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Workshop Enhances Regional Laboratory Quality Assurance Skills



From May 12th – 15th, 2009, the Caribbean Environmental Health Institute (CEHI), one of the co-executing agencies of the GEF-IWCOM Project, ran a Workshop on “Laboratory Quality Assurance and Method Quality Control” in Rodney Bay, St. Lucia.

The course targeted laboratory managers, and quality assurance and laboratory personnel involved in the

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Community Perspectives on Watershed Management

The GEF-IWCOM Project's approach to Integrated Water Resource Assessment in Saint



Spring Village Working Group

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Conserving Forests for Better Water

“It is clear that we need to first and foremost protect whatever primary forest remains on the island in order to stabilize the dry season stream flow situation. We also need to set aside adequate reserve areas per watershed so that secondary forest can evolve. This will improve water quality in the short term. In the long term, we will be returning the water benefits of a primary forest and greater opportunities for sustainable water supplies.”

These were Cornelius Isaac's concluding words after making the case for conservation of St. Lucia's primary forests in a presentation titled “Forests and Rivers – the relevance of St. Lucia's forest to stream flow security” at a recent session sponsored by the GEF-IWCOM Project during St. Lucia's Water Week in May 2009. Cornelius is the Project Manager for the St. Lucia Demonstration Project, located in the Fond D'or Watershed.

The relationship between forests and water resources is closer than many of us realize. Forests are an integral part of the water cycle. They intercept rainfall, evaporate moisture from vegetative surfaces, transpire soil moisture and maintain soil infiltration, thereby influencing the amount and quality of water available. As water passes through a forest ecosystem the soil traps sediment and filters out pesticides and other pollutants from upslope land uses and activities. Forests stabilize the soils by helping to prevent erosion as ground vegetation, litter and plant roots protect the soil during periods of heavy rainfall, reducing the impairment of water quality due to sedimentation. As rainfall is intercepted, rapid runoff and flooding is also reduced.

Most importantly perhaps, forests play a role in recharging and maintaining the quality of groundwater. Water utilities know well that changes in land use can affect the quality of water at intakes, often leading to greater treatment costs.

Yet, even as the demand for water grows, Caribbean forests are declining in both size and quality.

(Continued on page 2)

Regional Technical Advisory Group's Fourth Meeting



**Vincent Sweeney, RPC,
presents Work Plan**

The GEF-IWCAM Project often looks towards regional experts to help to guide it in achieving its objective of improved integration of watershed and coastal areas in Caribbean small island developing states. As such, once to twice a year, the project calls a meeting of the Regional Technical Advisory Group (RTAG).

The RTAG is comprised of one senior technical representative from each country (wherever possible this national member should represent a sector which is related to that country's demonstration project or areas of principal IWCAM concern), the GEF-IWCAM Regional Project Coordinator, and a representative from each of the two Executing Agencies (EAs), UNEP CAR/RCU and CEHI. In addition the RTAG may invite regional or international, technical expertise as guests to a meeting where that expertise may prove to be valuable (and with the agreement of the EAs).

In July 2009, the Project convened its fourth RTAG meeting in Nassau, the Bahamas, to discuss past, present and future project activities. The draft mid-term evaluation of the

project was presented. Some major conclusions extracted from the report were:

The Project:

- is very significant and is expected to deliver important benefits and offer lessons.
- is successful and expected to continue to be so.
- has a strong local and regional impact.
- focus should move to replication of successes, sustainability, and capturing key lessons.
- is well formulated and well undertaken by an experienced Project Coordination Unit and with sufficient support from the Implementing and Executing Agencies.
- needs no significant corrective actions to objectives, activities or outcomes.
- is providing important support to Land Based Sources of Marine Pollution Protocol of the Cartagena Convention (LBS Protocol) ratification process.

