

CReW's Lines

Newsletter of the Caribbean Regional Fund for Wastewater Management

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2013 Message from CReW Project Coordinator

Greetings to All,

It is customary at the start of a New Year for one to reflect on the past and to set goals for the future. I am remaining faithful to that tradition and in this brief message wish to share with you my thoughts on the project's progress over its first eighteen months of operation and to use that reflection to inform our actions for 2013.

The first eighteen months in the four-year life of the project have been focused on mobilising the activities, which would build the

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Trinidad & Tobago's GEF CReW Pilot Project:

Connecting for Benefits

Innovative financing to close the gap between wastewater generation and treatment



The economy of Trinidad & Tobago, southernmost islands of the Caribbean Sea and located just 11 kilometres away from Venezuela, has been dominated by the oil and gas sector. In contrast to the bigger, more industrial island of Trinidad, Tobago has always depended more upon tourism. It attracts diving enthusiasts, nature lovers and those who simply come to rest and relax by the beach.

The Government of Trinidad & Tobago (GOTT) in its budget statement for 2013, laid out its plans for diversifying the economy of this two-island state. Its goal is to increase the non-energy share of GDP to 66 per cent over the next five years. Tourism was identified as one of the key areas to be developed.

As a result, in 2012, the Trinidad and Tobago Tourism Business Development Limited was established as a corporate body to administer the Tobago Tourism Development Fund. This would provide guarantees for two major business categories of the tourism sector in Tobago: - debt restructuring for tourism and tourism-related businesses; and the upgrade and maintenance of hotels of below 50 rooms and ancillary businesses. In addition, the Ministry of Tourism, through public-private partnerships, is taking steps to increase the number of new rooms in both islands by as many as 1,000.

It would seem therefore, that Tobago can expect a significant increase in its tourism and related facilities over the next

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necessary momentum to ensure its successful execution. To this end, we have worked to start up the activities in the Pilot Executing Countries (PEAs); to fully engage all of the participating countries; to forge new alliances; and to promote the goals of the project across the Wider Caribbean Region.

In 2012, we hosted two Project Steering Committee Meetings, both of which were combined with workshops. We also responded to calls from the participating countries and hosted two regional workshops on wastewater management in the Bahamas and Costa Rica. In addition we organized a Regional Workshop on Revolving Fund Management in Belize and a Utility Operation Assessment Workshop in St. Lucia.

The project joined with the Caribbean Water and Wastewater Association (CWWA) in its annual conference - an activity we view as important in developing the capacity of wastewater professionals across the region. CReW's support to the CWWA's High Level Ministerial Session (HLS) was consistent with our main objective being to strengthen the regional policy dialogue on funding the wastewater sector.

A regional baseline line assessment was conducted during the last quarter of 2012, in order to establish the current status of the sector. Along with bilateral discussions the intent is to use the findings of the assessment to develop national programmes on wastewater reforms and information exchange and dissemination. The national activities are scheduled to commence in 2013. In addition, a number of communication products, including the quarterly newsletter, e-bulletin, posters and brochures were rolled out in the past year.

What then is next for the project? Indeed 2013 will be a critical year in the project's life! Many activities are scheduled to commence. In 2013 we will continue to support the PEAs in their start-up activities for establishing and testing the pilot financial mechanisms – a key outcome of the project. The national activities should be underway while we continue to host regional workshops in order to build capacity for better management of the wastewater sector, as determined in consultation with participating countries.

The first such workshop on facilitation training for decision makers is scheduled for March in Jamaica. We will also be supporting Latinosa, which will be hosted by the Government of Panama in late-May. Through our participation in that event we hope to support the deepening of cooperation between the regional English- and Spanish-speaking countries with regards to the wastewater sector. Additionally, the Region will play host to the Global Environmental Facility's Biennial International Water Conference in October and we anticipate that there will be much interest in the work of the CReW.

As we look back then there has been some progress but so much remains to be done and time is at a premium. We therefore need to focus strongly on implementation in 2013.

I hope you will join hands with the Project Coordinating Group (PCG) as we strive to execute an ambitious agenda. Our work motto, borrowed from a colleague, will be "commitment is nice; action is what we need ..."

