

TERMS OF REFERENCE

| Job ID/Title: | Consultant for the installment of BSL systems at the National Referral Laboratory and regional Hospital Ayres Menezes in São Tomé and Principe. |
|-------------------------------------|--|
| Duty Station: Sao Tome and Principe | Both Home/Country Based |
| Category: | HIV, Health & Development |
| Additional Category: | Global Fund |
| Brand: | UNDP |
| Type of Contract: | Individual Contract (IC) |
| Category (eligible applicants): | External |
| Application Deadline: | 30/07/2021 |

| Languages Required: | Arabic | English | Х | French | | Russian | |
|---------------------|---------|---------|---|--------------------------|---|---------|--|
| | Spanish | Chinese | | Portuguese or Spanish | Х | Other: | |

| Starting Date: | August 2021 |
|-----------------------------------|---|
| Duration of Contract (# of Days): | 30 working days |
| Expected Duration of Assignment: | 30 days to design the project for the BSL in the Hospital Ayres Menezes (HAM) in Sao Tome and the National Referral Laboratory (NRL), including the calibration of the laboratory equipment. |
| Travel | The consultant will travel to Sao Tome to conduct this technical assistance (TA). |
| Office facilities: | Connection to the internet, UN building pass |

1. Background

The United Nations Development Programme (UNDP) is the UN's global development network, advocating for change and connecting countries to knowledge, experience and resources to help people build a better life. We are on the ground in 170 countries and territories, working with governments and people on their own solutions to global and national development challenges to help empower lives and build resilient nations.

The 2030 Agenda for SDGs and the pledge to leave no one behind reflect the interconnectedness of health and sustainable development, including widening economic and social inequalities, the climate crisis, rapid urbanization, the continuing burden of HIV and other infectious diseases (e.g, malaria, tuberculosis), the growing burden of non-communicable diseases and the emergence of health threats. The scope and scale of delivering health and well-being for all demands innovative partnerships and financing.

UNDP has an important role in supporting health outcomes by supporting countries to address the social, cultural and economic determinants of HIV and health, in partnership with UN entities and other organizations. This is done through UNDP's core work in reducing inequalities and social exclusion that drive HIV and poor health, promoting effective and inclusive governance for health, and building resilient and sustainable systems for health. UNDP also contributes through its coordinating and convening role in bringing together multiple partners and resources at national and local levels.

As a trusted, long-term partner with extensive operational experience, UNDP supports countries in effective implementation of complex, multilateral and multi-sectoral health programmes while simultaneously investing in capacity development so that national and local partners can assume these responsibilities over time. When requested, UNDP provides technical assistance on public health, working with national partners and The Global Fund to improve management, implementation and oversight, while simultaneously strengthening health institutions and systems for national entities to assume the PR's role over time. Within the HIV, Health and Development Group, Bureau of Policy and Programme Support, Global Policy Network, the Global Fund Partnership/Health Implementation Support Team (GF-HIST) is a dedicated team providing support and technical assistance to countries like Sao Tome e Principe during their implementation of GF grants.

2. The impact of Covid in the national health system

The health system (NHS) has been significantly affected, either due to the disease itself, which demanded a specific and immediate response from the health services, or due to the anti-Covid measures adopted by the government with the purpose of preventing the virus transmission and combating the pandemic spread in the country. As in other countries, this caused the temporal restriction of rights and freedoms, regarding movement and economic freedoms.

A National Contingency Plan was developed with the aim of strengthening the country's capacities to prevent, prepare, respond and recover from a possible COVID-19 epidemic. However, the difficult environment generated by the pandemic had an immediate impact on the activity of the health system; the Covid-19 pandemic came to show the weaknesses in health services both in containing the infection and in terms of other pathologies in terms of deficiencies. in human resources, medicines, supplies and medical equipment needed for case management. There was a need for support and intervention by different bilateral and multilateral partners, such as: WHO, UNICEF, UNFPA, World Bank, UNDP, UNHabitat, IMF, China, Portugal, Brazil, etc.

At the hospital level, a temporary field hospital was installed at the Hospital Ayres Meneses (HAM), main hospital in the capital city, Sao Tome. This main hospital has 50 Covid beds, including 6 for intensive care units. The hospital was the referral center to attend the Covid patients during the two waves pandemic, which have affected the country since the beginning. One of the main issues identified was the lack of adequate bio safety levels in the rooms utilized for triage and initial assessment of patients. This became a critical factor during most of the pandemic.

