

TERMS OF REFERENCE

Consultancy Title: International Consultant - Baseline and Benchmarking Assessment on COVID-19 Medical Waste Management

Services/Work Description: Conducting a Baseline and Benchmarking Assessment on COVID-19 Medical Waste Management in 5 countries (Cambodia, Laos, Myanmar, Nepal and Philippines)

Project/Programme Title: Learning from China's Experience to Improve the Ability of Response to COVID-19 in Asia and the Pacific Region

Duty Station: home-based

Duration: 3 February – 30 April 2022 (in total 30 working days)

Expected start date: 3 February 2022

BACKGROUND

COVID-19, with its highly contagious and transmissible nature, has led to the exponential increase of healthcare waste generated in healthcare and quarantine facilities, medical laboratories and biomedical research facilities. Additionally, the increase in the amount of personal protective equipment (PPE) used during the COVID-19 pandemic, compared to normal circumstances, has further contributed towards the increase in healthcare solid waste. For example, recent research estimated that every minute 3 million facial masks are thrown away globally¹ and in some cities in the Asia and the Pacific the volume of medical waste has been increased by 500% on average compared with before COVID-19 figures.²

If not properly treated and managed, such large amount of waste will pose serious risks of disease transmission to waste pickers, waste workers, health workers, patients, and the community in general through exposure to infectious agents. In addition, unmanaged or poor-managed waste will also cause pollution and create new environmental risks.

COVID-19 has put significant additional burden on all phases of medical waste management systems, from segregation, collection, storage, transportation, treatment to final disposal. In light of the serious issue, international organizations such as WHO have developed a series of guidelines to support the countries manage healthcare waste resulting from the current pandemic. Many countries have also formulated policies, plans and SOPs on COVID-19 medical waste management at national and local levels. However, institutional and capacity gaps continue to persist, such as shortage of waste treatment equipment and facilities, lack of technologies for safe transportation and disposal, lack of professional workers and expertise for safe operations and the need for awareness-raising and attitude changes towards better management of COVID medical waste etc.

UNDP, in partnership with the Government of China, is undertaking a regional project to support COVID-19 medical waste management capacity building in 5 countries: Cambodia, Laos, Myanmar, Nepal and Philippines. Under the project, the Disaster Risk Reduction and Resilience Building Team (DRT) at UNDP Bangkok Regional Hub (BRH), in collaboration with Country Offices in the project countries, aims to conduct a series of research to better understand the most pressing issues of medical waste management in 5 project countries from the systems approach, fostering changes in

1 Elvis Genbo Xu, Zhiyong Jason Ren. *Preventing masks from becoming the next plastic problem*. *Frontiers of Environmental Science & Engineering*, 2021, 15(6): 125

2 ADB. [Managing Infectious Medical Waste during the COVID-19 Pandemic](#), 2020.

mindset, perceptions, behaviors and actions, towards more systematic and risk-informed medical waste management practices.

The research will take a phased approach, with baseline assessment and benchmarking as the initial step to map out existing frameworks, capacities and practices at various stages of COVID-19 medical waste management cycle, benchmark to the established/widely acknowledged international standards and norms, and identify pinpoints that call for most attention and efforts of interventions. Based on the findings of baseline assessment and benchmarking studies, a systems thinking workshop will be organized for each country to communicate the research takeaways and facilitate the thought process to apply a systems approach and design to medical waste management among stakeholders that supervise or work in difference areas of COVID-19 medical waste management.

UNDP BRH DRT is hiring an international consultant to conduct the baseline and benchmarking assessment and organize the systems thinking workshops under the direct supervision of DRR Team Leader, UNDP BRH and in close coordination with Country Offices in the project countries. The international consultant will be supported by 5 national consultants (1 consultant for each project country) in terms of in-country data collection and stakeholder coordination.