My very best wishes to you all.

Denise Forrest, Project Coordinator, CReW

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five years.

Trinidad and Tobago's Vision 2020 Draft National Strategic Plan, prepared in 2005, presented the national strategy to guide the country to 'developed nation' status by the year 2020. The main Plan identified pollution from non-functioning sewerage treatment plants among various environmental issues which need to be addressed.

Although central municipal wastewater collection and treatment was introduced in Trinidad & Tobago in 1962, it is estimated that currently only about 30% of the population is serviced by wastewater systems. The remaining 70% use septic tanks and pit latrines. Population growth and housing developments in both islands have outpaced expansion of central sewerage systems. As a result, the Government adopted a policy that each new housing development of more than 40 houses would require sewerage and a wastewater treatment plant (WWTP). This was meant to give the Water and Sewerage Authority (WASA), sufficient time to expand its central sewerage systems to accommodate these developments, after which such individual, package type treatment plants could be decommissioned. However, WASA's central sewerage systems have not been expanded as anticipated, and the package-type plants have not been closed or integrated into a centralized wastewater management system. The majority of these plants have since malfunctioned or been abandoned. Effluents from these facilities, consisting of poorly treated or untreated sewage, are often discharged into water courses, posing health and environmental risks and increasing the costs of potable water treatment.

Store Bay, SW Tobago— one of many popular beaches



The disposal of untreated sewage into rivers and coastal waters is a major threat to aquatic life and poses an economic threat to the tourism sector. In both islands a significant gap exists between the need for proper wastewater management and the actual provision of services. Indeed, Buccoo Bay off South West Tobago, is one of those coastal, receiving waters where water quality is of concern.

T&T National Revolving Fund:

The National Wastewater Revolving Fund in Trinidad and Tobago will be established with US\$2 million from the GEF. It is envisioned that a potential National Wastewater Revolving Fund would support the efforts of the GOTT to address the urgent issues confronting the wastewater sector. The executing agency for this fund would be selected following formal discussions with the GOTT.

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The NWRf will be governed by a Board of Directors from a number of relevant agencies. The Ministry of Finance is to identify funds as Government's contribution to the NWRf.

The First Generation Project: Scarborough Wastewater Treatment Plant, SW Tobago

GEF CREW's pilot project in Trinidad & Tobago is the refurbishment of the Scarborough Wastewater Treatment Plant (WWTP) and construction of 215 sewer connections. The project aims to ensure that the WWTP, which was commissioned in 1994 to serve Scarborough and its environs, operates at optimum capacity. Scarborough, with a population of about 17,000, is the chief port and administrative centre of the island of Tobago, which is 300 square kilometres in area.

WASA owns and operates the Scarborough WWTP which is located in south west Tobago, approximately 805 metres from the Port of Scarborough. The facility was commissioned in 1994 to collect and treat the wastewater generated by the town of Scarborough and its environs. The catchment area consists mainly of domestic and commercial properties.

The WWTP is situated on approximately 2.45 hectares and consists of an administration building, associated wastewater treatment process equipment and structures, various pumps, sludge drying beds, and an effluent discharge outfall. It utilizes the activated sludge, extended aeration process followed by disinfection using chlorination. The final effluent is polished using a sand filter. The



Pumping well to secondary treatment

effluent from the plant is discharged into the receiving waters of Rockley Bay via a sea outfall approximately 397 metres from the shoreline. The facility is designed for an average daily flow of approximately 3,170 m³/d, and peak hour flow of 10,420 m³/d.

This WWTP was designed for a contributing population of 10,000 persons and receives primarily domestic wastewater with a small contribution from commercial and industrial sources. It was designed to meet the Trinidad

and Tobago Bureau of Standards' TTS 417 effluent target parameters as well as the Water Pollution Rules 2001 (amended 2006) for coastal near shore receiving waters.

Although intended to reduce the risk to public health, reverse the trend of environmental degradation and thereby protect the delicate eco-system and enhance the tourism industry, fewer than 200 property owners, and not the 2,000 connections originally anticipated, made the commitment to connect to the sewerage network, resulting in underutilization of the WWTP. The majority of



potential users resisted due to the cost of the connection fee and on-going rates to be paid.