3. The need for Biosecurity levels to face the Covid-19 pandemic

The Covid pandemic committee at STP has decided that both the national laboratory and HAM are in urgent need of having updated state of the art rooms to prevent the spread of microbes.

To determine this safety control level, HAM and the national laboratory considered several factors, including disease transmission and severity, infection potential, microbe or agent origin, and type of work. What are the differences among the BSL designations?

The Centers for Disease Control (CDC) specifies four broad Biological Safety Levels, each of which corresponds to a level of exposure danger and a set of design features and operational protocol. Each increasing level builds on the previous level(s):

BSL-1: Required in the presence of microbes that do not consistently cause disease, such as E. coli. Work can be done on an open bench, and minimal Personnel Protective Equipment (PPE) is required. Doors separate the BSL-1 lab from the rest of the facility.

BSL-2: Required in the presence of moderately hazardous microbes, such as Staphylococcus aureus. The lab is restricted behind self-closing doors. Personnel wear minimal PPE plus face shields; many operations are performed within biological safety cabinets (BSCs – see explanation below). Negative-pressure containment is generally advised, and exhausted air may require filtration.

BSL-3: Required in the presence of potentially lethal, often "exotic" airborne microbes, such as tuberculosis. The lab is restricted behind two sets of doors. Workers may require immunizations, and PPE plus respirators are advised. All work is performed within a BSC. Filtered room air must be exhausted.

BSL-4: Required in the presence of high risk of airborne transmission; infections are frequently fatal, as from Ebola.

All BSL facilities require that personnel follow "standard microbial practices": no food or drink; no cosmetics; hands and gloves are frequently washed and surfaces routinely decontaminated. Sterilization and entry/exit protocol vary by BSL level.

4. The need for a national referral laboratory (NRL) with high biosafety levels

The emergence of multi-drug resistance tuberculosis has become a real priority for national health systems in Africa. In Sao Tome and Principe, the Ministry of Health, with the support of the Brazilian cooperation, built a national referral tuberculosis laboratory in 2004. The laboratory was built with a BSL III room, accordingly to international standards.

Since this date, the laboratory has been conducting Mycobacterium cultures and conducting HIV test in these rooms. Since 2020 the Covid-19 pandemic forced the country to use the laboratory to conduct PCR testing, becoming a pillar in the national response against Covid.

After more than 16 months of overwork and overuse, the laboratory is in urgent need or reviewing its BSL standards, which have suffered deterioration and a long period of lack of maintenance.

5. The need for improved BSL systems at the hospital

The Hospital Ayres Menezes (HAM) is the main hospital in STP. During the Covid pandemic the hospital has attended more than 300 Covid-19 patients, with different levels of clinical requirements, increasing the demand for high BSL levels to facilitate their care and attendance.

At this time, the HAM is in urgent need to update and improve their BSL levels. The HAM is planning to install modern BSL systems in three rooms, in order to have the adequate clinical and BSL levels of care, not only for Covid patients, but also for the initial care of

6. Goal of the consultancy

To assess the situation of the BSL status of the rooms at the national referral laboratory and the HAM in STP, looking for updating it and repairing as needed, and propose a design for the negative pressure system needed to ensure that both the laboratory and HAM have the BSL III standard needed.

At the same time, the Consultant will conduct calibration and evaluation of all equipment in the laboratory.

7. Objectives

1-. To assess the situation of the BSL system at the national laboratory in STP.

2-. To propose the repairs of the BSL system at the national laboratory in STP.

3-. To assess the situation of the three rooms identified at the HAM, and propose a BSL system for the identified rooms.

3-. To provide the technical framework needed to ensure the purchase of the best equipment with the best value-for-money, its installment and the complementary equipment and infrastructure.

5-. To train the local national team in preventive maintenance of the installed BSL systems and ensure an adequate supply of parts needed.

8. Main description

The HAM and the national laboratory are in need of installing BSL systems to ensure the maximum biosafety levels; this is a critical factor in to address in the Covid pandemic. The hospital needs to have the best biosafety levels to prevent the spread of SARS-Cov-2 and other viruses.

The national laboratory in STP has a BSL III system installed in one of its rooms. This system needs to be repaired, as it is not working properly due to the lack of adequate maintenance in the last 18 months due to the restrictions in travel caused by the Covid pandemic.

