Terms of Reference

A. Project Title:

Short Term Consultancy for the improvement of the Tuberculosis Cross Sectional and Longitudinal Data for utilization – a Health Information Strengthening Initiative

B. Project Description:

Background:

The surveillance of TB, MDRTB, TB/HIV is necessary as the country strives to control this epidemic and there is an essential need to update data to improve the epidemiological profile of tuberculosis disease in Belize, and to improve the treatment outcomes in those most affected. This significant milestone will help to improve data collection, analysis and socialization of information so as to stimulate policy development.

The Belize Health Information System (BHIS) is a comprehensive electronic health record system and is the Ministry of Health's main tool for the capture of health data, and is a web-based open source system that consists of several modules. Having been launched in 2008 this can be found in the major health facilities, and represents an unrivaled opportunity for data capture of information that can be utilized for both cross sectional and longitudinal reporting and analysis. The full potential and ability of the system has yet to be explored and capitalized upon therefore this represents a significant opportunity and priority, and that which we must explore to the fullest.

Global Fund Round9 and our country's Combined TB and HIV grants presents us with funding to strengthen Belize's Health System, and we seek the services of a suitably qualified consultant to improve the use of cross sectional and longitudinal, TB data captured within the BHIS in the following areas:

- **TB Case-based Surveillance** – TB case surveillance aims to collect data at the individual patient level on a longitudinal basis, starting from the moment of TB diagnosis. Collated at a regional level these data provide insight into the TB epidemic and care provided in Belize. At this point few countries in the region have a TB case-based system for surveillance, used for national reporting. Much work needs to be done in Belize as we are starting from ground zero.
- **Disease Cohorts for TB, MDRTB and HIV/TB** – The EMR of the BHIS facilitates the tracking of patients over time. The analysis of this longitudinal health data can allow for more meaningful and probing analysis which can ultimately be used to improve patient care and outcomes. Moreover, the longitudinal data analysis of various disease cohorts such as HIV is increasingly being seen along with the increasing trend towards EMRs and the advancement in technology. This feature of the BHIS EMR has not been utilized in this manner to date.

- **TB and HIV/TB Cross Sectional Data** - Traditionally these HIV and TB data are analyzed and presented on an annual and/or quarterly basis for the purpose of informing strategic programmatic direction and action. A comprehensive revision of the information presented and method of data analysis since the implementation of the BHIS has yet to be done for TB all forms. Moreover, although much of the TB data is being captured in the BHIS it is still largely being reported via a parallel manual mechanism. This has lead to duplication of efforts on the part of the already limited staff and hampered the buy-in of the BHIS.

This consultancy is also intended to be a capacity building exercise for the National Epidemiology Unit, the TB Coordinator, the monitoring and evaluation officer in data manipulation and analysis utilizing relational database structures through the engagement and mentoring of the relevant staff throughout the entire process. This is intended to utilize HIV and TB data as entry points in the first instance with the aim for the eventual extension of methodologies, approaches and lessons learnt to work with data for other diseases such as NCDs.

Purpose:

To strengthen the health information system of Belize by improving the collection and analysis of Tuberculosis cross sectional and longitudinal data

C. Scope of Work

Objectives:
- To revise and improve upon the presentation and analysis of cross sectional TB,MDRTB,TB/ HIV data captured within the BHIS
- To establish disease cohorts for TB,TB/HIV & MDRTB
- To enhance capacity of the relevant staff of the National Epidemiology Unit in data manipulation and analysis involving relational database structures

Tasks:

- Familiarization with the BHIS data structure insofar as gaining insight into all relevant variables (demographic, clinical, laboratory and pharmaceutical) currently being captured as it relates to HIV and TB and the conceptual relationships among them
- Revision of current methodology of presentation and analysis of HIV & TB cross sectional data with recommendations for improvement with an emphasis on maximizing use of data captured within the BHIS
- Creation of the physical data structures as indicated
- Guide the extraction and assembly of the data into the appropriate datasets as indicated
- Finalization of protocol for analysis of longitudinal and cross sectional data analysis within the BHIS
- documentation of challenges encountered and recommendations for the way forward
- Engagement of relevant staff in capacity building during the process in data manipulation and analysis utilizing relational database structures

D. Deliverables/Expected Results

Deliverable	Estimated duration to complete	Target due dates	Review and Approvals Required
Finalized datasets for TB,TB/HIV, MDRTB cohorts from data captured within BHIS	First 5 WD	5 days after signing of contract	MoH TB Coordinator/Biostatistician/DHS/UNDP
A 1st TB,TB/HIV, MDRTB CBS report	First 5 WD	5 days after signing of contract	MoH TB Coordinator/Biostatistician/DHS/UNDP
Finalized datasets for TB, MDRTB and TB/HIV cross sectional data analysis	First 8 WD	8 days after signing of contract	MoH TB Coordinator/Biostatistician/DHS/UNDP
Protocol for analytical methodology for TB,MDRTB,TB/HIV cross sectional data	First 9 WD	9 days after signing of contract	MoH TB Coordinator/Biostatistician/DHS/UNDP
Protocol for analytical methodology for TB,TB/HIV, MDRTB CBS	First 10 WD	10 days after signing of contract	MoH TB Coordinator/Biostatistician/DHS/UNDP

E. Institutional Arrangements

Work Setting:

- Location - the consultant will be based at the Ministry of Health headquarters in Belmopan
- Working relationships – The consultant will report directly to the National Tuberculosis Coordinator and the National Epidemiologist
- Deliverables of consultancy – All deliverables must be met within a period not exceeding 20 days from the signing of the contract

F. Duration of Work

10 working days, as per deliverable table in section D.

G. Qualifications & Experience:

- Masters degree or higher in biostatistics/epidemiology, health informatics, information technology or related fields
- Experience in relational databases and interfaces, and report building from relational databases for cross sectional and longitudinal reports
- Experience conducting data mapping exercises
- Medical background or degree highly desirable
- Familiarity including prior working experience within the local and regional contexts
- Familiarity with regional indicators, reporting forms and content desirable

H. Scope of Price Proposal and Schedule of payment

Deliverable	Estimated duration to complete	Target due dates	Payment Schedule
Finalized datasets for TB,TB/HIV, MDRTB cohorts from data captured within BHIS	First 5 WD	5 days after signing of contract	10%
A 1ˢᵗ TB,TB/HIV,MDRTB CBS report	First 5 WD	5 days after signing of contract	10%
Finalized datasets for TB, MDRTB and TB/HIV cross sectional data analysis	First 8 WD	8 days after signing of contract	20%
Protocol for analytical methodology for TB, MDRTB,TB/HIV cross sectional data	First 9 WD	9 days after signing of contract	40%
Protocol for analytical methodology for TB,TB/HIV, MDRTB CBS	First 10 WD	10 days after signing of contract	20%

I. Presentation of Offer

The presentation of Offer to be submitted along with the following:

a) Duly accomplished **Letter of Confirmation of Interest and Availability** using the template provided by UNDP;
b) **Personal CV or P11**, indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Candidate and at least two (2) professional references;
c) **Brief description** of why the individual considers him/herself as the most suitable for the assignment, and a methodology, on how they will approach and complete the assignment.
d) **Financial Proposal** that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs.

J. Criteria for Selection of the Best Offer
The successful proposal will be selected based on the following criteria:

Combined Scoring method – where the qualifications and methodology will be weighted a max. of 70%, and Combined with the price offer which will be weighted a max of 30%