

CReW's Lines

Newsletter of the Caribbean Regional Fund for Wastewater Management

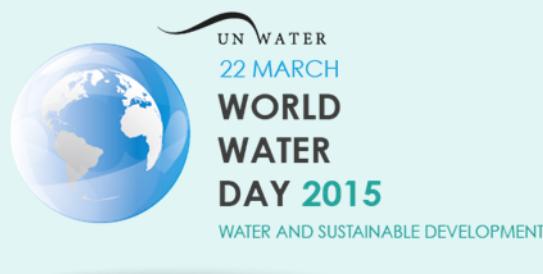
Vol. 4, Issue 1

March 2015

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Outdoor latrines remain a fact of life in many poor communities throughout the Caribbean. These are considered “improved sanitation” where no facility whatsoever existed before. Like these however, they are often neglected.



“Despite impressive gains made over the last decade, 748 million people do not have access to an improved source of drinking water and 2.5 billion do not use an improved sanitation facility.

Investments in water and sanitation services result in substantial economic gains. The return on investment of attaining universal access to improved sanitation has been estimated at 5.5 to 1, whereas for universal access of improved drinking-water sources the ratio is estimated to be 2 to 1.”

UN Water: <http://www.unwater.org/worldwaterday>



Considering the Future We Want on World Water Day 2015 - Sanitation for All?

UN Water estimates that: *“500,000 children die every year from diarrhoea caused by unsafe water and poor sanitation”.*

It's tempting for us in the Caribbean to think that our countries don't contribute to this number but statistics from any of the regional health agencies would confirm otherwise. Throughout the Caribbean there are poor communities without basic sanitation.

In February, participants in a Governance and Sanitation Workshop, organized by the Caribbean Development Bank (CDB) in collaboration with the Global Environment Facility-funded Caribbean Regional Fund for Wastewater Management (GEF CReW) Project, the United Nations Environment Programme Caribbean Regional Coordinating Unit and the Caribbean Water and Sewerage Association (CAWASA), visited a squatter's community in St. John's, the capital of Antigua & Barbuda. There, at most, wastewater goes into septic tanks (which are often not properly maintained) then to surface drains which run down to the sea. Human waste is still sometimes bagged and tossed for disposal, and communal latrines, few and far between, are poorly maintained. This is not an uncommon situation in the Wider Caribbean Region.

This says a lot about the real gap that exists between “Sanitation for All” and the reality. While the majority of us in the Caribbean may have flush-toilets

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UNEP CEP, CReW and TNC— Pooling Knowledge and Experience to tackle Wastewater Management more Resourcefully

Christopher Corbin, AMEP Programme Officer, represented UNEP CAR/RCU and the GEF CReW Project at a Wastewater and Reefs Strategy Development Workshop convened by the Nature Conservancy (TNC) in Florida, USA, 23rd – 25th March 2015.

TNC was seeking input for the development of its wastewater management strategy. UNEP CEP was able to make a significant contribution to the discussion given its extensive work on wastewater management, including through projects such as GEF IWCAM and GEF CReW and within the framework of Annex III of the LBS Protocol.

The workshop also aimed to help participants increase their understanding of current wastewater management practices (traditional and innovative), the conservation impacts of wastewater and the social situation/barriers to change, and their conservation implications.

It included: a webinar on wastewater management; a field visit to demonstrate water reclamation (see below); and a facilitated Workshop with technical presentations, case studies and resource material.

The Palm Beach County Southern Region Water Reclamation Facility and its associated wetlands, Green Cay and Wakodahatchee, is an activated sludge treatment system with wastewater reuse including discharge to two constructed wetlands.



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which discharge to sewer systems or to on-site systems such as septic tanks that provide some level of treatment, there are still many among us who struggle with this daily challenge.

For those who lack even basic sanitation, the suffering caused by this is not only about the hardship and indignity of having to “make-do”, it is also the sickness that results when coastal waters become polluted by untreated sewage. At worst, stagnant, oxygen-starved, polluted waters lap our shores killing marine life and making us sick. We often don’t even make the linkages... The ear, eye and skin infections suffered by swimmers and bathers, and the dwindling numbers of fish being netted by fisher-folk are caused by the domestic and industrial contaminants we put into waterways and the sea.

