

# Caribbean WaterWays

## Newsletter of the GEF IWCAM Project

Volume 5, Issue 1

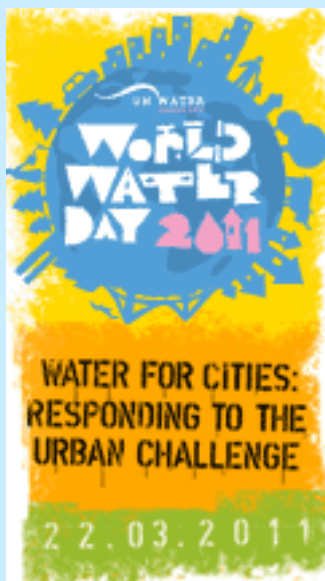
March 2011

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*Countries for which national hotspot interventions have been completed*



### Message from the Regional Project Coordinator

*"Urbanization is the degree of, or increase in, urban character or nature. It may refer to a geographical area combining urban and rural parts, or to the transformation of an individual locality from less to more urban". In*

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## Hotspot Assessment and Management - IWCAM Approaches

**Hotspots: Areas that contain significant sources of pollution, or, sensitive areas at high risk of being contaminated by specific pollutants.**

In March 2011, the GEF-IWCAM Project through the UNEP's Caribbean Regional Coordinating Unit (UNEP CAR/RCU) successfully completed national hotspot interventions (HSA) in four countries: Dominica, Grenada, Haiti and Saint Lucia.

This activity was completed under IWCAM Component 2, investigating the development of IWCAM Process, Stress Reduction and Environmental Status Indicators Frameworks.

The HSA sub-component sought to:

- compile details on some of the hotspots and sensitive areas within each of the pilot countries;
- identify critical areas in need of further action that urgently require IWCAM Impact Indicators and monitoring, and
- recommend urgent policy reforms necessary to resolve the identified issues.

Fulfillment of these objectives in turn provided urgently needed technical support towards the ratification of the Protocol Concerning Land-based Sources of Pollution (LBS Protocol) which entered into force on August 13, 2010.

HSA activities will continue in the development of GIS products to support the hot spot watershed activities conducted in the pilot countries as well as to provide capacity building support for improved environmental monitoring and policy strengthening in the region.

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the Caribbean, where there is already limited land space, increases in the size of urban areas can have significant impacts on local watersheds. Often new urban areas are built in areas where the natural water cycle once occurred, such as forests or wetlands. This can harm the recharging of the groundwater table, and can affect local bodies of water. The natural water cycle is disrupted, and often, new pollutants such as sewage and pesticides can create problems for the ecology of an area, including the coastal areas.

According to UN Water, this is the first time in human history that **most of the world's population live in cities: 3.3 billion people**, and the urban landscape continues to grow. Our region is no different as our urban areas compete with the rural areas for the limited land mass. In this context and with the trend towards urbanization, managing our limited water resources becomes even more critical. This adds to the already daunting task faced by Caribbean SIDS, as our climate changes and issues like sea-level rise and saltwater intrusion, combine with droughts and floods.

As we reflect on the theme for World Water Day 2011: **"Water For Cities: Responding to the Urban Challenge"**, it is important that we recognise that our region, even without mega-cities, must face up to the challenges of urbanization, in relation to managing our water. The GEF-IWCAM's continued focus on supporting IWRM is even more critical now. It is our hope that the region takes note of this challenge as part of its future planning for improved water resources management."

- Vincent Sweeney

<sup>1</sup> <http://www.knowledgerush.com/kr/encyclopedia/Urbanization/>

## BACKGROUND ON THE GEF-IWCAM PROJECT:

The Global Environment Facility-funded Integrating Watershed and Coastal Areas Management in Caribbean Small Island Developing States (GEF-IWCAM) Project was approved by the Global Environment Facility (GEF) in May 2004. Implementing agencies are the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP). Executing agencies are the Secretariat of the Cartagena Convention (UNEP-CAR/RCU), the Caribbean Environmental Health Institute (CEHI) and the UN Office for Project Services (UNOPS). The thirteen participating SIDS are: Antigua and Barbuda, The Bahamas, Barbados, Cuba, Grenada, Dominica, Dominican Republic, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, and Trinidad and Tobago. The length of the Project is 5 years and it commenced in the second quarter of 2005. The Project Coordinating Unit is located at the CEHI, as agreed by the Implementing and Executing Agencies and the participating countries.