To support this initiative, UNDP plans to recruit an international consultant in charge of the following activities:

9. Description of activities

1.- Conduct field visits to assess the needs to ensure an adequate BSL status for the laboratory.

- Conducts a field visit to the RNL to evaluate the actual state of the BSL III system.

- Work together with the Laboratory Coordinator in assessing the BSL III system

- Reviews and refines technical documentation and specifications (existing and future lay out, Bill of Quantities (BoQ) with estimation of costs, technical description, design and specific drawings, provide technical support to procurement processes under the project).

- Propose the repairs needed for the system and a budget

- Send a detailed proforma to UNDP with the proposed budget.

2.- Conduct field visit to assess the biosafety needs to install a BSL level III system at three rooms of the HAM in STP.

- Conducts field visits to the HAM

- Work together with the HAM clinical coordinator to propose a BSL design at three rooms of the HAM

- Reviews and refines technical documentation and specifications (existing and future lay out, Bill of Quantities (BoQ) with estimation of costs, technical description, design and specific drawings, provide technical support to procurement processes under the project).

- Propose a design and a budget to install BSL III to the identified three rooms at the HAM.

3.- Conducts calibration and maintenance of the laboratory equipment.

- Evaluate the needs of the equipment at the laboratory

- Designs a maintenance plan for the identified equipment, with the support of the

- Bring the spare parts and install them to the needed equipment

- Provide maintenance to the laboratory equipment, following the plan.

4.- Train the national equipment

- Organize meetings to provide general training on preventive maintenance and good practices with the local NRL team.

- Distribute didactic materials to local personnel on preventive maintenance and good practices.

10. Documents to be submitted after the mission and technical analysis:

(i) Diagrams and technical manuals of the proposed equipment for the BSL system both at the NRL and HAM.

(ii) Budget and timeframe/calendar for the repairs of the NRL. Repairs must ensure BSL III levels at the NRL.

(iii) Budget and timeframe/calendar for the installment of BSL III systems in three rooms of the HAM. The equipment installed must ensure BSL III at the identified rooms at the HAM.

(iv) Certification of all maintained equipment approved by WHO.

(iv) Complete technical specification for the system needed, including Make, Model and certifications in accordance with technical specifications.

(vi) Installment of the BSL systems should be under the scope of the consultants (which includes works required for equipment installment. All related works needed shall be deemed to have been included within the scope of the consultant).

(vii) Life Span: Minimum 5 years and certificate in this regard; life span of minimum 5 years; guaranteed by a letter from the manufacturer; • certificate of quality, calibration and inspection. Vendor should also certify the availability of all the parts/spares/accessories delivered with the equipment to be available for 5 years.

Licensing: determines necessary building permits and licenses and to ensure that they are obtained.

11. Establish the guidelines for preventive maintenance plans for the BSL system at the NRL

- Ensure that the hospital and the technical team has the following key documentation to support the prevention maintenance plan:

Documentation (included, minimum in English and Portuguese languages),

(i) Hard and soft copies, language as requirement and local language as preference, of:

(ii) User manual, detailing: specific protocols for operation, list of equipment and procedures required for cleaning, disinfection, troubleshooting, calibration, and routine maintenance; service manual; focal point and contact details of manufacturer, and authorized distributors (if applicable).

- Provides the main guidelines and training plan; establish and trains local technicians on preventive maintenance of the system installed.

- Designs check lists and other Terms of reference needed (in Portuguese) to ensure that preventive maintenance actions are in place.

12. Results/expected outputs and dates

The project has 4 phases:

- Calibration of the laboratory equipment (5 days)
- Evaluation of the BSL system at the NRL (10 days)
- Evaluation of the installment of a BSL system at HAM (12 days)
- Training of local personnel (3 days)

Timeframe

| Phase I - Calibration of laboratory equipment. (output finalized and approved 5 days after contract). | 5 days (1 to 5 August) |
|---|---------------------------|
| Phase II - Site assessments conducted and final evaluation reports of BSL III installment, including pipelines, equipment, civil works etc./budgets and timeframes of the NRL. (Output finalized and approved, 10 days) | 10 days (5 to 15 August) |
| Phase III - Site assessment conducted and final evaluation reports of BSL systems III installment, including pipelines, equipment, civil works etc./budget and timeframes for the HAM. (Output finalized and approved, 12 days) | 12 days (15 to 27 August) |
| Phase IV - Technicians trained and preventive maintenance plan in country (Output finalized and approved, 3 days) | 3 days (27 to 30 August) |