So what can we do?

The issues of sanitation (i.e. the provision of clean drinking water and adequate sewage disposal) and wastewater treatment (i.e. the process of removing contaminants from wastewater) are intertwined. Both affect living conditions and human health and are considered critical issues at every level.

The Protocol on the Control of Land-based Sources of Marine Pollution, referred to as the LBS Protocol, offers Caribbean countries some help. In the Wider Caribbean Region, over 80% of domestic wastewater enters the Caribbean Sea untreated making sewage the number one point source of marine pollution in the region. In 1999, Governments of the Wider Caribbean

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David Dalton of the Palm Beach County Water Utilities Department explains to participants how wastewater is treated and reclaimed and demonstrates field testing of wastewater effluent before being discharged into the wetlands and for use in irrigation.



Palm Beach County Water and Wastewater Utility in South Florida: uses reclaimed water for irrigation and also for an artificial wetland which has become a big tourism attraction.

Treated effluent is discharged from the utility to two constructed wetlands. Both wetlands were designed to demonstrate beneficial water reuse and provide a multi-purpose park facility that serves as wildlife habitat and recreational facility while polishing treated wastewater. It is managed by the Palm Beach County Water Utilities Department.



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Wastewater Management Policy – New Toolkit offers Guidance for Participating Countries

All of the GEF CReW participating countries have similar issues with respect to their policy, legislative and institutional frameworks for wastewater management. According to data gathered: 38 per cent of countries have a weak policy and legislative framework; 23 per cent have made considerable progress and are using a comprehensive framework for wastewater management in their country, and; less than 10 per cent have legislation that focuses on wastewater management.

GEF CReW countries have long indicated the need for assistance in the form of guidelines that would assist them to develop wastewater policy. In response the Project has developed a toolkit to assist wastewater managers, chief technocrats and senior policy officers to improve capacity in developing and implementing wastewater management policies in order to improve the management of the sector. It sets out the key considerations in developing wastewater management policy.

While the toolkit is a work in progress, the Project encourages its use as a practical reference guide to stimulate change in how wastewater managers develop and revise policies on behalf of their governments.

The developmental goals of the Toolkit are to:

- Improve wastewater management;
- Stimulate improvements in the management of domestic wastewater as a priority source category under Annex III of the LBS Protocol;
- Provide policy to support wastewater legislation;
- Improve infrastructure, institutional and human resource capacity for wastewater management;
- Improve the organizational readiness and absorptive capacity for investments in the sector including financing for operations and maintenance;
- Promote the enactment of national legislation to implement the LBS Protocol; and
- Foster a regional approach to the management of coastal and marine areas of the Wider Caribbean Region.

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Region signalled their commitment to address land-based sources of marine pollution when they agreed to the LBS Protocol. This Protocol forms part of the only legally binding regional agreement for the protection and development of the Caribbean Sea – the Cartagena Convention - and eleven countries in the region have signed this agreement to date.

Signing onto the LBS Protocol commits Governments to make major improvements in wastewater management by introducing innovative and cost effective treatment technologies, improving policy, regulatory and institutional frameworks, and expanding access to affordable financing.

The GEF CReW Project is one of the initiatives that is meant to help. It aims to: provide sustainable financing for the wastewater sector; support policy and legislative reforms; and foster regional dialogue and knowledge exchange. It does this through three inter-linked components: investment and sustainable financing; reforms for wastewater management; and communications outreach and training.

GEF CReW recently published a Regional Wastewater Management Policy Template and Toolkit which is specifically designed to assist wastewater managers, chief technocrats or senior policy officers to improve capacity in developing and implementing wastewater management policies to improve the management of the sector. Recognizing the need to raise public awareness of waste management and related issues, GEF CReW has produced a range of information products including documentary videos, fact and briefing sheets, newsletters and posters. These are available on the project website: www.gefcrew.org



March 22nd was World Water Day and the theme for 2015 was 'Water and Sustainable Development'. It reminded us about how water links to all areas we need to consider such as health, nature, urbanization, industry, energy, food and equality, if we are to create the future we want. It also reminded us that improving sanitation and wastewater treatment as well as exploring new opportunities for seeing wastewater as a resource must become part of the development agenda.