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## Dominica: The Roseau Watershed

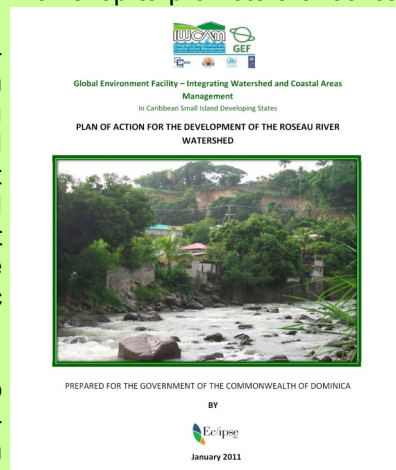
During a national Workshop to promote the ratification of the LBS Protocol, convened by the Commonwealth of Dominica in July 2009, the Roseau Watershed was identified as a critical area or 'hot spot' in need of integrated watershed management approaches to preserve its unique and dynamic natural resources.

In response to this request, the GEF-IWCAM Project, through the Ministry of Agriculture developed a comprehensive management plan for the Roseau Watershed in consultation with various Government stakeholders and civil society.

The plan provides a detailed physical description of the watershed, problem analysis, implementation proposal and indicative budget.

Several priority actions have been identified for further support in a Phase Two pilot project which will come on stream in the next of couple months. Themes of interest include land use mapping, baseline monitoring assessments of the watershed, policy and legislative reviews and capacity building activities.

In February 2011, Christopher Corbin, Programme Officer for the Assessment and Management of Environmental Pollution Sub-programme for the UNEP CAR/RCU, conducted a site visit to this Watershed, reinforcing support for the implementation of the Watershed Management Plan. He met with various government stakeholders to discuss the outputs of the pilot project and to explore opportunities available through the UNEP CAR RCU programmes and projects. Outputs of this pilot project complement the national Integrated Water Resource Management (IWRM) policy which is also being developed through the GEF-IWCAM Project. The Roseau Watershed Management Plan and the National IWRM Plan are together meant to facilitate the national mainstreaming of IWCAM approaches and the Government of the Commonwealth of Dominica's current efforts towards ratification of the regional LBS Protocol.



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### Grenada: The Saint John's Watershed



The national HSA Pilot for Grenada evolved from needs expressed during national promotional activities for the LBS Protocol in Grenada during 2009.

Stakeholders highlighted the need for an integrated approach to sustainably manage the Saint John's Watershed.

This Watershed drains into the bay just north of St. George's, the capital, and the flow affects the southern coast of the island including the important tourist facilities located on Grand Anse Beach. The Saint John's Watershed is considered a hot spot due to the many threats and ongoing pollution challenges and resulting risks posed to communities and residents as well as tourism, commercial and recreational activities.

Currently a draft plan has been prepared and is under review by national stakeholders with the aim of developing a possible phase 2 to implement priority actions. These activities support Grenada's progression towards ratification of the LBS Protocol, initiated in late-2010 through the submission of a Cabinet Memorandum of Understanding, catalyzed through the GEF-IWCAM Project-funded LBS Technical Exchange Workshop convened in September 2010.

### Haiti: Improved Watershed Management and Sedimentation Control in Lully and along the Southern Peninsula

Although it was a very difficult 2010 for Haiti, with ongoing earthquake recovery efforts compounded by an outbreak of cholera and political uncertainty, the HSA pilot project demonstrated several concrete successes and fulfilled the target objectives proposed.

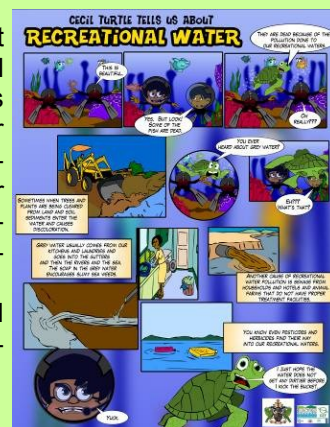
Through the coordination of the project by Fondation pour la Protection de la Biodiversité Marine (FoProBiM) a seedling nursery was established for the Lully area (north of Port-au-Prince), and Léogane (along the southern peninsula). In addition, 500 persons participated in environmental education and stewardship activities, 50,000 plastic pots and containers were retrieved and 2 French-language awareness brochures were produced.