Definitions:

- 1. Terms of Reference (ToR): document written by UNDP describing the needs of the technical assistance, which is required for a specific project. ToR are integral parts of the contracts signed by the consultant with UNDP in Sao Tome. It includes the description of duties, but is not limited by it.
- 2. BSL III system: this is the entire oxygen system of the hospital and includes the main plant, pipelines, auxiliary plant, concentrators, electric systems, cylinders and other equipment needed to ensure a reliable and resilient oxygen flow to the patients
- 3. Preventive maintenance plan: this is the plan needed to ensure that the BSL equipment installment functions properly. This includes all the preventive maintenance activities needed routinely. The plan should include the training of the maintenance technicians to ensure they are conducting routine daily activities needed. The consultant must design simple checklists, which need to be used in the preventive daily activities.
- 4. Field visits: visits conducted to Sao Tome, with all expenses incurred on the side of the Consultant
- 5. Consultant: technical assistant provider with a temporal non-bidding relationship with UNDP.
- 6. Technical support and assistance: this is the technical knowledge provided by the Consultant to UNDP, to ensure the quality of the design, implementation, installment and follow up of the oxugen system in the hospital at Sao Tome.

13. Contract contents

This contract shall include a lumpsum for the following activities.

- 1. Provision of technical support and technical documentation, all along the design of the BSL system, with a budget including estimated equipment purchasing costs and transportation process and installment of the needed equipment and design of the maintenance plan to ensure that UNDP is purchasing the best equipment adapted to the needs of the NRL and HAM in Sao Tome,
- 2. Field visit expenses, including air tickets, hotels, and other expenses related,
- 3. Prints and other software needed.

UNDP will provide orientation in country during the visits of the consultant. UNDP will support all public relations, including meetings and contacts, needed associated with the project, including an official presentation to the Minister of Health, and the launching of activities in country. At the same time, will link the consultant with the need personalities and technicians whilst in country.

All documentation produced during this contract will belong to UNDP and UNDP considers under its intellectual property.

14. Qualifications/requirements (including competencies, values and skills):

A) Qualifications, skills, experience:

Degree Level: Master's degree from a recognized university Type of Degree: Bio engineer from a recognized trained center - Professional licensure in maintenance of bioengineering and add advantage.

B) Years of work experience: Minimum of 7 years of senior professional experience in the management of oxygen systems, especially in third world scenarios. This includes recognized experience in purchasing, maintaining and installment of BSL systems at third world countries.

- Experience in the installment of BSL equipment in health facilities in Africa, and posterior maintenance.

- Knowledge of health facilities maintenance highly desirable, professional experience in development of technical project documentation as well as installment of BSL systems/rehabilitation supervision in site;

- Knowledge of and experience in operational modalities and procedures of UNDP and/or UN system would be an asset;

- Knowledge and understanding of international BSL management standards (including WHO and CDC), Knowledge and understanding of international standards, technical regulations, general and special technical conditions and professional codes;

- Familiarity with Global Fund procedures and grant implementation is an add advantage; Knowledge of procurement, tendering and contracting regulations, requirements of international organizations is desirable;

- Knowledge of civil works related to BSL installment is needed,

- Recognized by WHO as provider of BSL equipment and calibration, highly desirable.

Computer skills: Experience in the usage of computers and office software packages (MS Word, Excel, etc.) and knowledge of spreadsheet and database packages, experience in handling of web- based management systems.

Language: Fluency in both English and Portuguese or Spanish (oral and written) is mandatory.

B) Competencies and values:

Core Competencies: Essential:

- Ability to work under limited supervision-Plans, prioritizes, and delivers tasks on time.
- Generates ideas and seizes opportunities to support corporate strategic objectives.
- Strives for and promotes excellence in performance continually.

Desired:

- Participates effectively in a team -based, information -sharing environment, collaborating and cooperating with others
- Demonstrate corporate knowledge and sound judgment, namely for Informed and transparent decision making
- Demonstrating/safeguarding ethics and integrity

- Self-development, initiative-taking and create synergies through self-control
- Learning and sharing knowledge and encourage the learning of others. Promoting learning and knowledge management/sharing is the responsibility of each staff member.