Access to clean water and to sanitation as well as good management of the wastewater we generate are all essential aspects of sustainable development. To continue to neglect them, even as we find resources to do other "more important" things, puts our people at a disadvantage and steadily diminishes the value of the natural environment, upon which our future and livelihoods depend.



Examining Gender, Climate Change and Monitoring & Evaluation issues in Sanitation Management



Christopher Corbin, AMEP Programme Officer, UNEP CAR RCU, greets participants



Timica Richards represented the Antigua Public Utilities Authority



Lively discussion amongst participants

The Global Environment Facility-funded Caribbean Regional Fund for Wastewater Management (GEF-CReW) and the United Nations Environment Programme (UNEP) collaborated with the Caribbean Development Bank (CDB) and the Caribbean Water and Sewerage Association Inc. (CAWASA) to convene a one-week workshop on *Governance and Sanitation* in Antigua and Barbuda, 23rd – 27th February, 2015.

The Workshop was a follow-up to an eight-week online course in Governance and Urban Sanitation which was run by the United Nations Institute for Training and Research (UNITAR) and successfully completed by thirty-eight professionals from water and sewerage companies and health ministries, from 17 of the CDB's borrowing member countries. Their participation was funded by the CDB in keeping with its poverty reduction goal and its Climate Resilience Strategy. The online course focused on enhancing the capacity of sanitation professionals in relation to decision-making and investments in the area of urban sanitation. It provided analytical tools to help participants understand the financial and institutional frameworks of the sanitation sector, taking into account the needs of urban poor communities.

The Workshop aimed to build additional capacity in areas such as gender; climate change; use of wastewater as a resource; and monitoring and evaluation. Presenters included experienced wastewater sector specialists who have worked in the areas of gender mainstreaming, climate change, financing, and technology development.

The issue of sanitation and wastewater man-



Squatter's household with no sanitation; waste is discharged to the waterway.



Water is drawn directly from the polluted harbour to clean fish.



<Neglected latrine without a door.



Discharge of untreated sewage pollutes the harbour which is site of the port and used for fishing.



(l) Keith Nichols of CCCCC presents, and (r) Maurice Jones, Facilitator, moderates panel discussion.



**- CDB, the GEF CReW Project, UNEP and CAWASA collaborate to host workshop,
Antigua, 23 – 27 February 2015**



Northsound Wastewater Treatment Plant and the community it serves in the background. This was one of the stops on the technical fieldtrip.



Argent Tillett of Belize receives certificate from Timica Richards of APUA



agement in the Caribbean is a very neglected one. The CDB, CAWASA, UNEP and the GEF CReW Project in organizing this workshop, placed up front the need to deal with the institutional and financial challenges, gender and climate change issues that affect the sector. Sanitation professionals were provided with an overview of the state of the sector in their respective countries as well as with information on the skills and tools used for planning investments and decision-making to help them to identify actions that could contribute to improvements in the sector.

Changing this situation will require Caribbean countries to make the issue of sanitation and wastewater management a greater priority. Training professionals in the sector, the goal of this Workshop, is both necessary and of increasing urgency.



Algy Jarvis-Johns of Suriname receives certificate from Maurice Jones, Workshop Facilitator



Rushell-Kay Ricketts of Jamaica receives certificate from Stephen Lawrence of the CDB



Carol Gill of Barbados receives certificate from Christopher Corbin of UNEP



UPCOMING PROJECT EVENTS

DATE	EVENT	PLACE
6–10 July	Fourth GEF CReW Project Steering Committee Meeting	Antigua, Guatemala
24–25 August	GEF CReW Resource Valuation Workshop	
24–28 August	24 th Annual CWWA Conference & Exhibition	Miami, USA
27–28 August	11th High Level Forum	
November	Regional Policy and Enforcement Workshop	To be determined

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Using Reclaimed Wastewater to create a beautiful Wetland

Green Cay and Wakodahatchee, Delray Beach, Florida



Pipes? Yes, in a constructed wetland.



Solar energy panels are used on-site to offset energy costs.



Linking water recycling, open green spaces and wetlands/wildlife habitat provides many opportunities.

The constructed wetlands have become important habitats for wildlife and attract many visitors.