Several key observations were made during project implementation, including the following:

- The high demand for educational activities geared towards both school age children and adults exceeded expectations and resulted in the project increasing the number of programs.
- Although attendance was high, the availability of environmentally sustainable and friendly income generating alternatives (e.g. apiculture, recycling, and development of plant nurseries) for communities remains a concern. Without these alternatives, the only remaining option, which is the exploitation of natural resources, will remain a serious problem.
- The extreme poverty and current situation in Haiti makes the delivery of a sustainability message extremely difficult.

### Saint Lucia: Improved Recreational Water Quality along the North-West Coast

The Saint Lucia Pilot HSA project produced several practical and replicable outputs related to recreational water quality monitoring methodologies and public outreach for various target groups. The objectives of the pilot were successfully completed in 2011 through the Ministry of Physical Development and the Environment and included :



- Development of a new assessment tool used to capture information on potential point sources of pollution (hotspots) within the Castries, Choc, Bois d' Orange and Cap Estate (Rodney Bay watershed sub-unit) watersheds in Saint Lucia along the northwest coast (NWC) of the island.
- An updated, comprehensive report on the current status of recreational waters along the NWC
- Compiled research on pre-existing water quality reports, i.e. a baseline report
- Spatially defined recreational waters along the NWC of Saint Lucia, including the identification of pollution "hot spots"
- Targeted promotional materials, including brochures and a comic strip on Recreational Water Quality

This pilot project forms a component of Saint Lucia's national plan of action that seeks to improve recreational water quality along the North-West Coast of Saint Lucia through the implementation and demonstration of best practices for pollutant discharge reduction. This will in turn enable informed management interventions to reduce coastal pollution on the NWC of the island.



## Chateaubelair



*Meeting with North Leeward Tourism Association to discuss project proposal with group members*



*Member of community group meets with resident.*



*Project participants and residents of Chateaubelair conducting a river cleanup exercise*



## Saint Vincent & the Grenadines:

### Communities Act for Healthier Waterways

In October 2010, the GEF-IWCAM Project approved IWRM Community Pilot projects for four communities in mainland Saint Vincent: Chateaubelair, Spring Village, Vermont and Greggs. These pilot sub-projects aim to strengthen community commitment and capacity to implement an integrated approach to the management of watersheds and coastal areas in their respective communities.

Each of these communities was involved in a process which encouraged them to determine their own IWCAM priorities and to participate in activities meant to address particular issues. Solid waste management and the prevention of contamination of waterways were deemed by all of the communities to be priorities. Public education on these issues was felt to be necessary to begin addressing existing problems. All four projects were designed with input from, and implemented by, groups in the communities with the guidance and management of the firm Project Promotion Limited (PPL).

Despite delays caused by, firstly, Hurricane Tomas at the end of October, then general elections held in December 2010, all four community projects are well underway.

These photos provide us with a glimpse of some of the activities and achievements in each of the four communities.

## Vermont / Buccament



*Meeting with members of the Vermont/Buccament Development Organisation to discuss project proposal*



*Community launch of project and distribution of bins*



*Minister of Health and the Environment distributes garbage disposal bins to residents*



## Spring Village



*Community members clean-up*



*Distribution of garbage disposal bins to community residents*



*Community launch of project by Cumberland Valley Eco-Tourism Organization*

## Greggs



*Member of Keepers of the Environment (KOTE) meets with resident*



*Early stages of construction at the Garifuna Spring*



*Before: Residents used the Garifuna spring for washing*



*< Central Water and Sewerage Authority workers offer technical advice to members of KOTE in the construction of the facilities*

*Community residents and members of KOTE involved in cleaning exercise*



*The upgraded Garifuna Spring facility—new washing station, the tank and the bath with male and female section*





## St. Lucia moves towards a Common Water Agenda



On February 3<sup>rd</sup>, 2011, the Government of Saint Lucia held a consultation entitled: “*Sustainability of the Water Sector in St. Lucia: A Common Water Agenda*” to discuss an Integrated Water Resources Management (IWRM) Road Map for St. Lucia.