The RTAG was specifically asked to consider the sustainability of the IWCAM approach after the end of the project. Participants stressed that much of the sustainability of the approach would be linked to ratification of the LBS Protocol. LBS ratification would entrench the IWCAM approach into national



Opening Ceremony Head Table

(Continued on page 7)

BACKGROUND ON THE GEF-IWCAM PROJECT:

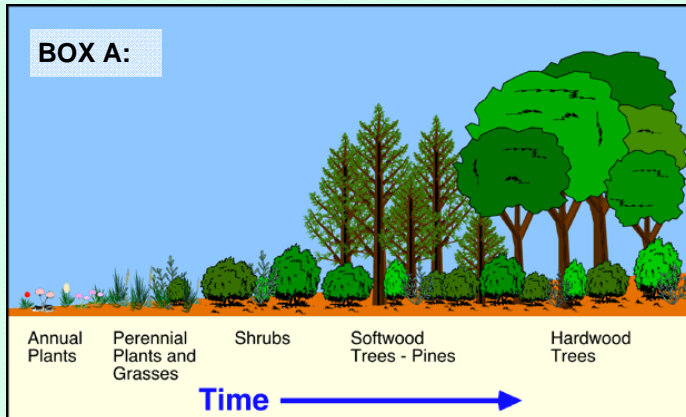
The Global Environment Facility-funded Integrating Watershed and Coastal Areas Management in Caribbean Small Island Developing States (GEF-IWCAM) Project was approved by the Global Environment Facility (GEF) in May 2004. Implementing agencies are the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP). Executing agencies are the Secretariat of the Cartagena Convention (UNEP-CAR/RCU) and 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.

Looking around at the green hillsides of the Caribbean, we might be tempted to think that our water supplies are guaranteed for many years to come. However forests face numerous threats, among them: conversion for agriculture or for development (residential, industrial and commercial uses, roads, paved areas etc.); wildfires; insect outbreaks and; harvesting for timber.

Increasingly, more and more of the vegetation that we see on hillsides is in fact secondary forest or vegetation which has grown after some drastic event such as a forest fire or indiscriminate clearing. Once primary forest is destroyed, light-demanding species grow first followed by an under story of shade-tolerant species, which is known as succession (See Box A, pg. 3).

(Continued on page 3)

(Continued from page 2)



Succession—a simplified description

Primary forests, important for water conservation, once covered hillsides and valleys throughout the Caribbean. These are forests which exist without significant disturbances for significant periods, long enough to be dominated by mature trees and are composed mainly of shade tolerant species. These include the Gommier, Chatainier, Bois de Masse and Balata Chien.

Secondary forests, which now dominate many of the forest areas in the region, in contrast, are far less efficient at water conservation. They are composed mainly of pioneer species which grow rapidly, demand a lot of light and generally do not live long. Dominant trees in secondary forests include the Palmiste, Bois Canon, Laurier and Mahot.

The reality is that demand for land for a variety of activities means that forest acreage on the whole is declining and the creation of reserves (areas set aside for non-development) is important if primary forest in particular, vital to the sustainability of water quantity and quality, is to be protected. St. Lucia's Fond D'or Watershed, where the Demonstration Project is located, has an area of 39 square kilometers, of which only 23 percent is reserve. Efforts through the Demo Project seek to preserve what is left of these forests.

Managing primary forest and expanding the forest reserves in each watershed is important if we are to have sustainable water supplies in the future. Better communication and cooperation between different sectors is needed. The development and implementation of good management practices is important to ensure that existing forests protect and enhance the freshwater environment which ultimately also affects coastal water quality as well. Better integration of forest and water policy, plans and measures is vital to sustainable management of water resources.

Primary forest



Secondary forest



Box B:

Impact of Climate Change on Forests

- Changes in precipitation (frequency, intensity, distribution)
- Increased drought
- Increased evaporation due to higher temperatures, affecting species distribution
- Extreme weather events (e.g. floods, hurricanes) that could cause damage and stress to forests
- Changes to the physical, chemical and biological processes of soil

Grenada: The St. John's Watershed

Grenada faces major threats to local watersheds and the marine environment. To begin addressing the problem, the Ministries with responsibility for the Environment and Agriculture in collaboration with the Ministry of Finance, Planning, Economy, Energy, Foreign Trade & Cooperatives, and with the support of the GEF-IWCAM Project, held a Land Based Sources of Marine Pollution Awareness and Promotion Workshop at the National Stadium in St. Georges, Grenada, on the 6th – 7th April 2009.

