

Caribbean WaterWays

Newsletter of the GEF IWCAM Project

Volume 4, Issue 4

December 2010

In this issue:

- Building Capacity for IWCAM (pgs. 1,2,3, and 6)
- End of Year Message from the Regional Project Coordinator (pgs.1—2)
- Background on the GEF-IWCAM Project (pg.2)
- Challenges and New Directions— Workshop on Coastal Aquifer Management in Caribbean SIDS (pg. 4)
- Caribbean Youth Motivated to Act for the Environment (pg. 4)
- GEF-IWCAM Project develops Community Tools for Managing Land and Water Resources in the Caribbean (pg. 5)
- Fifth Project Steering Committee Meeting Looks at Next Steps for IWCAM (pg. 5)
- Water Ministers Meet to Discuss IWRM (pg. 7)
- Rainwater Harvesting—A Natural Way of Augmenting Water Supplies (pg. 8)



End of Year Message from the Regional Project Coordinator

Dear Colleagues and Partners,

It is that time of year again when we reflect on the past twelve months and consider how successful we have been in the implementation of the GEF-IWCAM Project. Such reflection is even more critical now, as we prepare to enter our final year – the “Home Stretch”. 2011 is to bring the formal end to the project, with all that project closure entails. Naturally, it will involve completion of all demonstration and pilot activities. It will necessitate winding down of all outreach and capacity-building and will see the Terminal Review of our collective work.

However, 2011 will not only be the ending of the GEF-IWCAM, but, looking forward, will be a year in which we consider more carefully, what has worked and what should be continued in 2012 and beyond. It will be a year when we identify any future initiatives which will be needed to support what has already been built, and which can build upon the foundation established during our GEF-IWCAM Project. In this regard, there are many ideas to consider. Perhaps most importantly, the coming into force of the Land-Based Sources (of marine pollution) Protocol (to the Cartagena Convention) means that many countries will be looking towards implementation of its provisions, inclusive of reducing pollution of our coastal areas from activities on land. Complementary to the pollution reduction measures, will be efforts to improve water resources management and direct implementation of Integrated Water Resources Management (IWRM) Plans and Road Maps, prepared during the GEF-IWCAM Project.

(Continued on page 2)

Building Capacity for IWCAM

An important aspect of increasing human capacity for better management of watershed and coastal areas is the provision of tools and training in the skills needed. Activities designed to increase and enhance the capacity of stakeholders for IWCAM through training and/or equipment, or through introduction to new technology or methods, have been at the forefront of the GEF-IWCAM Project's approach.

Even as the documentation of lessons learned and good practices continues, the Project is increasingly being asked to share its experiences towards mainstreaming. While the exercise is not yet complete, in this article we focus upon capacity building as it relates to mainstreaming of the IWCAM approach.

Laboratory Strengthening

The GEF-IWCAM Project, through the Caribbean Environmental Health Institute (CEHI), has been undertaking a laboratory strengthening exercise, which includes assessments of laboratories in Participating Countries and provision of needed equipment. The objective of these activities is to build capacity for environmental surveillance and monitoring to support the adoption of IWCAM as a management approach. The goals are:

- The enhancement of the capability of national laboratories to perform basic analytical techniques related to the attainment of IWCAM objectives
- The development of capacity for national IWCAM-related environmental surveillance and monitoring
- Enhancement of collaboration and cooperation amongst relevant national



Demonstration during Practical Water Quality Workshop, April 2010

(Continued from page 1)

Efforts will be made to replicate the many good practices and pilot-scale activities implemented during the past 4 years, like rain-water harvesting, wetland wastewater treatment, and livelihood enhancement. Naturally, these good practices will be documented extensively, using formats such as documentaries, radio clips, public service announcements, manuals, brochures, experience notes, and case studies. As such, in 2011 the public will be hearing even more about the very good work done across Caribbean SIDS in relation to improved watershed and coastal area management.

As we end the year, I am pleased to report that in 2010 Participating Countries received further training, exposure for their work (such as through regional and international conferences), equipment and technical support. Training was conducted in Proposal Writing, Coastal Aquifers Management, Harbour Management, and Bio-indicators of Pollution. Technical support was provided for IWRM policy development and planning, with some on-the-ground interventions executed within communities in participating countries. The Project supported regional and global activities of other agencies, organizations and associations, such as the Caribbean Environmental Forum (CEF-5), the High-Level Session of Water Ministers at the CWWA Conference, and the Global SIDS Methodology for IWRM.