The GEF-IWCAM Project, in collaboration with CEHI and the Government of St. Lucia, supported the Road Map preparation and the consultation which was held under the auspices of the Ministry of Finance, Economic Affairs and National Development.

The Road Map produced by the GEF-IWCAM Project was used as the basis for presenting a status report on the water sector and making critical recommendations to advance development of the sector and IWRM in particular.

High-level representation came from Permanent Secretaries in the following Ministries:

- Ministry of Finance, Economic Affairs and National Development
- Ministry of Physical Development and the Environment
- Ministry of Agriculture, Forestry and Fisheries
- Ministry of Health

Senior technocrats present from, among others, the Water & Sewerage Company (WASCO), the Water Resource Management Agency (WRMA) and the National Water & Sewerage Commission (NWSC) also participated.

The challenges faced by the water sector, particularly bearing in mind the drought of 2009-10, the impacts of Hurricane Tomas, and issues such as climate change were discussed.

Among recommendations made at the consultation was the establishment of an “Inter-Ministerial Water Reform

Committee”, chaired by the Permanent Secretary in the Ministry of Finance, and including the Ministries responsible for Physical Development & Environment; Public Utilities; Agriculture and Forestry; and Health. There was also agreement on the need for greater coordination among ministries and the need for an allocation of increased resources to allow the newly-created Water Resources Management Agency (WRMA) to function properly.

The GEF-IWCAM project has committed to assist with the work of this Inter-Ministerial Committee and in strategic planning for the WRMA.

## GEF-IWCAM Second Training Workshop on Proposal Writing *Antigua & Barbuda, 7—10 March, 2011*

Following excellent reviews from participants in the Proposal Writing Workshop originally held by the GEF-IWCAM Project in Trinidad & Tobago in April 2010, the Project Steering Committee recommended that it be conducted again.

A second Training Workshop on Proposal Writing was therefore held 7-10 March 2011 in Antigua & Barbuda.

It aimed to provide more institutions and individuals with training in the fundamental tools and information needed to:

- conduct relevant research (e.g. funding opportunities, background information, donor priorities); and
- organize and prepare the various components of proposals.

Participants in this ‘train-the-trainers’ workshop are expected to share this knowledge with their colleagues upon return to their respective countries. All GEF-IWCAM Project Participating Countries were represented.

Materials used at the Workshop are located on the Project website [www.iwcam.org](http://www.iwcam.org) at:

<http://www.iwcam.org/documents/meeting-reports/gef-iwcam-training-workshop-responding-to-rfps-writing-effective-proposals-2011>

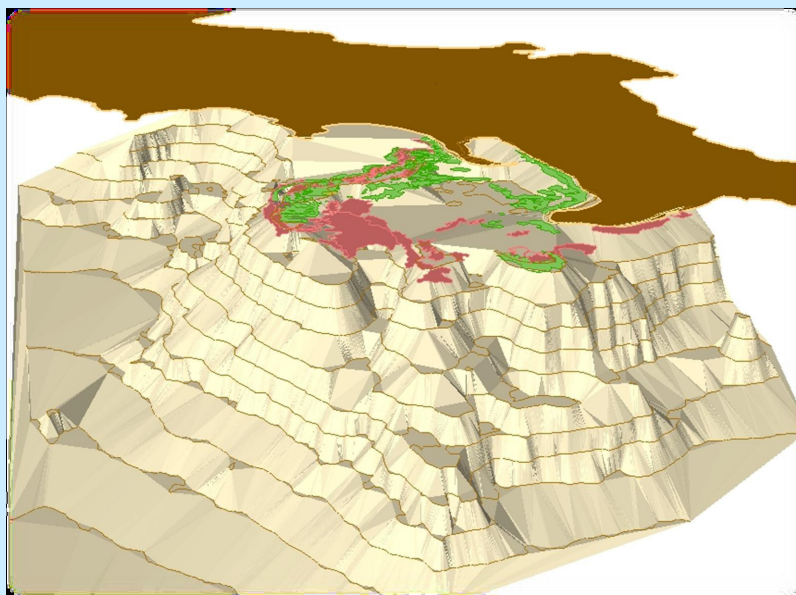


*Workshop participants*

## Using Three-Dimensional Models to Improve Marine Park Management

The GEF-IWCAM Project sponsored participation of Cherece Wallace Haywood, the GEF-IWCAM Trinidad & Tobago Demonstration Project's GIS Officer's participation in the Urban and Regional Information Systems Association's (URISA) 5th Caribbean GIS Conference, St. Anns, Trinidad and Tobago, 6 – 10 December, 2010.

