Terms of References

Consultancy Service for Development of E-Learning Platform for Training Modules and training questions bank on the Environmental Sound Management (ESM) of Healthcare Waste (HCW)

1. Background
The Government of Egypt (GoE), represented by the Ministry of Environment (MOE) in coordination with the Ministry of Foreign Affairs (MoFA) and the technical support of the United Nations Development Program (UNDP) has succeeded in obtaining a new package of grants from the Global Environment Facility (GEF) to implement a five years project entitled “Protect human health and the environment from unintentional releases of POPs originating from incineration and open burning of health care- and electronic waste”.

The project objective is to prevent and reduce health and environmental risks related to POPs and harmful chemicals through their release reduction achieved by provision of an integrated institutional and regulatory framework covering environmentally sound Health Care Waste and E-waste management. The project will reduce emissions of UPOPs as well as other hazardous releases (e.g. mercury, lead, etc.) resulting from the unsound management, disposal and recycling of a) Health-Care Waste (HCW), in particular due to substandard incineration practice and open burning of HCW; and, b) Electronic Waste (EW), in particular due to the practice of unsound collection and recycling activities and open burning of electronic waste.

The project will achieve this by i) determining the baseline for releases of UPOPs and other hazardous substances (e.g. mercury, lead) resulting from unsound HCW and E-waste practices; ii) conducting facility assessments; iii) building capacity among key stakeholders; iv) implementing BEP at selected model hospitals, health-care facilities (HCFs) and a central treatment facility (CTF); v) introducing BAT and BEP to formal and informal E-waste processors; vi) preparing health care facilities for the use/maintenance of non-mercury devices followed by introduction of mercury-free devices; vii) evaluating facilities to ensure that they have successfully implemented BEP; viii) installing and evaluating BAT technology(ies) at one Central Treatment Facility based on a defined evaluation criteria; and, xi) enhancing national HCWM training opportunities to reach out to additional hospitals/HCFs.

Wastes generated at health care facilities have the potential to cause harm if not managed correctly. If risk waste and non-risk waste (general waste) are combined, they must be treated as risk waste, thus larger volumes of waste than necessary are submitted for treatment, which may overload the treatment capacity, leading to stockpiling of untreated risk waste. Waste that is incorrectly segregated leads to increased costs of waste management.
Thus, proper segregation of general non-hazardous waste, potentially infectious waste and used sharps into separate containers, referred to as the “three-bin system”, is very critical. Further segregation should be conducted for other categories of wastes, such as chemical, cytotoxic, pathological, plastic and pharmaceutical wastes, which should be handled and disposed of through the available technologies according to the international standards.

Hence, Environmental Sound Management of Healthcare Waste should be implemented in the HCFs to minimize the overall quantities of waste generated by the hospital, to ensure that healthcare waste is managed properly from its point of origin to its final disposal, and to eliminate as much as possible dioxins, mercury, and other toxic byproducts of waste disposal through the application of the best environmental practices and the best available technologies.

The MEWM Project has updated the Healthcare Waste Management (HCWM) guidelines and developed HCWM policy on the level of the Health Directorate, general HCF plan and HCF training materials based on training modules developed by the UNDP, GEF, WHO, Healthcare Without Harm society and the School of Public Health in University of Illinois, which were adapted to the Egyptian conditions, to get the HCWM Officers in healthcare services trained on its implementation.

2. Objective of the assignment
The project is seeking the service of a National Consultant (NC) for Development of E-Learning Platform for Training Modules and training questions bank developed by the MEWM Project to further disseminate the Environmental Sound Management (ESM) of Healthcare Waste (HCW) for healthcare waste Staff and Officers in Egypt.

3. Scope of work
Development of E-Learning Platform for Training Modules and training questions bank previously developed by the MEWM Project. The Training Modules and training questions bank are meant for healthcare waste management Staff and Officers in the MoHP Health care entities and facilities who are geographically dispersed in the various parts of the country and who are directly involved in Management of Healthcare Waste in order to help them to get trained, tested and certified as Trainers and Healthcare waste management Officers, respectively, after passage of the E-test. Also It should be designed to be carried out in a self-paced format and should be designed to be housed on the MEWM Project website.

Therefore, the consultant should:
1. Review the questions and model answers provided by the MEWM Project
2. Develop and implement the E-learning platform for MEWM.
3. Edit and design the course presentation content to be interactive for web.
4. Develop “multiple choice and true or false” questions bank platform, to cover courses units, to be a guide for understanding the course.
5. Develop a test platform online onsite exam to evaluate course attendees and qualify course passing, the test could be held with online/offline based on environment configurations to be arranged.

6. Generate statistics and reports for the E-learning platform usage

7. Integrating the electronic version of the training modules and training questions bank into the MEWM Website

8. Submit the final summary report including statistics and documentations

Therefore, the required service should be composed of the following phases:

- Phase (1): Design and branding after pre-analysis and analysis for all the system requirements.
- Phase (2): The development of the system code/code encryption and web application structure.
- Phase (3): The final testing.
- Phase (4): The Publishing process.
- Phase (5): The Training process of MEWM Staff to manage, edit, and explore all the system features and apply it on the live version.
- Phase (6): Submit the final summary report including statistics and documentations
- Phase (7): Technical Support for 12 months to fix all the system technical issues or problems.

5. Terms of Payment

The expected terms of payments (after approval) are:

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<thead>
<tr>
<th>Task</th>
<th>Terms of Payment (%)</th>
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<tbody>
<tr>
<td>1 Design and branding</td>
<td>20</td>
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<tr>
<td>2 The system code/code security and formation of Interactive content of 1000 slides</td>
<td>35</td>
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<tr>
<td>3 The final testing</td>
<td>20</td>
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<td>4 Publishing Online</td>
<td>10</td>
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<tr>
<td>5 Training process</td>
<td>10</td>
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<tr>
<td>6 The final Report Submission</td>
<td>5</td>
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<tr>
<td>Total</td>
<td>100</td>
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6. Deliverables expected from the assignment

The main deliverables of the NC are:

- The Training Modules and training questions bank electronic versions Integrated into the MEWM Website
- The final summary report including statistics and documentations.
All deliverables must be in Arabic, while the final summary report must be in Arabic and English languages.

7. Required Qualifications
The Consultant shall have as a minimum the following qualifications:

- Advanced degree (Masters as a minimum) in computer science or a relevant field
- A demonstrated track record in developing quality online learning. Overall experience of the consultant should be more than 5+ years.
- Has experience developing online learning in low-bandwidth environments and have knowledge of delivering online learning in developing countries, particularly Egypt.
- Have a strong project management ability and excellent communication skills
- References and examples of past work are required and should be included in the proposal.

8. Confidentiality Statement
- All data and information received from MEWM for the purpose of this assignment are to be treated confidentially and are only to be used in connection with the execution of these Terms of Reference.
- All intellectual property rights arising from the execution of these Terms of Reference are assigned to MEWM.
- The contents of written materials obtained and used in this assignment may not be disclosed to any third parties without the expressed advance written authorization of MEWM.

7. How to apply
Interested applicants are requested to submit CVs and financial proposals electronically to: tmelaraby@sci.cu.edu.eg, tmelaraby@gmail.com, tmelaraby@mewm-egypt.net and ahmed@mewm-egypt.net, no later than 3 pm C.L.T., 29th of March, 2020