Outreach also included regular production of the 'Caribbean WaterWays' Newsletter, exhibiting at the CEF-5 and convening or attending workshops across participating countries.

We recognize that 2011 will require much effort in order to ensure a highly satisfactory completion of the project. There is still much to achieve but we remain optimistic that we will have another productive year. On behalf of the GEF-IWCAM Project Coordinating Unit, I wish to thank all partners, especially our counterparts in Participating Countries and our Executing and Implementing Agencies, for their hard work and continued support. May you all have a blessed holiday season and a productive 2011.

- Vincent Sweeney

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 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.

(Continued from page 1)

laboratories in the 13 participating SIDS countries, thereby facilitating greater information exchanges between laboratories

- Increasing the awareness of SIDS stakeholders about regional and national laboratory services available and how these services can be accessed
- Compliance with the obligations of the Cartagena Convention and the LBS Protocol.

A four-day regional training workshop on Laboratory Quality Assurance and Method Quality Control was held in May 2009 in St. Lucia. Participants attended from the following laboratories:

- Antigua & Barbuda: Antigua Public Utilities Authority (Antigua); Department of Analytical Services (Antigua)
- Bahamas: Environmental Monitoring and Risk Assessment Division (Freeport); Environmental Monitoring and Risk Assessment Division (Nassau)
- Barbados: Government Analytical Services; Public Health Laboratory
- Dominica: Water and Sewerage Company; Water Quality Laboratory; Environmental Health Department
- Grenada: National Water and Sewerage Authority; Produce Chemist Laboratory
- Jamaica: Environmental Health Laboratory; National Environment & Planning Agency
- St. Kitts & Nevis: Community Based Health Services (St. Kitts); Water Services Department (St. Kitts)
- St. Lucia: Gros-Islet Polyclinic, Ministry of Health; Water and Sewerage Company Ltd.
- St. Vincent & the Grenadines: Bureau of Standards (St. Vincent)
- Trinidad & Tobago: Department of Natural Re-



Participants - Workshop on Laboratory Quality Assurance

(Continued on page 3)

(Continued from page 2)

sources and the Environment (Tobago); Water and Sewerage Authority (Tobago).

The workshop focused on meeting the requirements of the standard ISO/IEC 17025 – General Requirements of the Competence of Testing and Calibration Laboratories and development, implementation and documentation of a laboratory quality management system. It was aimed at laboratory managers, and quality assurance and laboratory personnel involved in laboratory analysis.

In April 2010, another workshop was held at the CEHI laboratory. This four-day workshop was intended to enhance the practical aspects of water quality monitoring and interpretation of results with a special focus on microbiological analyses by membrane filtration, and physico-chemical analyses.

Building Capacity for IWCAM cont'd: Teaching Good Practices

Sustainable agriculture was promoted through a series of training sessions. These included: agro-forestry, soil conservation and composting. A series of farmers' training days in East Portland, Jamaica (left, below) and farmers' workshops in Cienfuegos, Cuba (right, below) were held, as well as technical exchanges between projects.



(Continued on page 6)

A comprehensive assessment of laboratories in the following countries was conducted by CEHI in 2008 and 2009. The listed laboratories were selected for support as a result:

COUNTRIES	ACTIVITIES
ANTIGUA AND BARBUDA	Department of Analytical Services (training and equipment) and Antigua Public Utilities Authority laboratory (training).
BAHAMAS	Water and Sewerage Corporation Laboratory, Nassau, and the Environmental Monitoring and Risk Assessment Laboratory, Freeport (training and equipment).
BARBADOS	The Public Health Laboratory (equipment and training) and the Government Analytical Services Laboratory (training).
CUBA	UEB Analisis y Servicios Tecnicos, Centro Provincial de Hygiene y Epidiologia y Microbiologia (training and equipment).
DOMINICA	The Dominica Water and Sewerage Company Laboratory and the Dominica Water Quality Laboratory of the Environmental Health Department (training and equipment)
DOMINICAN REPUBLIC	Laboratorios Instituto de Innovacion en Biotecnologia e Industria, Instituto de Química, Instituto de Microbiología y Parasitología and Laboratorio de Servicios Ambientes de la Secretaría de Medio Ambiente (training and equipment).
GRENADA	The Grenada Produce Chemist Laboratory and National Water and Sewerage Authority Lab (equipment and training).
JAMAICA	Environmental Health Department (training and equipment); National Environment & Planning Agency (training).
ST. VINCENT AND THE GRENADINES	The St. Vincent and the Grenadines Bureau of Standards (equipment and training) and the Central Water and Sewerage Authority Laboratory (training).
ST. LUCIA	Gros Islet Polyclinic laboratory (equipment and training) and Water and Sewerage Company Ltd. Laboratory (training).
ST. KITTS AND NEVIS	The Water Quality Laboratory of the Environmental Health Department in St. Kitts and the Nevis Water Department Laboratory, Water Services Department (training and equipment).
TRINIDAD AND TOBAGO	The Department of Natural Resources and the Environment and the Water and Sewerage Authority Laboratory in Tobago (equipment and training).