The pilot project will refurbish the WWTP to ensure operational continuity and compliance with TTS 417. This includes but is not limited to, the drainage of the facility by means of 700 feet of box drain, of dimension, width 3' and height 3', the repaving of the parking lot, the renewal of the submersible pumps located at the inlet manhole and the wet well, upgrade and repair of the plant civil and electromechanical elements, and the addition of a SCADA System. A Condition Assessment of the Outfall Line Assembly will be also conducted.

In addition, the existing sewerage network is to be extended (extensions of no more than 100 meters, when such extensions can accommodate at least 1 connection per 15 meters of extension). Wastewater service connections for properties to be connected and internal plumbing/retro-fit necessary for each property will be designed and built as needed. In total 215 new connections will be made.

The capital cost of the project is approximately US \$2.7 million and funding will be provided through the National Wastewater Revolving Fund (NWRf), which is in the process of being established, with its capital contribution coming from the GEF CREW.

Project benefits include: operation of the WWTP at optimum capacity; reduced risk to public health; beginning reversal of the trend of environmental degradation, thereby protecting the delicate ecosystem and enhancing the tourism industry, increased revenue for WASA, and; compliance with the LBS Protocol which the GOTT ratified in 2003.

Addressing underutilization of an already existing facility such as the Scarborough WWTP, is necessary if available resources are to be more efficiently used. In addition to refurbishing the WWTP, the GEF CREW Pilot Project is meant to kick-start the stalled process of connecting more users to the facility by providing the financing to enable the connections. **Extending connection beyond this initiative will depend upon convincing people that it is in their best interests to connect to the new sewer system. Beyond the project, this is likely to require a combination of public education and policy change.**



Vice Minister Jose Lino Chavez, Willy Bendix of IDB -Costa Rica and Nelson Andrade Colmenares, Coordinator, UNEP CAR/RCU.



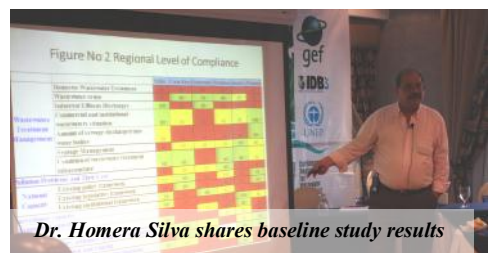
Denise Forrest, Project Coordinator, presents Work Plan and Budget



Chris Roberts of CEHI and Isabelle Vanderbeck of UNEP



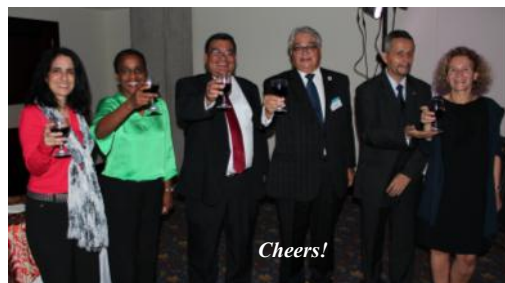
Pilot Project Coordinators present updates



Dr. Homera Silva shares baseline study results



PSC 2 participants



Cheers!



Part of the team!

GEF CReW's Second Project Steering Committee Meeting

The GEF CReW Project held its Second Steering Committee Meeting in San Jose, Costa Rica, 19 – 20 November, to review progress and endorse the Work Plan and Budget for the Project's second year of implementation, 2013.

National Focal Points of ten of the Project's participating countries (Antigua & Barbuda, Barbados, Belize, Costa Rica, Jamaica, Guatemala, Guyana, Honduras, Panama, Saint Lucia, and Saint Vincent & the Grenadines) met with the project's Implementing Agencies, the IDB and UNEP CAR/RCU and the Project Coordinating Group to chart the way forward. Representatives of the Caribbean Development Bank, the Latin American Development Bank (CAF), the Caribbean Environmental Health Institute, and other observers, also participated.