Similar to the Dominica LBS Workshop (see pg. 5), the objectives of the Workshop were to: raise awareness of the LBS Protocol, examine its implications for Grenada, and discuss its implementation. The Workshop also sought to initiate the development of a master plan for a watershed at risk in Grenada.

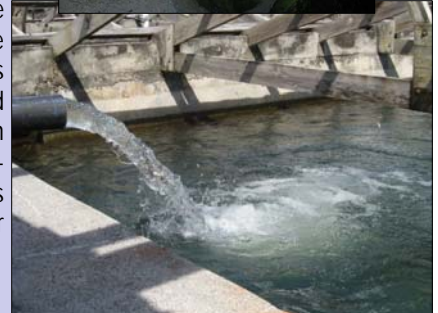
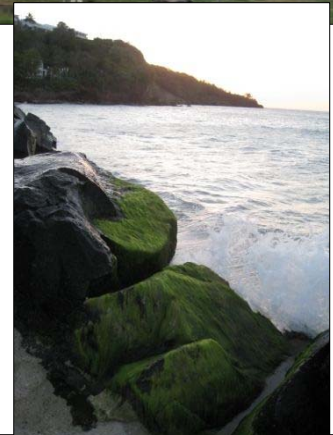
Stakeholders from Government, and other non-governmental agencies, including private sector and community-based organizations participated in the Workshop.

The St. John's Watershed

St. John's Watershed is being considered for development of a Watershed Master Plan to address the LBS Protocol. This Watershed Management Planning approach will be used as a template that could be replicated in other high-risk watersheds in Grenada and the Wider Caribbean SIDS.

After describing the St. John's Watershed the meeting discussed many of the issues affecting it. These include erosion and resulting sedimentation which affects Grande Anse Beach and its reefs negatively, and repeated flooding of communities in the lower watershed area. In addition there are manufacturing (e.g. soft drinks, detergent), agricultural, housing, mining and other activities which are also causing pollution. The area was toured later that day by Workshop participants.

A three-step approach, to be led by an Inter-agency Collaborative team and to take place over 18 months, is envisaged: 1) initiation and scoping; 2) design and implementation of control measures; 3) a monitoring and evaluation mechanism. The meeting agreed that the entire effort should be cross-cutting and integrated and that training for various stakeholders would be an integral part of it. There was a recognition that policy and decision makers need to use guidelines that encourage integrated management, that legislation needs to be revamped, and that successful cases need to be promoted.



Dominica—what does the LBS Protocol have to do with it?

It is oft remarked that if Christopher Columbus were to return to the Caribbean some 500 years after his original visit, the one island he would recognize is the Commonwealth of Dominica. In comparison with her Caribbean neighbors, Dominica has significant forest cover and a fairly pristine environment. But, as many Dominicans will remark, the situation has degraded notably in the past few decades due to uncontrolled forest clearance; encroachment by farmers; use of agro-chemicals such as fertilizers, pesticides and weedicides; siltation of rivers and dams; poor land use practices; indiscriminate waste disposal; pollution; land tenure rights; and, unplanned developments.

The Ministry of Agriculture, Fisheries and Forestry (MAFF), together with the GEF-IWCAM Project, the United Nations Caribbean Regional Coordinating Unit (UNEP/CAR-RCU), the Caribbean Environmental Health Institute (CEHI), and the Pan-American Health Organization (PAHO), held a workshop in Roseau, Dominica in July 2009 to address these threats and the role of the Land-based Sources of Marine Pollution (LBS) Protocol of the Cartagena Convention to address them.

