

CReW's Lines

Newsletter of the Caribbean Regional Fund for Wastewater Management

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Rodney Bay, Saint Lucia

GEF CReW at an important juncture –

Project Steering Committee considers progress to date and the way forward

The GEF CReW Project is preparing for the Third Meeting of the Project Steering Committee (PSC 3) which is scheduled to take place 28– 30 January 2014 in Rodney Bay, Saint Lucia.

Project Coordinator, Denise Forrest, describes this as, arguably, the most important meeting of the Steering Committee to date. In addition to reviewing Project activities and achievements in 2013, the Work Plan and Budget for 2014 will be considered. Key findings and recommendations of the Mid-term

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Building Country Capacity under Component 2

Under Component 2 of the GEF CReW Project, UNEP CAR RCU has developed Small Scale Funding Agreements (SSFAs) to support National Capacity Building and Policy, Institu-

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Regional journalists agree - Wastewater is an issue that deserves more attention

Introduction

The headline *“Storms, Flooding, Can Unleash a Toxic Soup”* written by Desmond Brown for Inter-Press Service (IPS), three days after participants in GEF CReW's Regional Media Workshop on Wastewater saw first hand the effects of a heavy overnight rain on the streets of Georgetown, Guyana, may at first seem overly dramatic. The twenty-five Caribbean journalists who participated in the Workshop probably would agree with Desmond however. As expert after expert outlined the consequences of poor wastewater management for Caribbean society and environment, this lively group of journalists from ten of the Project's countries, grappled with the issue, asking themselves how they might most effectively bring this urgent issue to the attention of their readers, watchers and listeners.



Flooded street, Georgetown, Guyana, 27 November 2013

The call to attention was led by the Project Coordinator, Denise Forrest, who presented regional reali-

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Evaluation (MTE) of the Project, undertaken between October and December 2013 (half-way through project implementation), will also be presented and discussed.

A significant portion of PSC3 will be dedicated to obtaining input and feedback from participating countries and experts on the development of guiding principles for a replication strategy. As the GEF CReW Project enters its second half of implementation, consideration of how best to replicate Project Financial Mechanisms (PFMs) in additional countries, as well as how to move all countries in the Wider Caribbean Region closer to compliance under the LBS Protocol through policy reform and institutional strengthening are foremost in the mind of the Project's Inter-Agency Coordination Group (IACG).

PSC3 will be attended by National Focal Points (NFPs) of the Project's participating countries, key agencies, such as the Caribbean Development Bank and the Caribbean Public Health Agency which are members of the PSC, members of the IACG—UNEP and IDB, representatives of the Pilot Project Executing Agencies, the regional Executing Agency - UNEP CAR RCU - as well as consultants and members of the Project Coordination Group (PCG).



The Mid-term Evaluation of GEF CReW

The Mid-term Evaluation (MTE) of the Project "Testing a Prototype Caribbean Regional Fund for Wastewater Management (CReW)" was undertaken half way through project implementation to analyze whether the project is on-track, what problems or challenges the project is encountering, and what corrective actions are required. The MTE assessed operational aspects, such as project management and implementation of activities and the level of progress towards the objectives. The evaluation assessed project performance to date (in terms of relevance, effectiveness and efficiency), and determined the likelihood of the project achieving its intended outcomes and impacts, and the implementation of planned project activities and planned outputs against actual results. It focused on identifying corrective actions needed for the project to achieve maximum impact. Evaluation findings will feed back into project management processes through specific recommendations and 'lessons learned' to date.

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tional and Legal reforms in seven countries: Antigua & Barbuda, Barbados, Belize, Guyana, Jamaica, Saint Lucia and Suriname.

SSFAs for Antigua and Barbuda, Saint Lucia, Guyana, Belize, and Barbados have been signed and first disbursement of funds was made. Guyana and Barbados are expected to receive their first disbursements early in 2014.