Challenges and New Directions - Workshop on Coastal Aquifer Management in Caribbean SIDS

Natural hazards, unplanned construction, unregulated pesticide use, and climate change – these were all themes that were discussed at a recent workshop in Saint Kitts and Nevis focusing on the management of coastal aquifers in Caribbean small island developing states. The workshop, *Coastal Aquifer Management in Small Island Developing States of the Caribbean: Challenges and New Directions* (11-12 October 2010) was co-sponsored by the Food and Agriculture Organisation of the United Nations (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the GEF-IWCAM Project.

The meeting brought together town and country planners and hydrologists to explore approaches for sustainable management of coastal aquifers. Their expertise was enhanced by the participation of technical experts in aquifer management from UNESCO and the United Nations University. These experts shared global lessons learned in areas such as mapping of aquifers and emergency use of groundwater for human security. The meeting also benefited from Caribbean experts, who presented on climate change, mapping aquifers, and managing extraction.

GEF-IWCAM Demonstration Projects in Andros (the Bahamas) and the Basseterre Valley (Saint Kitts and Nevis) were presented to the meeting participants as examples for replication. The meeting report and annexes are available at www.iwcam.org. See <http://www.iwcam.org/documents/meeting-reports/coastal-aquifer-management-in-small-island-developing-states-of-the-caribbean-challenges-and-new-directions>.



Workshop participants tour the Basseterre Valley Aquifer area

Caribbean Youth Motivated to Act for the Environment

Every two years the Caribbean Youth Environmental Network (CYEN) hosts the Caribbean Youth Environment and Development Congress, a gathering of youth environmentalists in the Caribbean which aims to provide young leaders with training and a forum for discussion of issues critical to the region's environment. It also allows them to develop action plans designed to engage and motivate the youth in the region to take action on environment and sustainable development matters.

The 8th Caribbean Youth Environment and Development Congress and Youth Environment Summit took place on 28 October – 1 November 2010 in Kingstown, St. Vincent & the Grenadines. Donna Spencer participated in the first day of the Congress, which focused upon Integrated Water Resource Management, on behalf of the Project.

The GEF-IWCAM Project was particularly pleased to receive an excellent proposal for funding support for the meeting and related activities from Renee Boyce-Drakes, Regional Chairperson of CYEN and one of the persons who had in April 2010 attended GEF-IWCAM's Proposal Writing workshop in Barbados.



Renee Boyce-Drakes speaks at the Opening Ceremony

As a result the Project was able to provide funding support for the Congress and Summit. CYEN's plans for the design and conduct of a baseline Knowledge, Attitudes and Practices Survey (KAPS) for Youth on IWRM in the Caribbean is of particular interest. This activity is in keeping with GEF-IWCAM objectives as well as CEHI's work in IWRM. The knowledge gained would inform the design of public education and awareness messages, materials and activities for youth, a target group which is increasingly recognized as being extremely significant.

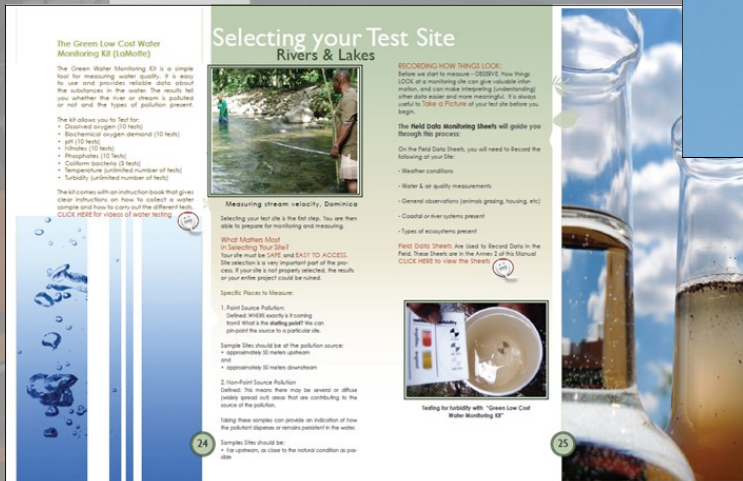
Congratulations to Renee and her colleagues at CYEN for the initiative which they are taking towards a better Caribbean Environment!