The LBS Protocol is a regional agreement for the prevention, reduction and control of marine pollution from land-based sources and activities, providing a framework for addressing pollution based upon national and regional needs and priorities. It adopts an approach which focuses upon addressing the sources of pollution, including the application of most appropriate technologies and best management practices. It also promotes the establishment of pollution standards and schedules for implementation.

The objectives of the workshop were to raise awareness of the LBS Protocol, examine its implications for Dominica, and discuss its ratification and implementation. The Workshop also sought to initiate the development of a master plan for a watershed at risk in Dominica. It is hoped that this master plan will guide the design and implementation of appropriate measures to minimize the risk posed to life, property and the coastal zone as a result of pollution, accelerated land degradation and flooding.

The workshop was very well attended by key stakeholders from Government, at the local and national level. Participants, together with the regional agencies present, brainstormed about how to promote LBS Protocol ratification in Dominica as well as the development of a watershed management planning initiative for the Roseau Watershed.

Such a watershed planning initiative would seek to improve quality and quantity of water in the Roseau River; preserve and sustain tourism potential of the valley; heighten the physical planning activities and improve programmes in the valley, and maintain the aesthetic value of the watershed. Some critical issues in the watershed identified at the meeting, and at the field trip through the watershed, are road construction, land tenure, inadequate physical planning, solid and liquid waste disposal, ad hoc quarrying (materials taken from roadsides), poultry farming, human settlement, agricultural practices, environmental services (spas), pollutants, and stakeholder identification.

The key stakeholders were broadly defined as the wider public, utility companies, government, and the private sector. Participants underscored the importance of a Communication Plan / Strategy, involving education / public awareness, workshop, town hall meetings, trainings, and publications. Those present also underscored the need for assessment of information available and gaps and establishment of a steering committee (new or existing) and development of a workplan.

Based on the results of this meeting, the GEF-IWCAM Project Coordination Unit, CEHI, UNEP/CAR-RCU and the Forestry Division of MAFF will work together to elaborate next steps for plan development. In parallel to the watershed management initiative, GEF-IWCAM and UNEP/CAR-RCU will be working with the Government of Dominica to support them on the road to ratification of the LBS Protocol.



Freshwater Lake, Dominica

(Continued from page 1)

analysis of environmental samples. It aimed to enhance and develop their capabilities to perform basic analytical techniques in support of IWCAM objectives, and to develop the capacity for national environmental surveillance and monitoring.

Participants were selected from laboratories in participating countries of the English-speaking Caribbean that were assessed as part of the Project's laboratory strengthening component. The course curriculum was based on the training needs identified in the assessment.

The workshop sought to raise the standard at which laboratories in the Region operate to an internationally accepted level. Participants were trained in the development, implementation and documentation of a laboratory quality management system that meets the requirements of the international laboratory standard ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories.

Selected laboratories will be supplied with laboratory equipment to carry out environmental monitoring and the national training needs will be assessed and training provided at this level

CEHI will coordinate an informal network of laboratories and other interested parties in order to facilitate the exchange of:

- Standard Operating Procedures
- Experiences
- Suppliers
- Training opportunities
- Troubleshooting

Proficiency testing services by an institution such as CEHI is required and the specific tests and the cost of provision of such a service still need to be looked at.



CEHI laboratory

Training on Operation & Maintenance of Sewage Treatment Plants for Operators



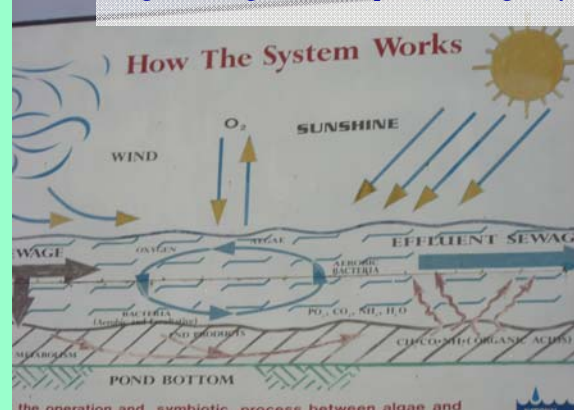
Michelle Watts of Jamaica's Water Resources Authority makes a presentation.

