



Project on “Testing a Prototype Caribbean Regional Fund for Wastewater Management (CRew)”

Terms of Reference for Conducting a Review of Status of Wastewater Management and Regional Training Needs Assessment in the Wider Caribbean Region

A. Background

The degradation of the Caribbean marine environment including the discharge of untreated wastewater is a serious concern for those countries whose livelihoods depend heavily on their natural marine resources. Several scientific studies, including UNEP/GPA’s 2006 report on the State of the Marine Environment, singled out untreated wastewater entering the world’s oceans and seas as the most serious problem contributing to marine pollution. In the Region, the recent Caribbean Sea Ecosystem Assessment (CARSEA) study similarly found that “sewage pollution from land-based sources and from ships has been the most pervasive form of contamination of the coastal environment”.

There is then an urgent need to increase wastewater treatment in the Wider Caribbean Region, which is presently far below the required levels. UNEP/GPA estimates that as much as 85 percent of wastewater entering the Caribbean Sea is currently untreated. According to the Pan American Health Organization (2001), 51.5 percent of households in the Caribbean Region lack sewer connections of any kind and only 17 percent of households are connected to acceptable collection and treatment systems. Within Caribbean SIDS, less than two percent of urban sewage is treated before disposal; this is even lower in rural communities. On some islands (e.g. Antigua and Barbuda, Dominica and Haiti) there is no sewerage system; sewage is disposed mainly through septic tanks and pit latrines, many of which do not comply with minimum technical specifications or are not adequately maintained.

As a result of rapidly expanding populations, poorly planned development, and inadequate or poorly designed and malfunctioning sewage treatment facilities in most Caribbean countries, untreated sewage is often discharged into the environment with serious human and ecosystem health implications. Added to this is the discharge of untreated or partially treated sewage from many tourism facilities situated along the coast. Such a situation is responsible for serious health, environmental and economic impacts.

In recognition of the gravity of this situation, several countries from the Wider Caribbean Region (WCR)¹ ratified the Convention for the Protection and Development of the Marine Environment

¹ As defined in the Cartagena Convention, the *Wider Caribbean Region* comprises the marine environment of the Gulf of Mexico, the Caribbean Sea and the areas of the Atlantic Ocean adjacent thereto, south of 30 north latitude and within 200 nautical miles of the Atlantic Coasts of the United States. The countries of this Region (who are also members of the Caribbean Environment Programme) are : Antigua and Barbuda, Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, Panama, Saint Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and Venezuela.

in the WCR, also known as the Cartagena Convention (adopted in Cartagena, Colombia on 24 March 1983), and signed the Protocol on the Control of Pollution from Land- Based Sources and Activities (LBS Protocol), which was adopted on October 6, 1999. The LBS Protocol sets several goals to govern domestic sewage discharges into the waters of the Wider Caribbean Region.

While countries increasingly recognize the importance of improving wastewater management, obstacles exist to meeting the obligations of the LBS Protocol and taking such steps. UNEP GPA reported in their 2006 State of the Marine Environment Report that significant financial constraints exist and that there is a lack of adequate, affordable financing available for investments in wastewater management in the Wider Caribbean Region. Smaller communities in particular often find it difficult to obtain affordable financing for making improvements in wastewater infrastructure.

In addition to financial constraints and barriers, other substantial barriers also exist. These include inadequate national policies, laws and regulations; limited enforcement of existing laws and regulations; poor communication and collaboration between various sectors and agencies which contributes to a fragmented approach to wastewater management; and limited awareness, knowledge and understanding of appropriate, alternative and low cost wastewater treatment technologies. Other limitations in technical capacity (e.g., in developing project proposals, operating and maintaining treatment systems, and monitoring and analyzing wastewater discharges and impacts) delay the progress of effectively managing wastewater.

Moreover, wastewater treatment is considered by many water utility managers and stakeholders as a low priority. In most cases, provision of a reliable and safe potable water supply generally ranks first, with the second priority being the collection of sewage by means of covered sewerage systems, and lastly wastewater treatment. Countries often engage in “opportunistic capital planning” based on the availability of funding from donors or governments, and not on best value and net economic benefit.