SCOPE OF WORK, RESPONSIBILITIES AND DESCRIPTION OF THE PROPOSED WORK

Under the overall supervision of DRR Team Leader, UNDP BRH, the Consultant is expected to undertake the below roles and responsibilities:

- Conducting desk review on the medical waste management context of 5 countries, including legislative, regulatory and policy frameworks, institutional/governance arrangements and key stakeholders engaged in various HCW management stages, technical guidelines and standards, actual operation practices, etc.
- Conducting desk review on the widely-recognized/used international standards or guidelines issued by WHO and relevant organizations;
- Developing the methodology to establish the baseline at project countries while considering specific contexts and sensitivity of each country;
- Developing the methodology to benchmark the practices and capacities of 5 project countries to the above international standards;
- Developing the baseline and benchmarking assessment report based on the data collected from 5 countries through literature review, focus group discussion and stakeholder interviews etc with the support of national consultants;
- Consolidating and finalizing the baseline and benchmarking assessment report based on the consultation feedbacks of project countries, UNDP BRH DRT and Country Offices, relevant international organizations such as WHO, UNICEF, etc.;
- Conducting in-depth analysis of the results of baseline and benchmarking assessment such as cross-country and cross-stage comparison in terms of the deviation from international standards/average levels, the feedback mechanisms and contributing/causal factors, and recommendations for policy-makers and practitioners;
- Organizing 1 systems thinking workshop for each country (in total 5 workshops, virtual or hybrid depending on COVID context) to communicate the assessment results and takeaways, and facilitate system thinking on the causal dynamics and feedback loops within and between medical waste management stages for more coordinated, coherent and systematic future design and action, with the support of national consultants.
- Any other tasks as assigned by BRH DRT.

EXPECTED OUPUTS AND DELIVERABLES

Deliverables/Outputs	Due Dates
1. An inception report that describes methodology and workplans with timelines, including a list of key documents, data sources, stakeholders and support needed from national consultants based on consultations with national consultants and Cos (8 days);	18 Feb 2022
2. A draft baseline and benchmarking assessment report, including executive summary, research design, desk reviews, methodological framework, data analysis, key findings and recommendations, limitations, references and any other information to inform and support the assessment findings (8 days);	18 March 2022
3. A final report that includes all the components of the above first draft while addressing all comments, edits and observations from the review of the first draft (4 days);	1 April 2022
4. A PowerPoint presentation that illustrates the key messages of the report with good visuals (2 days);	8 April 2022
5. 5 systems thinking workshops organized with the support of national consultants (8 days)	20 April 2022

INSTITUTIONAL ARRANGEMENT

The Consultant will report directly to the Team Leader, BRH DRT and work in close collaboration with members of BRH DRT team. He/She will also work closely with National Consultants who will be hired in the 5 project countries. Since the IC will be home-based, virtual meetings will be held regularly with the Team Leader and the focal points.

DURATION OF THE WORK

This assignment will start on 3 February 2022 and complete on 30 April 2022, for 30 working days.

DUTY STATION

Home-based.

EXPERIENCE AND QUALIFICATIONS

Educational Qualifications

Minimum Masters' Degree in medical science, environmental science, public health engineering, solid waste management, medical waste management, hospital management or relevant.

Experience and Skills

- Minimum seven years of experience in medical waste management.
- Proven records of experience managing/implementing minimum 2 projects that demonstrate understanding and knowledge of the impacts and implications of COVID-19 on medical waste management systems
- Minimum two years of experience working for international organizations such as the United Nations.
- Minimum two years of experience working in developing countries.

Language

Fluency in spoken and written English.

Competencies

- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;

- Displays integrity and fairness - embodies UN values and promotes the well-being of all individuals regardless of gender, religion, race, nationality, or age;
- Results-driven, initiative-taking, ability to work under pressure and to meet deadlines;
- Ability to work under minimum supervision;
- Highly motivated with a positive attitude and problem-solving approach;
- Good interpersonal and networking skills, supports and encourages open communication.

SCOPE OF PRICE PROPOSAL AND SCHEDULE OF PAYMENTS

The method of payment is output-based scheme. The payments shall be released upon satisfactory submission of the required deliverables by the due dates, or as otherwise agreed with the BRH DRT.