A GEF-IWCAM Regional training workshop on *Operation & Maintenance of Sewage Treatment Plants* was convened from May 18-22, 2009 in Montego Bay, Jamaica. This workshop was organized, based upon a request from the Project Steering Committee that training in this area be provided to Participating Countries.

The training sought to improve the skills of plant operators across the region, in order to reduce the pollution load entering the marine environment.

Over thirty persons from 12 of the Projects PCs received training. The training covered all aspects of biological wastewater treatment and included troubleshooting and plant visits. Local counterparts from NEPA and the Water Resources Authority assisted in organizing the event and making background presentations as well. UNEP CAR/RCU took the opportunity to introduce participants to the LBS Protocol.

Sign at sewage treatment plant, Montego Bay



The CARICOM Consortium of Institutions on Water Advances its Agenda



The GEF-IWCAM Project attended a meeting to jointly plan the work of a Consortium of CARICOM Institutions on Water. This meeting took place on July 14, 2009 at the CARICOM Secretariat, Georgetown, Guyana. It was attended by representatives from the CARICOM Secretariat, CEHI, CBWMP Inc, CAPNET, GWP-C, CWWA, CDERA, UWI, CERMES, and the OECS Secretariat, among others.

(Continued from page 2)

RTAG 4 cont'd:

governance structures. It will also prove helpful in obtaining external funding from donors. The RTAG suggested that the project focus its activities on countries that are close to ratifying in order to help with this process, identify the gaps, and take the needed actions to help move the process forward.

A draft work plan for 2010 was presented to the RTAG and the participants made a number of useful suggestions on how to enhance the work of the Project in the upcoming year. These included: a focus on legislators and the private sector, additional support to LBS Protocol ratification, stressing the link to climate change, and capacity building activities in areas such as project and proposal preparation, wastewater treatment and re-use, preparing watershed management plans (process / methodology), and hydrochemistry and water analysis interpretation. These recommendations, as well as others made during the meeting, will be presented to the Project Steering Committee for consideration during its upcoming meeting in October 2009, Dominican Republic.

The meeting was a follow up to a meeting held in December 2008, of an IWRM Partnership Group, established through the support of the GEF-IWCAM Project. This IWRM Partnership Group had been exchanging information and had engaged in joint planning on these previous occasions. The meeting was also designed to advance the mandate given to CARICOM institutions by the CARICOM Council for Trade & Economic Development (COTED), when it met earlier in 2008. COTED instructed that a Consortium of CARICOM institutions, in collaboration with other entities, advance an agenda for water management in the region. The meeting therefore sought to facilitate such advancement.

Conclusions and Recommendations from the IWRM Partnership Group meeting, the subsequently drafted Terms of Reference for the CARICOM Consortium on Water, and a possible Work Programme for the Consortium were also discussed. Elements of the Work Programme would be:

- Policy Formulation & Institutional Development (led by CEHI)
- Data & Information Sharing (led by CIMH)
- Capacity Enhancement (led by UWI)
- Technology & Methods (led by UWI/ CERMES)

GEF-IWCAM's Clearing House Mechanism work would support the Data and Information Sharing element.

Did you know?



The streets of many Caribbean towns flood after heavy rainfall, stranding people, creating a health hazard, destroying property and causing chaos.

Flooding is exacerbated by waterways which are loaded with sediment and drains which are clogged by solid waste debris.

Preventing soil erosion and keeping streets and waterways clear of litter helps to prevent flooding.

Workshop on Hydrometric Networks underlines importance of measuring and recording rainfall

The Caribbean region is one of the world's wettest regions in terms of precipitation. Average annual precipitation ranges from 1,100 mm in Antigua to more than 6,000 mm in the mountains of Dominica. Yet despite this, planners, authorities and decision-makers often find that there are no records available on river discharge, rainfall, groundwater levels or climate data. These data are however, the necessary foundation for proper planning, decision making and watershed management. Furthermore, long term records of data are often required to make reliable conclusions.