The Governments of Jamaica and Suriname are expected to sign their respective SSFAs soon, following agreement on proposed activities, work plans and budgets. Discussions are also ongoing with project focal points in Trinidad and Tobago and Saint Vincent & the Grenadines on specific areas of capacity building support. In this regard, UNEP CAR RCU facilitated a mission to St. Vincent and the Grenadines by the Project Coordinator and Technical Specialist in November 2013. Based on this visit, several recommendations were made that will form the basis for future capacity building support for St. Vincent & the Grenadines.

The Regional Activity Centre for the LBS Protocol, RAC-CIMAB, as part of an agreement to prepare a report on LBS compliance in the participating Spanish-Speaking countries of the project, conducted country visits to Honduras, Guatemala, Costa Rica and Panama between July and October and discussions were held with a range of national stakeholders on issues relating to wastewater management and the LBS Protocol. A sub-regional workshop was subsequently organized by CIMAB and held in December, 2013 in Cuba. At this workshop, country representatives made detailed presentations on wastewater management and national challenges and needs highlighted during the country visits were further discussed. Based on these discussions, a final workshop report and Regional Report on LBS Compliance is expected to be finalized by February 2014. These reports will guide future capacity building support to be provided to the Spanish-speaking countries.

Country activities under Component 2 include:

- Development of water quality monitoring and analysis programmes
- Updating and strengthening of national standards and regulations for wastewater management
- Developing guidelines for wastewater permitting and licensing systems
- Development of national wastewater management strategies
- National training workshops for operators and regulators of wastewater facilities
- Development of national communication strategies and public awareness programmes for wastewater issues
- Development and dissemination of communication products, press releases, articles relating to wastewater management
- Development/Amendment and Harmonization of legislation and regulations for and related to wastewater
- Review of legislation with regards to utility regulations



WASTEWATER SERIES: Fact Sheet # 4



Wastewater as a Resource

Understanding the Concept of Waste as a Resource

Much of the waste generated on a daily basis, both in our personal lives and in industry, can be reused. In this way waste can be viewed as a resource as it can form an input into economic processes. The reuse of waste allows not only a reduction in the amount of waste for disposal, but allows for a reduction in the amount of first use materials in production processes.

The use of water in our homes, for agriculture and in industry results in its contamination with different substances. These “contaminants” can however be valuable resources for other uses. Increasingly, integrated water resource management (IWRM) involves recognizing that wastewater can be a resource if approached differently.

Wastewater contains both nutrients and water, both of which are essential for food production. Linking water management, sanitation and agriculture can provide needed water and nutrients in a way that is sustainable. For example, wastewater from chicken processing can be used for irrigation (this is actually done by Jamaica Broilers)

Wastewater is a Resource... It can be Reused and Recycled

Managing wastewater wisely makes good sense.

The reuse of wastewater can ease the demand on limited fresh water supplies and improve the quality of streams and lakes by reducing discharged effluent. Wastewater can be a resource – as a source of reclaimed water, biogas and useful biosolids.

Using recycled or reclaimed water can benefit us in many ways.



The Sustainable Sanitation and Water Management Cycle.

Source SEECON 2010. <http://www.sswm.info>

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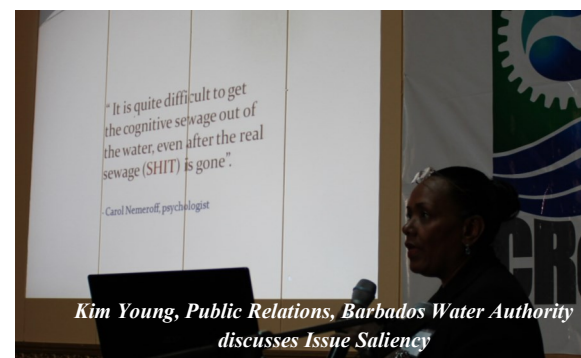


Nigel Niles, Board Member, Guyana Wastewater Revolving Fund opens the Workshop

The journalists who attended this workshop think that the linkage that most urgently needs to be explained to the public is:

Wastewater and Health

(Source : KAPS, GEF CREW Regional Media Workshop)



Kim Young, Public Relations, Barbados Water Authority discusses Issue Saliency



Rensforde Joseph & Marlon Daniels of the Guyana Pilot Project



Answering the KAPS!