Workshop participants head back to the Interpretation Centre after touring the constructed wetlands.

The Belize Wastewater Revolving Fund at Work!

The first project to benefit from the establishment of the Belize Wastewater Revolving Fund (BWRF) is underway with repayment scheduled to begin in June 2015! Under this First Generation project which is being implemented by Belize Water Services Limited (BWSL) the Belmopan Wastewater Treatment Plant is being upgraded and the sewer system is being expanded using retroactive financing.



Upgrade of the sewage treatment plant: Excavator digging the new anaerobic pond. The excavation is 75% completed. After this is completed, the Geosynthetic Liner will be installed.



Sewage Collection System: Advancement of the trench works for the installation of the sewage pipes. A total of 2,262 meters of sewage pipe will be installed and this will be completed by the end of July.



Pumping Station: Masons working on the application of two coats of bituminous compound for one of the manholes at the pumping station.

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The Toolkit focuses in particular upon, and, as such, promotes:

- the treatment of wastewater effluent in accordance with Annex III of the LBS Protocol as a minimum, but also fit for reuse in irrigation;
- improving the need for coordination between government entities with various responsibilities related to water and wastewater management in the development and implementation of policy;
- the development and enforcement of minimum standards for managing on-site systems such as septic tanks;
- the establishment of a dedicated department/personnel in the Water Authority/Department with responsibility for developing and managing wastewater systems including the treatment and reuse of the effluent;
- the adoption and enforcement of standards for domestic wastewater.

An inadequate legal framework for wastewater is often a major weakness. The Toolkit therefore provides guidance on what aspects of the country's legal framework should be referenced in the wastewater policy.

Countries which have already acceded to the LBS Protocol, must, as a follow-up, implement actions that include establishing wastewater policy, strengthening institutional arrangements, enhancing human resource capacity and enacting legislation and effective enforcement provisions.

Status of Wastewater Management Policy Drivers in GEF CReW Participating Countries

The Toolkit also assesses the status of the English-speaking GEF CReW participating countries and Suriname in relation to key drivers, describes gaps in their wastewater policy and suggests remedial actions. The information is presented in a table for those countries that are parties to the LBS Protocol (Antigua and Barbuda, Belize, Guyana, Saint Lucia and Trinidad and Tobago) and, those that are not parties to the LBS Protocol (Barbados, Jamaica, St. Vincent and the Grenadines and Suriname).

The Toolkit is available at:

http://www.gefcrew.org/images/reports/project_final_reports/CReW_C2_Regional_WWMPolicyToolkit_Final_RevJanuary2015.pdf

GEF CReW has a new website!

Same URL:
www.gefcrew.org

In January the Project launched a completely new website which includes pages featuring the thirteen participating countries as well as each of the Pilot Projects.

The Media section features all public education resources produced by GEF CReW, including the first three in our series of video documentaries:

- Caribbean Wastewater Report
- Wastewater Warning: Health Hazard
- Wastewater Policy: A Caribbean Priority

Do check it out! We are still populating it with Project resources and outputs and hope that you will find it a useful source of information. Remember to check (and like!) our Facebook page as well! Please let us have your feedback and we welcome your submission of stories, links and pictures!

Welcome:
Effective management of wastewater in the Wider Caribbean Region (WCR) has for several decades been, and remains, a significant challenge faced by the region's governments and local organizations that land-based sources of pollution can municipal, industrial and agricultural factors and their negative impacts on marine resources are a threat to the region's economic development and the quality of life of its people.
Recent studies have shown that untreated sewage is one of the major threats to public health and the region's rich biodiversity and is the result of rapidly expanding urban populations, poorly planned development, and inadequate or poorly designed and malfunctioning sewage treatment facilities. As a result:

- 85% of wastewater entering the Caribbean Sea remains untreated
- 81.5% of households lack sewer connections
- Only 17% of households are connected to acceptable collection and treatment systems.

GEF CReW Participating Countries
Map data ©2015 Google, INEGI, Instituto de Estadística y Geografía

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.

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](#)

Acknowledging the contributions of Christopher Corbin, AMEP Programme Officer at UNEP CAR RCU, and Pedro Moreo Mir, Technical Specialist, GEF CReW.

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