Workgroup designing the concept for a hydrometric network on an example island

In order to address this issue, a Workshop on Hydrometric Networks was organized in St. Vincent and the Grenadines from 18th – 20th May 2009. Its objectives were: to inform about the importance of data collection; to show the latest technology in hydrometric networks and; to offer a platform for the exchange of experience among Caribbean states.

The workshop was initiated by the Caribbean Renewable Energy Development Programme (CREDP-GTZ) and jointly organized by CREDP-GTZ, the GEF- IWCAM Project and the Government of St. Vincent and the Grenadines through the Ministry of Health and the Environment. Further sponsors were SEBA Hydrometrie GmbH and Egis BCEOM International.

St. Vincent was selected as the venue for this Workshop because the National Water Resources Management Study Project, which is funded

by the European Development Fund (EDF) and implemented by Egis BCEOM, is erecting a new hydrometric network in St. Vincent and the Grenadines.

Participants visited various gauging stations to see equipment that had recently been installed. At the water treatment plant in Jennings a rain gauge, a clamp meter for discharge measurements in pipes, a radar water level gauge, a staff gauge and a water quality meter could be seen. A discharge measurement with an inductive velocity meter was made. In addition participants were able to visit the climate station at Langley Park, where wind speed, wind run, evaporation, sun radiation, humidity, temperature and precipitation measuring instruments were inspected.

Workshop discussions revealed that the financing of hydrometric systems is a major issue. While investment for procurement of equipment is in most cases financed by donors, operation and maintenance of the systems lack sufficient financial support and need proper strategies. In addition, there is a need to increase awareness amongst decision makers of the importance of hydrometric networks and the value of the information which they generate.

The overall recommendation made by participants was the formation of a comprehensive hydrometric network in the Caribbean. The importance of hydrometric networks and data collection is to be conveyed to the Ministers of the Council for Trade and Economic Development (COTED) of the CARICOM, or a similar meeting. This effort should include recommendation of the establishment and operation of hydrometric and climate data collection in the environment policy of each member state. The sustainable financing of hydrometric networks was also discussed with participants putting forward many suggestions.



Discharge measurement with inductive velocimeter at Jennings

Jamaica Demonstration Project Manager Shares Experiences with SOPAC

The GEF-IWCAM Regional Project was represented at the recent SOPAC (Pacific Islands Applied Geoscience Commission) **Building Foundation Programme Leadership Training Seminar on Improving Water Planning Management** by Jamaica's Demonstration Project Manager, Lisa Kirkland.

The seminar took place at the East West Centre in Hawaii from July 14 - 24, 2009. Lisa participated in the last week of the seminar at which selected participants from the Federated States of Micronesia, Republic of Palau and the Republic of the Marshall Islands were provided with useful information and assistance towards adopting new, pragmatic approaches to more effectively mobilize political constituencies, increase knowledge and technical competence, and facilitate, organize and coordinate the development and implementation of integrated water resources management plans.

Lisa made two presentations: 1) *IWRM Planning in the Caribbean: Roadmap Process and Lessons Learned*, and 2) *Use of Monitoring and Evaluation: IWCAM Demonstration Project in Jamaica*.

The inclusion of local communities in water quality monitoring exercises in all instances had helped to educate the communities about natural resources, to empower them and to get their support for project activities. Seminar participants particularly liked this approach and asked questions about how they could do the same.

Lisa noted that it was interesting to see that although there are cultural differences, the issues as they relate to IWRM remain the same. These include the challenges encountered when engaging stakeholders, obtaining political endorsement and commitment, and coordination between different sectors. Examples of how Caribbean SIDS were able to overcome some of these hurdles were given. The implementation of short term, on-the-ground activities which have provided tangible, quick results or benefits to the community was one such example.

She also stressed the differences which exist from one island to another, and that it is not "a one size fits all situation"; that differences should be anticipated and highlighted.