Facilitated session on Day 1

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ties in terms of wastewater management, or lack thereof. She was followed by Adrianus Vlugman, Senior Advisor, Sustainable Development and Environmental Health, PAHO/WHO, Guyana who pulled no punches in describing the health risks to which poor management of wastewater exposes us. Dr. Donna May Sakuralesmessy, Deputy Director (Research), Institute of Marine Affairs in Trinidad & Tobago, described the many effects of untreated wastewater on the environment, public health and ultimately the economic wellbeing of a community; all against the fact that tourism is a major source of income in the region.

The Workshop, which took place 26—28 November in Georgetown, Guyana, aimed to:

- Deepen the knowledge and expertise of journalists on wastewater issues and management in the Wider Caribbean Region.
- Increase media coverage about the challenges of wastewater management, impacts on human and environmental health, and solutions, use of appropriate technologies, low-cost alternatives and use of treated water.
- Raise awareness on the GEF CREW Project and issues of sustainable financing for wastewater management.
- Build a regional community of journalists, writing regularly about water and wastewater issues.
- Gain a better understanding of how to provide information resources to journalists to better enable coverage.

A Knowledge, Attitudes and Practices Survey (KAPS) of Media practitioners was administered via questionnaire on Day 1 of the Workshop (to be repeated in 2014 for comparison) and facilitated exercises were included on Days 1 and 3 to promote dialogue amongst participants and to help them share their knowledge and insights.

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Workshop participants

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The United Nations Environment Programme's Regional Coordinating Unit (UNEP CAR RCU), as regional executing agency of the GEF CReW Project, organized the Workshop with the support of Guyana's Ministry of Housing and Water, which is responsible for implementing Guyana's pilot project under the GEF CReW.

Over three days the media learned about wastewater management and issues and challenges faced in terms of health, tourism, agriculture and climate change throughout the region. They had site visits and opportunities to speak to experts.

Two instructive site visits were facilitated by the Guyana Pilot Project Coordinator and Guyana Water Incorporated (GWI) on Day 2. Both were located in Georgetown: 1) Banks DIH Limited's Wastewater Treatment Facility at Caribanks Complex, jointly funded by BANKS DIH and the Coca Cola Company, and; 2) GWI's Mandela Facility which is to be improved.

In the two weeks following this media sensitization workshop, more than fourteen articles were placed in regional media by journalists who participated.

This was an important learning exercise for all, including the CReW team. The KAPS report should be published by March and the Project will be doing its best to provide the media with useful resources, opportunities to visit sites and to speak with experts. We know that helping the public make greater sense of wastewater issues is going to take consistent reporting. We hope that out of greater awareness will come action!



Touring the BANKS DIH Wastewater treatment facility



Some of the constraints described by journalists in writing about wastewater:

- Finding exciting human interest stories related to wastewater management is difficult.
- There is a lack of up to date information and statistics.
- Soliciting interviews and updated information from experts is not easy.
- Public perception and lack of public knowledge.
- The absence of adequate training and exposure for journalist and reporters.
- Assistance simplifying wastewater issues is needed.
- There are often budgetary constraints.
- Political and managerial pressure can be a factor.
- Environmental issues are not priority for most media outlets given other things happening.



Media interview engineer at GWT's Mandela Facility, Georgetown



Facilitated discussion, Day 3



Interviewing the journalists!

GEF CReW and Related Events to look out for in 2014!

