



GEF-IWCAM Project Coordination Unit

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Project on “Integrating Watershed & Coastal Areas Management in Caribbean Small Island Developing States (GEF-IWCAM)”

Terms of Reference for Sewage Treatment Plant Operator Training

The Caribbean Environmental Health Institute (CEHI) and the Secretariat to the Cartagena Convention (UNEP-CAR/RCU) are co-executing a regional project (referred to as GEF-IWCAM) which seeks to improve the management of watersheds and coastal areas in Caribbean small islands, in an integrated manner.¹ Based on the training needs identified through earlier work done in the region, and by the participating countries directly, the project wishes to conduct targeted training in order to address the core concerns related to pollution of the marine environment from land-based activities. In this regard, CEHI and UNEP-CAR/RCU, through the Project Coordinating Unit (PCU) for the GEF-IWCAM Project, are soliciting the assistance of suitable consultants to conduct training programmes for sewage treatment plant operators on behalf of the 13² participating countries.

The scope of the assignment includes to:

- Prepare Caribbean-specific training material related to operation and maintenance of sewage treatment plants in common use within the region
- Conduct a 5-day training workshop in Operation & Maintenance of Sewage Treatment Plants, inclusive of field trips, for a group of 15-20 operators and technicians. This includes advising on the venue, provision and delivery of training materials, supply of audio-visual equipment, and actively participating in the field trip. This course is to provide participants with the basic knowledge of the methods available for the treatment of wastewater and the operations of such facilities. Upon completion of this workshop, the participants will be expected to be able to:
 1. Identify the various types of pollutants in sewage
 2. Discuss the effects of these pollutants on the environment
 3. Maintain the integrity of Collection and Conveyance systems
 4. Know the acceptable standards for treated sewage discharge
 5. Identify different types of treatment systems
 6. Identify and modify the important treatment characteristics
 7. Identify the problems associated with the operations of various types of treatment systems
 8. Make basic calculations and understand pollutants and how they react
 9. Provide solutions for the various common problems encountered during sewage treatment activities

¹ GEF-IWCAM is funded by the Global Environment Facility and co-implemented by the United Nations Environment Programme and the United Nations Development Programme.

² Participating countries include Antigua/Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St. Kitts/Nevis, St. Lucia, St. Vincent & the Grenadines, and Trinidad & Tobago.

10. Safely complete operational activities
11. Know the difference between Preventative and Routine maintenance
12. Discuss the components of a Plant maintenance schedule
13. Identify the parameters for troubleshooting
14. Know the maintenance schedule for on-site equipment
15. Know the process of grit removal
16. Know how to maintain screens
17. Be able to discuss the control and removal of scum and solids
18. Know how odour control can be affected by the maintenance programme
19. Know the classification of types of hazards
20. State the need for safety precautions
21. Describe the importance of safety equipment
22. Discuss the prevention of infections
23. Discuss the need for sanitary facilities in wastewater plants

The outputs of the assignment will be:

- Training material for Sewage Treatment Plant Operations & Maintenance
- A cadre of trained operators who can apply the information gathered during the workshop to their day-to-day work upon returning to duty; and
- Training Workshop Report

Qualifications

At least a Bachelors degree in Sanitary or Environmental Engineering equivalent plus at least five (5) years post qualification and relevant experience. Alternatively, technical qualifications in sewage treatment plant operations with at least ten (10) years relevant work experience. Knowledge and experience in the Caribbean environment is necessary. Knowledge and experience in the coastal and marine environment is desirable.

Payment Schedule

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

- 40% upon the submission of the draft training material;
- 40% upon the delivery of training programme; and
- 20% upon delivery of the Final Reports.

Workplan, Reporting Formats and Timeframes for Deliverables

The GEF-IWCAM Project Coordination Unit will provide the workplan, reporting format and time frames for this assignment and individual deliverables. Time frames allocated for the deliverables are as follows: -

- Expected Output No. 1 (Training material) – 5 working days
- Expected Output No. 2 (Delivery of training workshop) –5 working days
- Expected Output No. 3 (Final workshop report) – 2 working days.

These working days will be spread over a period of two (2) months between March 2008 and April 2008, in accordance with the following time schedule:

Deliverable	Dates for Submission
Start of assignment	01.03.2009
Draft training material	10.03.2009
Finalize training material	20.03.2009
Deliver training (Regional Workshop)	15.04.2009
Final Reports	30.04.2009

Please note that:

- a. The Consultant will, at GEF-IWCAM's expense, engage in a consultation with the GEF-IWCAM PCU prior to initiating the preparation of training material, at which time all relevant information will be provided and where GEF-IWCAM's expectations of the assignment will be discussed in detail
- b. GEF-IWCAM will bear the travel, accommodation and incidental costs of the Consultant's participation at training workshops approved as part of the assignment
- c. Any other travel to be undertaken by the Consultant under the project will be supported by GEF-IWCAM, **BUT** must be agreed upon/verified by GEF-IWCAM prior to travel
- d. Normal travel cost to be reimbursed refers only to the costs associated with departure taxes and transport costs to and from airports
- e. The Consultant will submit to GEF-IWCAM, for review and comment, an initial draft of the training material at least **12 days** prior to the workshop
- f. The Consultant will submit to CEHI a full draft of the Workshop Report **13 days** after the date of completion of the Workshop
- g. Failure to deliver satisfactory products to GEF-IWCAM under this TOR will result in the withholding of the final tranche of payment of **20%**
- h. The documents to be produced within this TOR will become the property of GEF-IWCAM in this instance.

Evaluation Criteria

Proposals will be evaluated based on price/cost effectiveness, suggested approach, and experience.

Submission Requirements

Proposal submissions are to include:

1. A technical proposal
2. A schedule for delivery of outputs
3. A cost proposal (budget)

Technical proposals must not exceed 10 pages in length, including CVs. Other material deemed to be relevant to the proposal may be attached as annexes.

Proposals must be submitted via e-mail to Vincent Sweeney (Vincent.sweeney@unep.org) and Sasha Beth Gottlieb (sgottlieb@cehi.org.lc) **by 6 February 2009**. The subject of the e-mail should be RFP – Sewage Treatment Plant Operator Training and then the name of the company or consulting group submitting the proposal, or, if submitted by an individual, your last name (e.g. *RFP – Sewage Treatment Plant Operator Training – Smith* or *RFP – Sewage Treatment Plant Operator Training – Smith and Jones Associates*)