Costa Rica's Vice Minister, Ministry of Water and Sea, Jose Lino Chavez, opened the meeting, stressing its importance as the Project is concerned with providing better wastewater treatment to participating countries. He underlined the right of every person to clean water.

The Project Coordinator, Denise Forrest, presented the past year's work achievements and the work plan and budget for 2013.

The preliminary results of a comprehensive baseline study of wastewater management in participating countries were presented by Dr. Homero Silva, Consultant to UNEP, with some explanation of the approach used. In response, National Focal Points sought clarification and noted their concerns. The baseline study was to be completed by the end of 2012 and disseminated in early 2013.

Following are the broad decisions of the PSC2 as briefly presented by Isabelle Vanderbeck, and unanimously endorsed:

- Endorsement of the communication strategy for the project.
- Agreement on the way forward with the Clearing House Mechanism.
- Agreement on the need to approach donors for support in replicating Project Funding Mechanisms in non-pilot countries.
- Acceptance of the 2012 Work plan and related expenditure.
- Approval of the 2013 Work plan and budget.

CRew Workshops on Appropriate Wastewater Treatment Technologies



Dr. Roberto Parra Saldivar, a Biotechnologist with extensive experience in Latin America, North America and Europe was the trainer.

As part of its capacity building activities, CRew organized two workshops on Appropriate Wastewater Treatment Technologies. The first, for representatives of its English-speaking countries, took place 30 September—1 October, immediately preceding CWWA 2012 in The Bahamas. The second, for CRew's Spanish-speaking countries, took place immediately after the Second Steering Committee Meeting, 22—23 November, in San Jose, Costa Rica.