The required review time is between one to two weeks after submission of the deliverables. In the event of unforeseeable travel not anticipated in this ToR, payment of travel costs including tickets, lodging and terminal expenses should be agreed upon, between the respective business unit and the Individual Consultant, prior to travel and will be reimbursed at actual documented cost.

Schedule of payments:

Schedule	Deliverables/Outputs	Due Dates
First payment of 50%	Upon completion and approval of Deliverable 1 and 2	18 March 2022
Second and final payment of 50%	Upon completion and approval of Deliverable 3, 4 and 5	20 April 2022

EVALUATION OF CANDIDATES:

Individual consultants will be evaluated based on the following methodology:

Cumulative Analysis: The candidates will be evaluated through Cumulative Analysis method. When using the weighted scoring method, the award of the contract will be made to the individual consultant whose offer has been evaluated and determined as:

- Responsive/compliant/acceptable; and
- Having received the highest score out of set of weighted combine technical evaluation of desk review and interview (70%), and financial criteria (30%). Financial score shall be computed as a ratio of the proposal being evaluated and the lowest priced proposal received by UNDP for the assignment.

Technical Criteria for Evaluation – 70% (Maximum 70 points)

- Criteria 1: Minimum Masters’ Degree in medical science, environmental science, public health engineering, solid waste management, medical waste management, hospital management or relevant – **(Max 10 points)**
- Criteria 2: Minimum 7 years of experience in medical waste management – **(Max 20 points)**
- Criteria 3: Proven records of experience managing/implementing minimum 2 projects that demonstrate understanding and knowledge of the impacts and implications of COVID-19 on medical waste management systems – **(Max 20 points)**
- Criteria 4: Minimum 2 years of experience working for international organization such as the United Nations – **(Max 10 points)**
- Criteria 5: Minimum 2 years of experience working in developing countries – **(Max 10 points)**

**Only candidates obtaining a minimum of 70% of the total technical points would be considered for the Financial Evaluation.

Financial Evaluation (30%)

Financial proposals from all technically qualified candidates will be scored out 30 marks based on the formula provided below. The maximum marks (30) will be assigned to the lowest financial proposal. All other proposals will receive points according to the following formula:

- $p = y (\mu/z)$.

Where:

- p = points for the financial proposal being evaluated;
- y = maximum number of points for the financial proposal;
- μ = price of the lowest priced proposal;
- z = price of the proposal being evaluated.

Application Procedure / Recommended presentation of offer

Instructions to Applicants: Click on the "Apply now" button. Input your information in the appropriate Sections: personal information, language proficiency, education, resume and motivation. Upon completion of the first page, please hit "submit application" tab at the end of the page then the uploading option for the required document will be available.

Please group all your document into one (1) single PDF document as the application system only allows to upload maximum one document.

Interested candidates must submit the following documents/information to demonstrate their qualifications. Please group them into one (1) single PDF document:

1. **Letter of Confirmation of Interest and Availability with Financial Proposal** (in USD) using the template provided as **Annex III**

[Financial proposal: Consultant shall quote an all-inclusive fixed total contract price, supported by a breakdown of costs, as per template provided for the entire assignment. The term "all-inclusive" implies that all costs (professional fees, communications, consumables, etc.) that could be incurred by the IC in completing the assignment are already factored into the proposed fee submitted in the proposal]

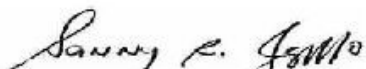
If an Offeror is employed by an organization/ company/ institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the Offeror must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

2. **P11 / Personal CV**, indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least three (3) professional references.

****Failure to submit the above-mentioned documents or Incomplete proposals shall result in disqualification**

****Please group all your document into one (1) single PDF document as the application system only allows to upload maximum one document.**

Approved by Sanny Jegillos, Team Leader, UNDP BRH DRT



20 December 2021