DATE	EVENT	PLACE
27—31 January 2014	GEF CReW Third Project Steering Committee Meeting (Regional)	Gros Islet, Saint Lucia
26—28 January 2014	CAWASA GEF CReW Annual General Meeting	Saint Lucia
31 March— 1 April 2014	CReW Regional Partnership Meeting on Wastewater Management (Tentative)	Jamaica
9—13 June 2014	LBS STAC / GPA Partnerships / LBS Compliance	To be determined
June 2014	Taller de CReW para los países Hispanohablantes — Media Workshop	To be determined / announced
1st week of October 2014	23rd Annual Caribbean Water and Wastewater Association Conference and Exhibition and 10th High Level Session (HLS) Ministerial Forum	Saint Lucia
24—28 November 2014	Second Meeting of the Contracting Parties to the Protocol Concerning Pollution from Land-Based Sources and Activities in the Wider Caribbean Region (2nd LBS COP). Thirteenth Meeting of the Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (13 th COP).	To be determined / announced

Highlights of Upcoming Regional Activities

- Resource Valuation Studies in Panama and Trinidad and Tobago
- Regional Capacity Building for improving financial sustainability of wastewater utilities
- Development and implementation of online courses in wastewater management
- Development of decentralized wastewater treatment technology in pilot rural communities and supporting communication strategy
- Enhancing Partnerships with regional organizations for raising profile of wastewater management in the region
- Upgrade of CReW web site and development of visualization tool
- Provision of direct Capacity Building Support to all CReW non-pilot countries
- Initiation of Development of Regional Data Base for wastewater management for supporting compliance with LBS Protocol
- Collaboration with the Caribbean Examinations Council (CXC) to strengthen incorporation of wastewater issues into curricula
- Documentation and sharing of experiences and lessons of Pilot Financial Mechanisms
- Regional Workshop on Global Partnerships on Nutrients, Wastewater and LBS Protocol

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Wastewater as a Source of Water

- Recycled or reclaimed water can be used in numerous applications to satisfy most water demands, depending on the level of treatment. The water is treated to meet regulatory guidelines for the intended end use.
- Wastewater may be reclaimed and reused for crop and landscape irrigation, groundwater aquifer recharge or recreational purposes.
- As water becomes scarcer, water treated to its highest quality is increasingly being accepted as an additional source of safe drinking water.
- Normally, reused water can be employed for non-potable purposes, e.g. flushing toilets and urinals. Reused water or grey water can be marked with a blue dye to ensure it is not used for potable purposes, e.g. drinking, showering or washing.
- Management of water and wastewater need to be seen as a package – related to each other.

Wastewater as a Source of Energy

- Clean energy can be generated from methane, which is emitted during the handling and treatment of municipal and industrial wastewater. Cost-effective technologies that deliver clean energy from methane are widely available.
- Benefits of this include: reduced greenhouse gas emissions, energy cost savings, and progress towards using renewable energy locally, close to where it is generated, e.g. on farms.

Wastewater as a Source of Fertiliser

- Biosolids are the nutrient rich organic product of wastewater treatment and can be used to return valuable nutrients and carbon to the land. Biosolids provide nutrients such as nitrogen, phosphorus, potassium, sulfur and zinc, enriching soils and keep them productive and healthy.
- Biosolids can be recycled as a fertilizer and soil conditioner in agriculture and forestry, and can be composted and used in landscaping and gardening.

Good Wastewater Practices – Reuse and Recycling in Action...Creating a Paradigm Shift

A paradigm shift is now required in world water politics not only to prevent further damage to sensitive ecosystems and the aquatic environment, but also to emphasize that wastewater is a resource whose effective management is essential for future water security. (UN Water, 2013)

The Le Sport resort in Saint Lucia treats wastewater in three interconnecting lagoons that filter wastewater with aquatic plants and mesh. The filtered water is then disinfected further with ultra-violet rays and used for irrigation on the resort's grounds. In its first year of operations, the new treatment method saved about 3.8 million litres (1 million gallons) of water and thousands of dollars.

The Grupo Punto Cana (GPC), which owns and operates an international airport, three hotels and various residential properties in the Dominican Republic, operates water treatment plants in all of its resorts and is in the process of introducing reused water for irrigation. GPC states that it uses ecological and sustainable development practices in the provision of all of its services.