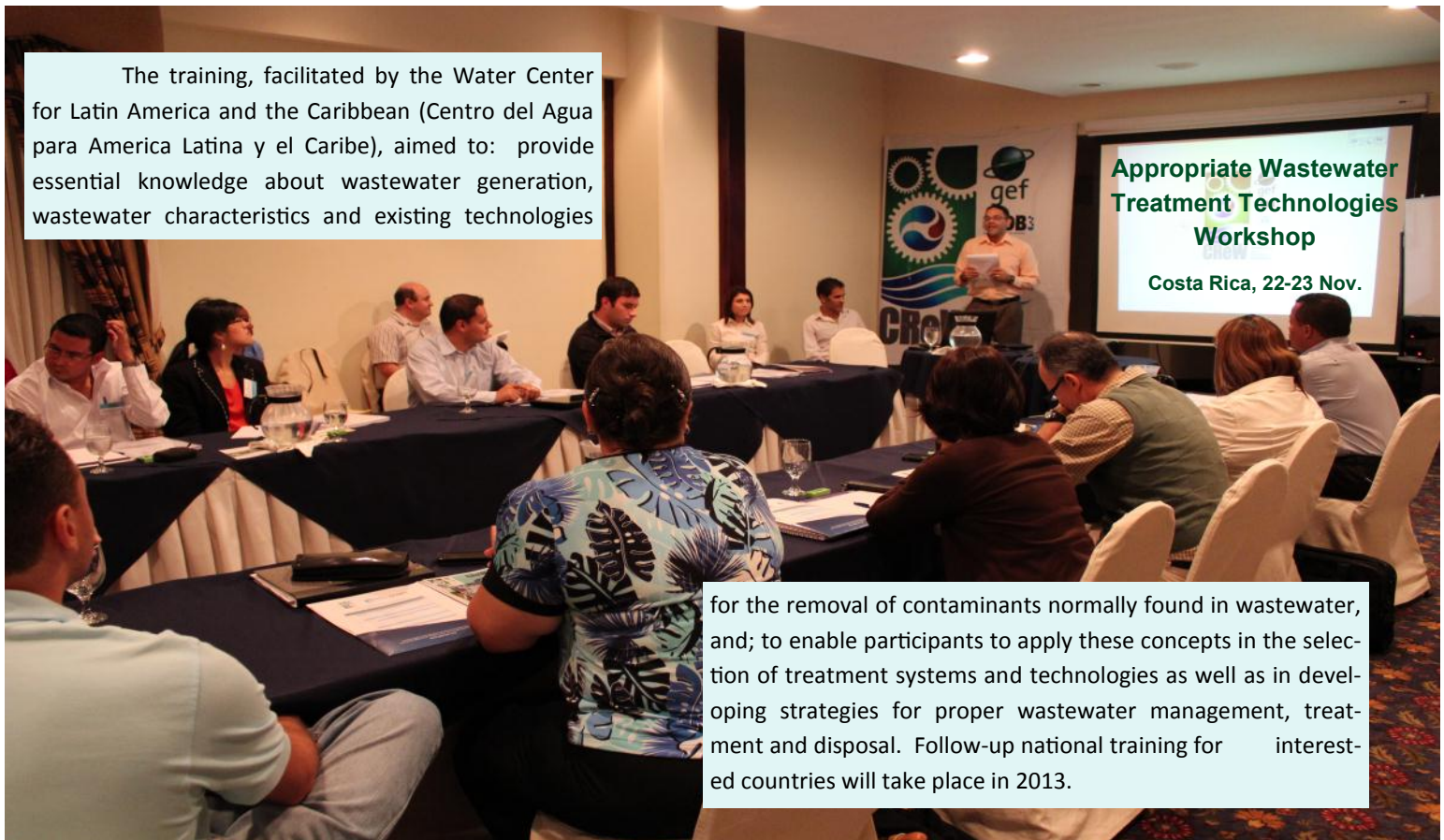


Participants in Costa Rica



Participants in The Bahamas

The training, facilitated by the Water Center for Latin America and the Caribbean (Centro del Agua para America Latina y el Caribe), aimed to: provide essential knowledge about wastewater generation, wastewater characteristics and existing technologies



Appropriate Wastewater Treatment Technologies Workshop

Costa Rica, 22-23 Nov.

for the removal of contaminants normally found in wastewater, and; to enable participants to apply these concepts in the selection of treatment systems and technologies as well as in developing strategies for proper wastewater management, treatment and disposal. Follow-up national training for interested countries will take place in 2013.

CReW at CWWA 2012:

CReW was one of the collaborating partners in the Caribbean Water and Wastewater Association's 21st Annual Conference and Exhibition, 1–5 October 2012, at Atlantis, Paradise Island, The Bahamas



Several Ministers with responsibility for Water, including, left to right, Nevis, Dominica, St. Kitts, Jamaica and St. Vincent participated in the 8th HLS.

The GEF CReW Project sponsored the participation of Ministers in the conference's **8th High Level Session/Ministerial Forum on Water**, which took place 4 – 5 October under the theme “*The Water and Energy Nexus in Caribbean Development*”.

GEF CReW was among the many exhibitors and featured an introduction to the project and its objectives, themed “*Treat Water Right*” as well as new posters describing the wastewater treatment process and types.



HLS Opening Ceremony

Seven Ministers, two Permanent Secretaries and other high-level representatives of both national and regional organizations such as CEHI, PAHO and CAWASA attended the High Level Session.



Chris Corbin, Denise Forrest and Emil McGarrell at the Exhibition opening



Alfredo Coello and Junior Sammy

Following the official opening of the Exhibition on 1st October, booths were open to visitors for the remainder of the Conference. Visitors included schools.



CReW Project Coordinator presents to HLS

Denise Forrest, CReW Project Coordinator, made the case for greater inclusion of wastewater issues in the agendas and budgets of Caribbean Countries while promoting the CReW.



Students of the Government High School

Eastern Caribbean Supreme Court

Judges Consider Environmental Issues

...including the CREW



Prof. Dale Webber presents on environmental threats

The GEF CREW Project in conjunction with UNEP CAR RCU, partnered with the Judicial Education Institute (JEI) of the Eastern Caribbean Supreme Court (ECSC) and the Division of Regional Cooperation, Regional Office for Latin America and the Caribbean (ROLAC) to host the 2012 Annual Judicial Conference for the Judges of the Eastern Caribbean Supreme Court. The Conference was held in Saint Lucia on 18th – 19th October 2012 and focused on Environment Law.