Developing innovative financial mechanisms, and making affordable resources available, to assist countries in the WCR to establish or expand domestic wastewater management programs and policies, to provide for the financing of cost effective, sustainable and environmentally acceptable wastewater management facilities based on community needs, constitutes a very high priority for the Region.

Based on the above, UNEP-CAR/RCU and IADB requested assistance from GEF on behalf of the countries of the Wider Caribbean Region to improve the capacity of countries in wastewater management through the development of a prototype Regional Revolving Fund as a possible modality for providing sustainable financing for wastewater management projects in the region while also addressing key capacity constraints within existing legal, institutional, educational and policy frameworks for wastewater management. A PIF was thus designed and cleared by the CEO on 26 September 2008 and subsequently approved by Council on 12 November 2008. The baseline information available to date is not sufficient to design the most effective intervention. The following activities will be undertaken during the preparatory phase (PPG) by UNEP-CAR/RCU in collaboration with IADB.

B. Scope of Assignment

Task 1. Prepare a brief regional synopsis of wastewater management in the Wider Caribbean Region based on existing available documentation. This summary should highlight the main challenges to improving wastewater management in the Wider Caribbean Region and the extent to which appropriate wastewater treatment technologies are being used. Special attention should be given to the level of regional compliance with Annex III of the Land-Based Sources of Marine Pollution Protocol under the Cartagena Convention and required gaps that needs to be addressed as part of the full project.

Task 2. Conduct a rapid regional assessment of the knowledge, availability and use of wastewater treatment technologies in the Wider Caribbean Region. Special attention should be given to an analysis of gaps relating to the knowledge and awareness of appropriate innovative wastewater management technologies that are underutilized in the region, particularly in Caribbean SIDS. This analysis should also identify specific issues for inclusion in the awareness building programmes and information dissemination mechanisms to be developed as part of the full project proposal. In addition to highlighting topics, issues and geographic areas requiring further elaboration, the results of the gap analysis will be the basis for formulating targeted research activities directed specifically to filling the knowledge base 'gaps.'

Task 3. Review documentation related to the root causes limiting the adoption of appropriate wastewater management interventions in the Wider Caribbean Region. Based on this review and input from discussions with key national and regional experts, identify the critical technological barriers to adopting new and innovative wastewater management measures in selected pilot countries which should be addressed as part of the full project proposal.

Task 4. Based on the outputs of Task 1-3, prepare a regional training needs assessment and develop TORs for the formulation of regional targeted capacity building and training activities for wastewater management to be executed during the Full Size Project.

C. Expected Outputs

- Brief Regional Sectoral Overview of Wastewater Management in the Wider Caribbean Region.
- Brief summary of Appropriate Wastewater Management Treatment Technologies and their extent of use in the Wider Caribbean Region.
- Analysis of Gaps relating to the knowledge of appropriate innovative technologies that could be used in the Wider Caribbean Region.
- Wastewater Training Needs Assessment including Gap Analysis based on regional overview of wastewater management
- TORs for specific regional capacity building and training programmes in the Region;

D. Methodology

Upon signature of the contract, a teleconference between, UNEP-CAR/RCU and the Consultant will be held to discuss TORs. Background information will be made available to the Consultant by UNEP-CAR/RCU. Thereafter, the Consultant will work from his/her desk using a participatory approach whereby key representatives of UNEP-CAR/RCU, the UNEP/DGEF Task Manager, IADB and other relevant staff will be informed and consulted regularly throughout the process. The Consultant will liaise with UNEP-CAR/RCU and the UNEP/DGEF Task Manager on methodological issues to properly conduct the consultancy given the circumstances and resources offered.

It is expected that a considerable amount of this work can be completed through research, literature reviews, telephone meetings and conferences, correspondence, questionnaires, group or individual discussions, and attendance at organized or scheduled meetings. The Consultant will participate in the November 2009 workshop and other teleconferences and meetings as deemed appropriate and present his/her work for collective review and comments. The draft report will be circulated to UNEP-CAR/RCU, IADB, and the UNEP/DGEF Task Manager. Any comments or responses related to the draft report will be sent to UNEP-CAR/RCU for review and the Consultant will be advised of any necessary revisions.