Perspective: Why would you want to waste your wastewater?

Adrianus Vlugman, Senior Advisor, Sustainable Development and Environmental Health, PAHO/WHO, Guyana, points out that a piped water supply is not only a source of "safe" drinking water, but also a medium for the transport of waste from the home. With improved water supplies came the development of flush toilets, washing machines, etc. and this, in turn, lead to the generation of more wastewater.

Water is a transport medium to remove waste from household (washing-flushing) and 98% of water supplied to a household becomes wastewater. In much of the region septic tanks are used and these discharge either into groundwater, into street drains, streams or rivers, or directly into the coastal zone. In the region, the majority of residents are not connected to sewer systems, and even when they are only 25% of treatment plants work satisfactorily, so that a great deal of wastewater goes into the sea untreated.

Providing piped water without proper disposal of wastewater could actually be detrimental to public health he says. Furthermore, when one considers that many Caribbean countries are water stressed and that freshwater is scarce, we need to think differently about wastewater which is freshwater, after all...

CIMAB Workshop assists countries in identifying priority needs under CReW

Requests for assistance from the four Spanish-speaking countries (Costa Rica, Guatemala, Honduras, and Panama) participating in GEF CReW at the Workshop hosted by CIMAB in December 2013 (see page 2), related to wastewater management and accession and implementation of the LBS Protocol, were comprehensive and included the following:

- Technical assistance with the improvement of the legislative framework for waste water discharge, to include legal instruments for various forms of disposal of wastewater (outfalls, septic tanks, among others).
- Training in innovative practices for mobilizing financial resources for domestic waste water management.
- Strengthening of the institutional capacity of Ministries with responsibility for Environment and Natural Resources, especially in terms of laboratory analysis.
- Training on environmental monitoring for marine and coastal areas, inland waters and aquifers.
- Technical assistance for the management of available information including the joining of existing databases on wastewater discharge characterization.
- Development of information systems to include indicators of wastewater man-

agement and environmental monitoring.

- Technical assistance for the evaluation of existing infrastructure for the management and treatment of wastewater.
- Specific technical assistance on issues such as: microbiology of activated sludge as a tool for operation and maintenance, sediment and biota monitoring in seas, stabilization and disposal of sewage sludge.
- Training in innovative practices for the mobilization of financial resources for domestic waste water management.
- Training on indicators of water quality (both coastal and inland) and environmental monitoring systems.
- Formulation of sanitation projects for fund-raising from international financial institutions.
- Strategies for awareness and environmental education in communities, population settlements at risk.
- Activities for the promotion and dissemination of the LBS Protocol.
- Financial assistance for environmental awareness programs for key actors in the municipalities and sanitation implementing institutions.
- Design and implementation of environmental education programs.



GEF CReW Project Background:

The CReW is a four-year project, funded by the Global Environment Facility (GEF) and implemented by the Inter-American Development Bank (IDB) and United Nations Environment Programme (UNEP). It was established in 2011 and will end in July 2015.

It aims:

- To provide sustainable financing for the wastewater sector
- To support policy and legislative reforms, and
- To foster regional dialogue and knowledge exchange amongst key stakeholders in the WCR.

There are thirteen participating countries: Antigua & Barbuda, Barbados, Belize, Costa Rica, Jamaica, Guatemala, Guyana, Honduras, Panama, Saint Lucia, Saint Vincent & the Grenadines, Suriname, and Trinidad & Tobago.

The Project Coordination Group (PCG) is based in Jamaica, at the offices of the IDB and at UNEP's Caribbean Regional Coordinating Unit which is Secretariat to the Cartagena Convention (UNEP CAR/RCU).

*Please check our website and visit (and like!) our Facebook page: **GEF CReW Project**. We also welcome contributions on wastewater issues from within the Wider Caribbean Region. Contact Donna Sue Spencer at: ds@cep.unep.org for more information.*

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