This was the JEI's first training programme on Environmental Law. Its main objectives were the sensitization of the Judges of the Supreme Court of the ECSC, Barbados, and Jamaica to the difficulties that confront our societies and to engender an understanding of the principles of environmental law, including ecological responsibility and the rule of law. The judges were reminded of the national and international obligations which are relevant to ensure that Caribbean societies continue to survive in a vibrant and healthy environment. It also underscored the important role of the judiciary in the enforcement of environmental law.

Participants were informed of the most urgent environmental issues confronting the OECS by a panel of facilitators who are leading experts in their respective fields. These included Mr. Justice Winston Anderson from the Caribbean Court of Justice, Professor John Bonine, Professor Patrick McGinley of the USA, Professor Dale Webber, UWI Mona, His Honor Judge Keith Hollis of the UK, Her Honor Sandra Paul of the Environmental Commission of Trinidad and Tobago, Ms. Laleta Davis Mattis, Executive Director of the Jamaica National Heritage Trust, Mr. Peter Murray, Programme Officer at the OECS Secretariat, and Mr. Crispin d'Auvergne from the Ministry of Physical Development and the Environment in Saint Lucia.

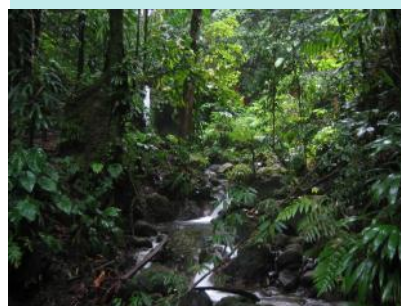
Mr. d'Auvergne presented on "*Protecting our Marine Environment: Pollution and Waste Management: Threats to Our Island Identities*", jointly prepared by himself and Christopher Corbin of UNEP CEP. This included an introduction to the

GEF CREW Project.

Among things considered and discussed at the Conference were:

- The major environmental issues affecting the Caribbean
- Global and regional perspectives of environmental issues
- The role of the judiciary in promoting the rule of law in sustainable development
- Multilateral environmental agreements (MEAs), their relevance to the Caribbean and their impact on the judicial decision-making process (these included the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (1983 Cartagena Convention) and associated Protocols)
- Soft law declarations such as the right to a healthy environment in the Stockholm Declaration (1972) and Principle 10 of the Rio Declaration (1992), the right of participation
- The idea of explicit environmental rights existing in international human rights treaties and the need for judicial creativity to expand "traditional" rights into environmental rights
- The role of Environmental Impact Assessment (EIA) and the need for it to be enacted as national law.

Judges attending described the conference as "eye-opening", "instructive and informative and very relevant and timely...", and said that "it provided a wealth of information".



Healthy rain forest

Healthy mangrove



Healthy coral reef

Experts look at Revolving Funds as Sustainable Financing Mechanisms for Wastewater Management in the Region



Workshop participants

CReW hosted a Regional Workshop in Belize City, Belize, 28 – 29 November to introduce the concept of Revolving Funds.

The Workshop aimed to provide participants, who came from the IDB, the Caribbean Development Bank (CDB) and utility, finance and environmental sectors in CReW's thirteen participating countries with a broad view of the operation of revolving funds with particular reference to the experience in developing countries.

It was also to assist the pilot countries in the operation and design of their own national funding mechanisms to be developed under the GEF CReW Project, and, promote a network of expertise that could facilitate the replication and/or development of similar funding mechanisms in other non-pilot Caribbean countries.

It was lead by Martin Baker, an environmental lawyer, with extensive experience in the planning, financing and operating of water, wastewater and other infrastructure projects in Latin America, Asia, Eastern Europe and the Gulf States. In addition, Peter Shanaghan, Team Leader of the National Drinking Water State Revolving Fund (DWSRF) Program for the Office of Ground Water and Drinking Water, United States Environmental Protection Agency (USEPA) and Paul Marchetti, an Economist and Executive Director of the Pennsylvania Infrastructure Investment Authority (PENNVEST) since 1988, shared practical experience in maintaining, replenishing and growing revolving funds.



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).

With thanks to the Trinidad & Tobago Pilot PMU, Christopher Corbin, AMEP Programme Officer, and his team at UNEP CAR/RCU and the CReW Project Coordination Group.

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