Cherece presented a paper on the use of three-dimensional ocean model maps of the Buccoo Reef for marine park management. The Buccoo Reef faces significant threats as a result of increasing use; increasing incidence of conflicts amongst users; land-based sources of marine pollution, and; physical damage to the ecosystem from reef-walking and anchoring.



*3D model of the Buccoo Reef Marine Park*

She pointed out that three dimensional models of the marine park can address these problems by mapping the distribution of habitats, animating the marine ecology, visualizing the causes of coastal pollution and using satellite imagery to visualize ocean currents and temperatures. Modeling is also useful in determining the best locations for snorkel trails, reef balls, and boating.

Both the model of the Buccoo Reef Marine Park and the methodology used to develop it were shared with the audience. It highlighted snorkel trails, boat access, and marine park boundaries.

For more information on the model, contact the Buccoo Reef Trust (see [www.buccooreeftrust.org](http://www.buccooreeftrust.org)).

## Training in Environmentally Sound Management of Laboratory Chemicals for Regional Lab Managers

The GEF-IWCAM Project's laboratory strengthening exercise included evaluation of the need for training in the management of laboratory chemicals. As a result, the Caribbean Environmental Health Institute (CEHI) hosted two back-to-back meetings: **a three-day workshop on the Environmentally Sound Management of Laboratory Chemicals**, 8-10 March 2011, and **a one-day Laboratory Managers' Meeting** on 11 March 2011 in St. Lucia.

The Workshop focused upon the safe ordering, handling, storage, and disposal of laboratory chemicals. Participants also conducted a Laboratory Hygiene Audit of the CEHI laboratory, and were able to put into practice all that was taught over the 3 days.

There were 21 participants from: Antigua, Barbados, Bahamas, Tobago, St. Kitts, Nevis, Jamaica, Grenada, St. Vincent, Dominica, and St. Lucia.

The Laboratory Managers' meeting provided a forum to discuss

the way forward in the establishment of a Regional Network of Environmental Laboratories. There were 20 participants and 3 invited speakers:

- Dr. Xanthe Dubuison, St. Lucia Bureau of Standards - Laboratory Accreditation
- La Verne Walker, Ministry of Physical Development and the Environment, St. Lucia - How environmental results affect legislation
- Valerie Wilson, Caribbean Medical Labs Foundation - Lessons Learnt when developing the Medical Laboratory Network.



*Training Workshop participants*





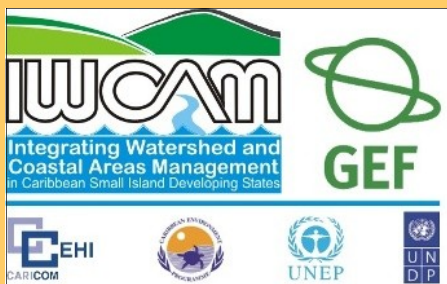
**Healthy rivers...**



## PICTURES WORTH A THOUSAND WORDS...

Polluted rivers and streams are the result of human activity on land. Everything that we dump on land is eventually washed into our rivers and streams, and this is carried to the sea. The quantity and quality of water in our rivers tell us much about the health of our water catchment. The main types of pollutants are: sediment (wind and water erosion of soils); nutrients (fertilizer, animal wastes, sewage; pesticides); solid waste (poor disposal of garbage); and toxins (manufactured and refined products such as oil, chemicals and paints).

### Polluted rivers...



**Participating Country Focal Points, Demonstration Projects and others are invited to submit articles. Please contact Donna Spencer at [dspencer@cehi.org.lc](mailto:dspencer@cehi.org.lc)**

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