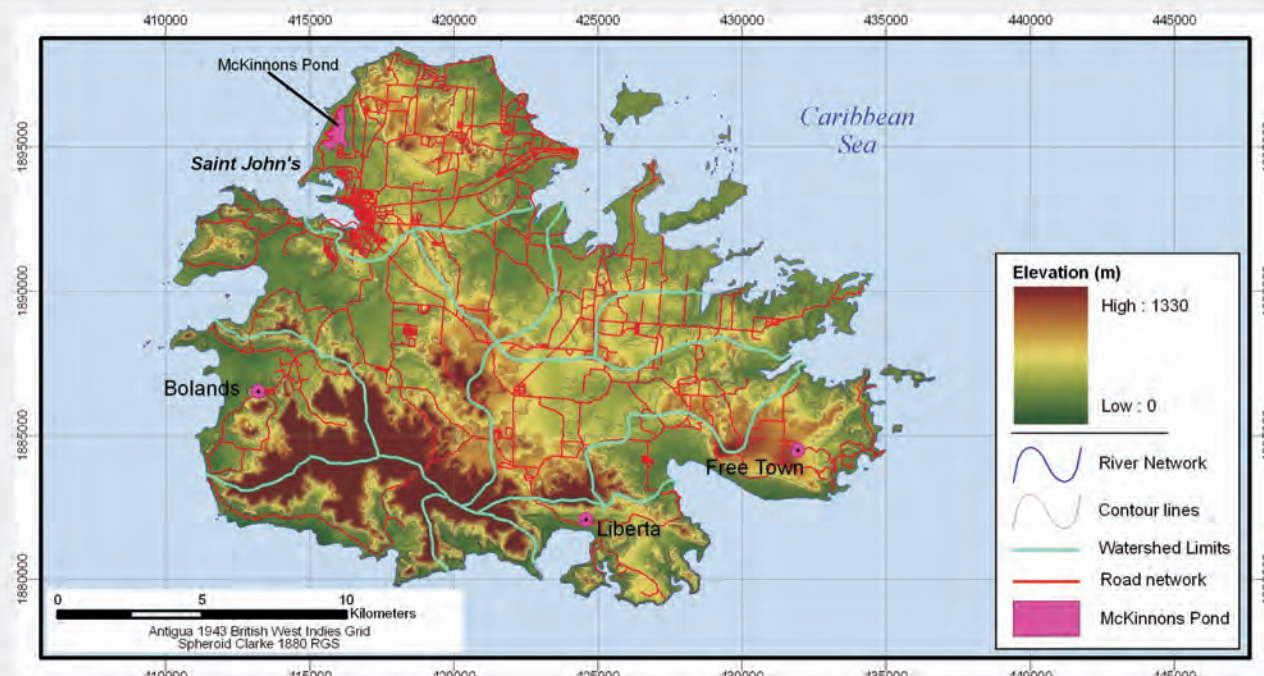
The main project activities and achievements were: (i) Public education and awareness; (ii) Establishment of a water quality baseline; (iii) Sewerage Management Strategy; (iv) Legislative Review; (v) Demonstration sewage system small Membrane Bio Reactor (MBR), which generated effluent that was used for irrigation of nearby agricultural plots; and (vi) Utilization of small-bore sewers to convey septic tank effluent, which previously overflowed into street surface drains.

The resulting impact of the demonstration project was improvement in effluent and water quality in McKinnon's Pond and greater public awareness on the need for improved wastewater management.



Students of Villa Primary School await a presentation on the demonstration project

Antigua & Barbuda - Overview Maps



预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_9309