One of the highlights of the seminar was the division of par-



The Punlao Watershed

ticipants into two islands; with each island being asked to come up with IWRM plans. This was fol-



Ancient Hawaiian planting technique

lowed by role play. It was notable that the various aspects of training which had taken place were actually incorporated into the plans which were produced.

The seminar included a trip to a Hawaii watershed which is managed to provide support for school children and to preserve aspects of ancient Hawaii planting techniques.

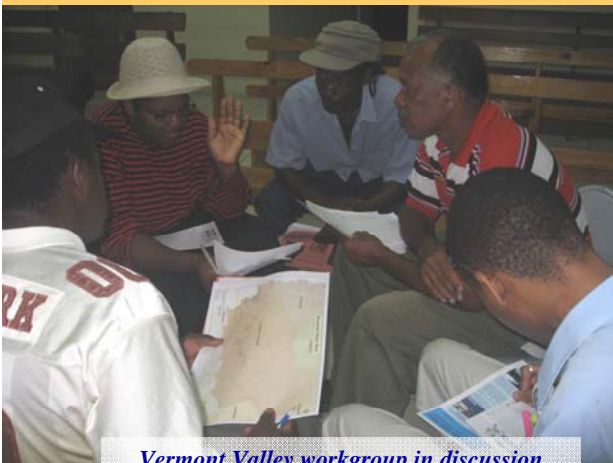
The Demo Project Manager was very enthusiastic about the experience which she found to be very educational and to have provided excellent networking opportunities.



Winning IWRM role play workgroup receives a gift basket from the Caribbean



Spring Village workgroup with facilitator, Agathe Sector



Vermont Valley workgroup in discussion

(Continued from page 1)

Vincent, is attempting to be more consultative in order to understand the most pressing issues faced by communities and how best to help resolve them while improving people's quality of life. In contrast to the approach used in the other participating countries where consultations have been limited to one or two national consultations, in St. Vincent, in addition to a national level consultation, four separate community consultations were organized during the month of August.

The four communities were:

Greggs – located in the South Eastern St. Vincent in the Biabou watershed. A tight knit community made up partly of Garifuna. Its main economic revenue came from banana farming until the collapse of that market and the destruction of much of the crop from the Moko disease. Today, dasheen (a root) is the main crop.

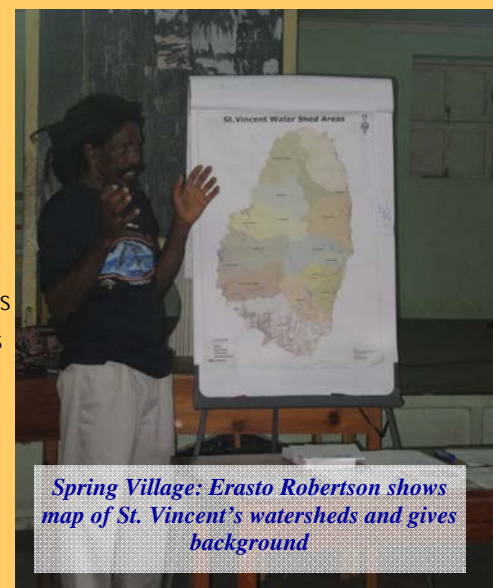
Chateaubelair - one of the larger leeward coastal communities, situated in the North West area of St. Vincent, in the Chateaubelair watershed. It is home to two major tourist attractions, the Trinity and Dark View Waterfalls. It is also close to the Soufriere Volcano, where illegal farming takes place due to the fertile soil and remote location. The main socio-economic activities are farming and fishing.

Spring Village - located on the leeward side of St. Vincent, in a valley to the south of Chateaubelair. It is in the Cumberland Watershed, one of the largest watersheds in St. Vincent. The farming of root crops and citrus dominates.

Vermont Village - located in the South Central part of St. Vincent, in the Buccament watershed. This watershed is extremely important as it supplies water to Kingstown, which covers about 40% of the population. It is also home to the Vermont Nature Trail, a popular tourism destination.