Congress participants broke into working groups

GEF-IWCAM Project Develops Community Tools for Managing Land and Water Resources in the Caribbean:

"Protecting Our Watersheds and Coastal Areas"



In early-2011 the GEF-IWCAM Project will launch its Community Based Resource Assessment tool—an engaging, visual and informative publication which aims to encourage and facilitate group activities and the sharing of ideas, towards identifying solutions to common water resource management problems of SIDS.

Look out for it online!

Fifth Project Steering Committee Meeting looks at Next Steps for IWCAM

Twelve of the GEF-IWCAM Project's thirteen Participating Countries, as well as both of the Project's Implementing agencies (UNEP and UNDP) and two of its Executing Agencies (UNEP CAR/RCU and CEHI) were represented at the Fifth Project Steering Committee Meeting which took place on 11th November 2010 in Port of Spain, Trinidad & Tobago.

Among items considered were status reports, the Work Plan and Budget for 2011, the final year of the Project, and ways to promote replication and sustainability of the IWCAM approach. 2011 promises to be a very busy year!



PSC5 Participants

(Continued from page 3)

Building Capacity for IWCAM cont'd: Regional Training courses

These included indicator development, Geographic Information Systems, project proposal writing, sewage treatment, water quality testing and project management.



Regional GIS Workshop participants, Cienfuegos, Cuba

Training for Communities

Community groups in several islands received training in different areas, among them land and water assessment and water quality monitoring.



Land and water assessment training, Union Island, SVG



Training in water quality monitoring, Mabouya Valley, St. Lucia

Support for IWRM MSc and diploma courses, Cuba

The Demonstration Project collaborated with the Centre for Environmental Studies (CEAC) to develop post-graduate Masters of Science and Diploma programmes in IWRM.



Proud participants collect their diplomas

Introduction of alternative technological solutions and training in construction and maintenance

This included rainwater harvesting and wetlands wastewater technology and reforestation techniques.



RWH in practice (with old storage tanks alongside), Fond D'or Watershed, St. Lucia



Construction of a wetland wastewater treatment unit

Water Ministers Meet to Discuss IWRM

The 6th High-Level Session (HLS) Ministerial Forum was convened on October 3-4, 2010 in St. George's, Grenada, just prior to the 19th Annual Caribbean Water & Wastewater Association (CWWA) Conference & Exhibition. The HLS was convened by CWWA, in collaboration with the Global Water Partnership – Caribbean (GWP-C), and hosted by the Government of Grenada.

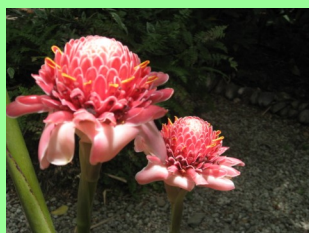
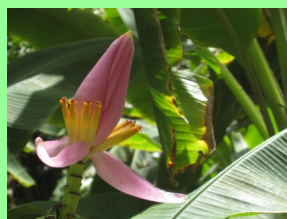
High-level representation included the Ministers with responsibility for Public Utilities/Water in Barbados, the Bahamas, Nevis and Grenada and other senior government officials (such as Permanent Secretaries) and water managers from the region. The GEF-IWCAM Project sponsored all overseas Ministers to the HLS, as well as representatives for Ministers (in the cases of Antigua/Barbuda, Dominica and St. Lucia). The GEF-IWCAM Regional Project Coordinator (RPC) also participated in the HLS, along with representatives from regional and international bodies such as CEHI, the CARICOM Secretariat, the Food & Agriculture Organisation (FAO), the Caribbean Development Bank (CDB), the Caribbean Institute for Meteorology & Hydrology (CIMH), and the Global Water Partnership (GWP). The Chairperson of the Technical Advisory Committee for the Antigua GEF-IWCAM Demonstration Project, Ivan Rodrigues, as well as the GEF-IWCAM NFP for Barbados, Dr. John Mwansa were also present.



The HLS heard from Ministers and other Keynote speakers, including the Honourable Joseph Gilbert of Grenada, and was informed of relevant developments within the region, the drought situation which the region had been facing, and *IWRM Approaches to Managing Water Crises*. Senior officials representing water utilities in Antigua/Barbuda, Barbados, Grenada, Jamaica and Trinidad & Tobago provided national perspectives on drought management in the Caribbean. They highlighted challenges, actions taken, lessons learnt and proposed future plans.