The report will be based on the following:

- A desk review of existing available information
- Interviews with national and regional stakeholders and the UNEP/DGEF Task Manager
- The Consultant will determine whether to seek additional information and opinions from representatives of donor agencies and other organisations. Where appropriate, these interviews could be combined with an email questionnaire.
- The Consultant shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.

E. Qualifications

This assignment is ideally undertaken by a team of consultants, comprising national/regional experts and a team leader. The members of the team should possess the following qualifications:

- A Master's degree in a relevant field (engineering, environmental studies) with at least two (2) years post-qualification and relevant experience.
- Alternatively, undergraduate qualifications in a relevant field with at least five (5) years relevant post-qualification experience.
- Knowledge and experience in wastewater management is necessary.
- Experience with conducting training and technology needs assessments is highly desirable.
- Experience in developing GEF Project Proposals will be an asset.

F. Workplan, Reporting Formats and Timetables for Deliverables

UNEP-CAR/RCU will provide the template for reports required for this assignment including a Log Frame for the full project proposal. The final report submitted including all outputs will be structured to include its own Monitoring and Evaluation Plan, budget, indicators and log frame to form a specific component of the full project proposal.

Duration

The time frames allocated for the deliverable are as follows:

- Task 1: 20 Working Days
- Task 2: 20 Working Days
- Task 3: 15 Working Days
- Task 4: 15 Working Days

These working days will span a period of 4 months between July 1st and October 31st, 2009 in accordance with the following schedule:

Deliverable	Date for Submission
Start of Assignment	Jul 1 st
Draft of Regional Overview for Wastewater Management	Jul 30 th
Draft of Summary of Appropriate Wastewater Treatment Technologies for the Wider Caribbean Region	Aug 1 st
Final Report on Regional Overview including major gaps	Aug 15 th
Final Report on Summary of Appropriate Wastewater Treatment Technologies for the Wider Caribbean Region	Sep 1 st
Draft of Training Needs Assessment including Gap Analysis	Sep 15 th
Final Needs Assessment Report and TORs for Capacity Building to address Gaps and Needs;	Sep 30 th

Location: Travel from place of residence to the regional workshop as appropriate.

Language: English and Spanish

Cost: USD 35,000 including travel costs for participation at the regional workshop in November 2009.

G. Cost and Payment Schedule

Payment will be made on the basis of outputs as follows:

Item	Time	Payment
Final Report on Regional Overview and Draft of Summary of Appropriate Wastewater Treatment Technologies for the Wider Caribbean Region	Aug 15 th	USD 70%
Final Needs Assessment Report and TORs for Capacity Building;	Sep 30 th	USD 30%
	TOTAL	USD 35,000

The fee is payable under the individual CPR contract and is inclusive of all travel, accommodation and incidental expenses. The Consultant will be responsible for his own travel and insurance (medical, travel, baggage, etc.) arrangements according to the work schedule.

Reporting Format:

The detailed reports will be presented based on the format provided by UNEP-CAR/RCU. The Executive Summaries of the same should not exceed one page. The products will be written in English and presented in electronic format in MS Word and Excel formats.

Subsequently, the report will be sent to UNEP-CAR/RCU for their review, appraisal and comments. Comments received from the local executing agencies as well as UNEP-CAR/RCU will be consolidated by UNEP-CAR/RCU and passed on to the Consultant for comments.

Intermediate and final products of the consultancy will be sent by email to Nelson Andrade Colmenares, Coordinator, UNEP-CAR/RCU (rcu@cep.unep.org) with a copy to Christopher Corbin, AMEP Programme Officer at cjc@cep.unep.org.

H. Submission Requirements

Proposal submissions are to include:

- A brief summary of approach to be taken (not more than 3 pages)
- A schedule for delivery of outputs
- Detailed CVs with information on the experience and competence of the person(s) who will undertake the assignment as well as evidence of working on similar projects.

I. Evaluation Criteria

Proposals will be evaluated based on suggested approach, qualifications and experience.

Proposals must be submitted by e-mail or in hard copy no later than 30th June 2009 to:

**Nelson Andrade Colmenares
Coordinator
UNEP CAR/RCU
14-20 Port Royal Street
Kingston
JAMAICA
Tel.: (876) 922-9267-69
Fax: (876) 922-9292**

Attn: Christopher Corbin cjc@cep.unep.org