Functional Competencies: Essential: Results-Orientation:

- Plans and produces quality results to meet established goals
- Generates innovative, practical solutions to challenging situations

Communication:

- Formulates written information clearly and persuasively
- Shares information openly with co -workers and partners while using discretion to protect confidences.

Job Knowledge and Expertise:

- Demonstrates substantive and technical knowledge to meet responsibilities and post requirements
- Executes day-to-day tasks systematically and efficiently
- Uses Information Technology effectively as a tool and resource
- Is motivated and demonstrates a capacity to pursue personal development and learn

15. Reporting:

The Consultant reports to the Project Coordinator.

16.Scope of Bid Price and Schedule of Payments:

Lump sum contracts

The financial proposal shall specify a total lump sum amount, and payment terms around specific and measurable (qualitative and quantitative) deliverables (i.e. whether payments fall in installments or upon completion of the entire contract). Payments are based upon output, i.e. upon delivery of the services specified in the TOR. In order to assist the requesting unit in the comparison of financial proposals, the financial proposal will include a breakdown of this lump sum amount (travel expenses, professional fees, insurance, etc...).

The expert will receive payment of fees subject to approval of the deliverables agreed upon in the Terms of Reference and approval of the respective Certificate of Payment by the immediate supervisor.

Travel:

All envisaged travel costs must be included in the financial proposal and the payment will be done by lumpsum accordingly with two deliverables. This includes all travel to join duty station/repatriation travel. In general, UNDP should not accept travel costs exceeding those of an economy class ticket. Should the IC wish to travel on a higher class he/she should do so using their own resources.

In the case of unforeseeable travel, payment of travel costs including tickets, lodging and terminal expenses should be agreed upon, between the respective business unit and Individual Consultant, prior to travel and will be reimbursed.

Payment phases:

| Phase I | 10 % | 10 August |
|-----------|------|-----------|
| Phase II | 30 % | 25 August |
| Phase III | 40% | 30 August |
| Phase IV | 20 % | 10 August |

17.Criteria for Selection of the Best Offer:

Individual consultants will be evaluated based on the combined scoring (Cumulative analysis) method.

The award of the contract will be made to the individual consultant whose offer has been evaluated and determined as:

a) Responsive/compliant/acceptable, and

b) Having received the highest score out of the pre-determined set of weighted technical and financial criteria specific to the solicitation.

* Technical Criteria weight – 70%;

* Financial Criteria weight – 30%;

Technical Evaluation will be conducted based on a review (desk review) of the applicant's qualifications, potentially including a technical interview.

| Criteria | Weight | Max. Point |
|--|--------|------------|
| <u>Technical</u> | 70 | 100 |
| <i>Criteria A:</i> Background and minimum educational qualification as defined above | | 10 |
| <i>Criteria B:</i> Practical previous experience relevant to the terms of reference | | 25 |
| <i>Criteria C:</i> Professional experience in design and construction/rehabilitation of negative pressure systems; experience in laboratory and hospital settings, professional experience in development of technical project documentation as well as installment of BSL in site | | 25 |
| <i>Criteria D:</i> Experience in the usage of computers and office software packages (MS Word, Excel, etc.) and knowledge of spreadsheet and database packages, experience in handling of web- based management systems | | 5 |
| | 20 | 20 |
| <u>r inanciai</u> | 30 | 30 |

Only candidates obtaining a minimum of 70 % of total 49 points in the Technical Evaluation would be considered for the Financial Evaluation

The financial score for the financial proposal will be calculated in the following manner:

 $Sf = 30 \times Fm/F$, in which Sf is the financial score, Fm is the lowest price and F the price of the proposal under consideration.

(Total Financial Maximum points = 30 points)

18.Guidelines for Applications:

Interested applicants are advised to carefully review this advertisement and ensure that they meet the requirements and qualifications described.

Interested individual consultants must submit the following documents/information to demonstrate their qualifications:

a) Duly accomplished Letter of Confirmation of Interest and Availability using the template provided;
b) Personal CV and P11, 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;
c) Brief description of why the individual considers him/herself as the most suitable for the assignment;

d) Financial Proposal that indicates an all-inclusive daily fee, as per template provided.

Approved by:

Carlos Falla

Carlos Falla Project Coordinator 14-Jul-2021