A Panel Discussion, chaired by the GEF-IWCAM RPC, was convened on "*Impacts of Water Crises and Climate Change in the Developmental Agendas of the Caribbean*". The HLS heard brief presentations from CEHI, CDB, FAO, the University of Florida and the Association of Small Island States (AOSIS), where panelists brought their various perspectives to bear on the issues in a highly interactive discussion. The meeting was also apprised of the work and plans of the CARICOM Consortium on Water.

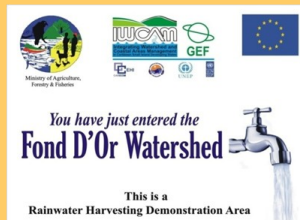
The HLS therefore served to raise the profile of water within the political sphere in the region and supported the efforts made by GEF-IWCAM and others related to partnership building among agencies.



*Seasons Greetings & a Happy
New Year from the GEF-IWCAM
Project Coordinating Unit!*



Rainwater Harvesting - a Natural Way of Augmenting Water Supplies



The GEF-IWCAM Demonstration Project in Saint Lucia launched a Rainwater Harvesting (RWH) activity in 2007 to address chronic water scarcity in the Fond D'or Watershed, particularly during the dry season and periods of induced and natural drought. This initiative

aimed to demonstrate RWH as a simple and low-cost water supply technology which can provide water at an acceptable quality standard. While RWH has been practiced historically in some communities and continues to be a major source of water in some of the drier islands of the Caribbean, its use had drastically declined in many islands, including St. Lucia.

Low-cost, simple rainwater harvesting systems were designed for installation in households and public institutions. All systems were designed so that the water is safe for use.

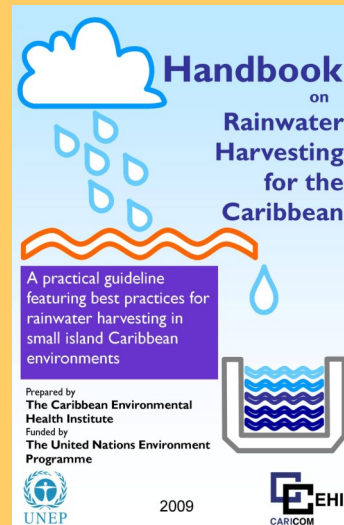
The selection of the sites where units would be installed was the responsibility of the Demonstration Project's Watershed Management Committee (WMC), composed of representatives of the community and relevant agencies. Selection criteria used included: that demonstration sites selected would be visible; persons using the systems should be able to educate the rest of the community about the systems and co-operate with the project on household impact studies.

Following site selection and development of appro-

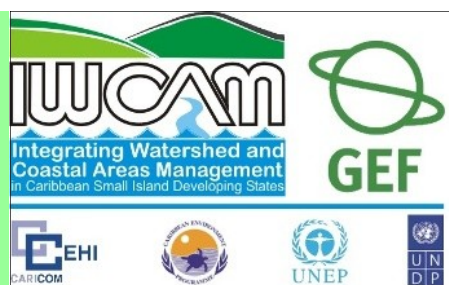
priate designs, contractors were trained in construction of the systems. By mid-May 2008, a total of 31 systems had been installed, among them 21 households and 10 public facilities, including 7 schools and 2 health centres.

Community education was extensive. Surveys of water supply impacts (quantity, quality, preferences) and economic benefits were undertaken for further evaluation. Cooperation agreements were signed between the Ministry of Agriculture, Forestry and Fisheries (MAFF) and the beneficiaries.

Following Hurricane Tomas in October 2010, based upon the performance of the RWH systems installed at the health centres in the St. Lucia Demo, the Ministry of Health took a decision to have RWH systems installed at all health centres, with funding support from the Pan American Health Organization (PAHO). More significantly, the country's Development Control Authority has recently announced that inclusion of a RWH system in new building plans (both household and institutional) will shortly be a condition for the granting of permits. Replication of RWH is increasing.



CEHI produced a RWH booklet in October 2009 with support from UNEP. It is available at:
http://cehi.org.lc/rwhindex_files/RWH%20handbook.pdf



Participating Country Focal Points, Demonstration Projects and others are invited to submit articles. Please contact Donna Spencer at dspencer@cehi.org.lc

Contact Information:
GEF-IWCAM Project Coordination Unit
P.O. Box 1111, The Morne, Castries, Saint Lucia
Tel: (758)-452-2501/1412; Fax: (758)-453-2721
E-mail: dspencer@cehi.org.lc