

## **TERMS OF REFERENCE for MIS Database Development Consultant**

(For short-term individual consultant)

*Version 2.0*

### **Background**

To improve project-specific planning and the further dissemination and use of project knowledge and experiences, the LASED II project supports the further development and improvement of the project and SLC-related management information system (MIS). Enhanced information collection, processing, and timely dissemination to project stakeholders would increase transparency, effectiveness and efficiency of project operations. Evidence-based planning would ensure that government resources are effectively and efficiently deployed for the maximum benefit of land recipients and their communities. An improved project MIS would be able to easily track progress of financials, outputs and outcomes of the project, particularly the results framework indicators. The system is expected to help GDH, NCDD Secretariat, GDA and the World Bank to address issues and constraints that impede the project implementation in a timely manner. The new MIS to be developed will build on the existing management information system, which currently is still largely based on Microsoft Excel and Word formats..

### **Objective of the assignment**

The objective of the consulting input is to design an upgraded MIS system for LASED II and to support the rollout of the system. The enhanced MIS would include a computer-based database that is able to record, track, store, and facilitate reporting on key indicators. The database would allow tracking of progress and verification at the household level and would include household as well as GIS data. If feasible, the system would be integrated into a web-site that could facilitate reporting as well as data entry. The system would be field-tested prior to launch and would include training materials, guidance documentation, and standardized questionnaires.

The MIS will be designed together with project management, drawing on existing data and on lessons from LASED. The consultant would work closely with relevant RGC counterparts, specifically at GDH, GDA and NCDD, to ensure that the system meets their project as well as long-term needs for M&E, and to ensure consistency and integration with RGC systems wherever possible.

### **Key Tasks**

Key tasks for the development of the enhanced MIS are as follows:

- (a) Assessment of project data and information needs
- (b) Assessment of possible and potential linkages to existing NCDD MIS
- (c) Assessment of capability of data collection and entry staff and design of capacity building program
- (d) Review of data flow and responsibilities
- (e) Consultation with relevant stakeholders (users of M&E system, and those involved in data collection), including field visits
- (f) Analysis of suitability and gaps of existing ID codes for use in database application.
- (g) Analysis of existing GIS database and capabilities and assessment of options and steps for integrating this with other project data
- (h) Data cleaning for existing data to be integrated into database system
- (i) Development of MIS database application which include but not limited to the following features:
  - Simple, effective and consistent web - enabled system

- Compatible with existing NCDDDS MIS systems in terms of technology and data standards (cost effective feasibility provided)
- An open system which benefits IAs and stakeholders in terms of content and accessibility
- Easy to use user interfaces especially data entry interfaces which must be compatible with tablet computer screens
- Involve data entry staff and other stakeholders throughout the system development lifecycle
- A comprehensive and complete set of reports based on the project requirements
- (j) System tests prior to mainstreaming
- (k) Development of training materials and guidelines
- (l) Training in the field for consultants and data entry personnel especially in using tablet computer as data entry device
- (m) Suggested revisions of M&E Manual for compatibility with enhanced MIS
- (n) Assessment of options for providing continuity in MIS application following project closure.
- (o) Coordination with web-designer to assess options for linking MIS to project website and for data entry and reporting

### **Expected Outputs**

- Final and agreed upon MIS design
- Field tested data entry system
- Tested database system for recording and reporting M&E data
- Training material and user guides

### **Qualifications**

The short-term consultant is expected to have the following qualifications:

#### **Education/Experience:**

- Advanced university degree in MIS / software development
- Extensive experience (3 years minimum) developing web - enabled software
- Demonstrate experience in software design, coding and relational database modelling, especially in some of the following technologies:
  - ASP.NET MVC 5 (C#) with .NET Framework 4.0 or above
  - MS SQL Server 2012+ and Windows Server Environment
  - HTML, JavaScript, CSS, jQuery, Bootstrap, (ExtJS or Angular JS would be an advantage)
  - Test Driven Development (TDD)
  - Object Relational Mapping (ORM). Entity Framework is an advantage
  - Inversion of Control (IoC) and Dependency Injection (DI)
  - Responsive UI/UX Design

#### **Organizational Competencies:**

- Displays gender, religion, race, nationality and age sensitivity and adaptability
- Ability to establish and maintain effective rapport with civil servants, other advisers, and all key project stakeholders

#### **Functional Competencies:**

- Proven IT development skills
- Proven communication and listening skills
- Experience providing capacity development support
- Flexible and adaptable
- Good analytical and quantitative skills
- Resourcefulness and ability to solve problems