Major issues identified:

- 'brown' water supplied by CWSA
- soil erosion leading to heavy sedimentation of river water
- landslides
- deforestation
- solid waste pollution in waterways and on beaches
- flash flooding
- damming of waterways as a result of debris and the overgrowth of elephant grass
- water pollution by pesticides and fertilizer runoff (sometimes pesticide containers are washed out in or near streams)
- water pollution by pig pens located near rivers affecting downstream users
- poor and unsustainable land use practices (e.g. illegal farming in the hillsides)
- bush fires
- armadillos unearthing tree root systems



Spring Village: Erasto Robertson shows map of St. Vincent's watersheds and gives background

Perceived Barriers to Change:

- unemployment
- migration
- political division
- religious differences
- poor communication
- financial difficulties and limited resources
- lack of proper solid waste management
- CBO's need for training in management and record keeping
- a lack of effective local government
- poor enforcement
- lack of cooperation and poor communication amongst stakeholders
- lack of education
- getting people to come to meetings
- selfishness
- illegal farming
- improper and uncontrolled river bank uses

The four communities identified these needs or solutions:

- education and public awareness (e.g. impacts of deforestation) through cultural programs and creating environmental groups.
- need for legislation regarding littering as there are no regulations concerning this issue and enforcement of that legislation.
- incentives for people to stop littering such as recycling programs, more bins for trash and more frequent cleaning of gutters
- training in better farming practices (contour drains) and agroforestry
- community exchanges between farmers
- provision of seeds with training on planting techniques
- capacity building for CBOs
- reforestation and river bank stabilization.
- more consultations to keep people involved in finding solutions to problems



Chateaubelair—everyone got involved.

Significantly, participants noted that they had learned that the protection of land, forests and water services is essential and that there are linkages between land and water.



Spring Village community presenter



Greggs workgroup deliberations

“This process of consultation has helped the GEF-IWCAM project gain the attention of four different communities as well as national level stakeholders regarding IWRM and land and water issues. It needs to build on this by quickly implementing a participatory process that addresses the priority land and water issues identified by the communities. Community members have shown their willingness to participate and CBOs exist on the ground ready to partner with GEF-IWCAM but they need information, support, coordination and capacity building.”

– Agathe Sector, Natural Resources Consultant.

Going Global: Sharing IWCAM Experiences in Paraguay



Sasha Gottlieb presents at the Ecohydrology Conference

As the GEF-IWCAM Project moves forward, sharing experiences, lessons learned and good practices at the national, regional, and global levels becomes more and more important. The staff of the Project Coordinating Unit, demonstration project managers, and others involved with the project are dedicating a significant amount of time to preparing papers, presenting at conferences, and exchanging information with others through a variety of fora.

This is why the GEF-IWCAM Technical Coordinator, Sasha Beth Gottlieb, found herself in Asuncion, Paraguay in late June and early July 2009. Sasha travelled to Paraguay to participate in two events organized by the United Nations Educational, Scientific, and Cultural Organization's (UNESCO) International Hydrological Programme (IHP): The VIII Meeting of National Committees and Focal Points of UNESCO International Hydrological Programme for Latin America and the Caribbean and the Conference *Ecohydrology in the context of*

Global Change.

At the former, she presented on the activities of the GEF-IWCAM Project and sought out opportunities for collaboration with the UNESCO IHP Centres and other partners present.

In the latter, Sasha shared the experiences of the project in its work on indicators, including the indicators assessment, development of an IWCAM indicators template, and then the application of that template in Barbados, through the upcoming development of a land and water information system which is being undertaken in collaboration with the United Nations Food and Agriculture Organization and the Government of Barbados.

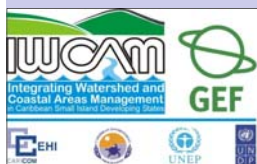
The presentations from these meetings can be found at www.iwcam.org.

The River and Public Health



"Public education and awareness; community mobilization ...most needed."

*Wenn Gabriel, St. Lucia's Chief Environmental Health Officer,
St. Lucia Water Week, May 2009*



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

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