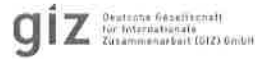




Implemented by:



Sustainable Land Management Program in Ethiopia

Terms of Reference

Software Development Firm

Upgrading SLMP Planning and Reporting Tool (PRT)

Date: September 2015

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1. Background

The Ethiopian national Sustainable Land Management Program – SLMP aims at reducing land degradation and increasing agricultural productivity of small-scale farmers in the rural highland areas of Ethiopia. Interventions of the SLMP are planned in a decentralized bottom up approach, from community level via woreda and regional levels to federal level. Political and operational decisions on fund allocation for decentralized planned interventions are made on regional and federal levels by the Ethiopian Ministry of Agriculture, based on submission of coherent plans and adequate reporting on planned versus achieved activities and results. The SLMP covers 6 regions and 209 woredas with a varying number of community level intervention sites (micro-watersheds) in each woreda.

Originally, the planning and reporting processes in the scope of SLMP involved the filling of a large number of spread sheets for each intervention site (micro-watershed). Those individual sheets were aggregated at the next higher administrative level and finally aggregated into a national plan at federal level.

Experiences in using spread sheets in a program of such scale has shown that correct aggregation of regional and federal plans turns out to be a huge challenge for the responsible management staff of the SLMP. Reasons include frequent errors in entering figures, the widespread use of different activity descriptions for the same activity, the application of different norms for units of measures, wrong use of formula functions. More experienced computer users at various levels of the planning process apply their skills to manipulate locked spreadsheet cells and actively contribute to incompatibility of plans for aggregation. Hence significant amounts of time have to be invested for corrective work at the aggregation levels of the planning process to allow compilation of plans meeting the desired qualitative standards.

The problems described above were the driving force for an earlier computer based planning and reporting tool (Eco-pop system), developed and used for about two years during the Sustainable Utilization of Natural Resources (SUN) Program (2005-2009). The tool was, however, not sufficiently user friendly and it took time to learn and customize it.

Based on the above described experiences from the planning process, GIZ took the initiative to improve the planning process by developing a web based system named "Planning and Reporting Tool (PRT)" with the aim to create coherent plans to the desired quality standard in a time efficient manner. The PRT was designed to allow for reporting on achievements against the plan, which requires regular monitoring of achievements and data entry by the responsible SLMP implementation staff at woreda and Regional levels. Currently, the main focus of the PRT is to enter Annual Work Plans on the community level where the SLMP intervenes; the data is then accessed by SLMP personnel at increasingly higher level, in particular Regional and Federal level, for approval and/or revision of the planned activities.

Data entered into the current version of the web-based Planning and Reporting Tool (PRT) during the planning process follow a format based on a joint logframe with specified components and defined outputs. Different types of activities are defined by details on funding source, geographic location, target, units, cost, time of implementation and responsibility.

Regardless of the PRT's program design as such, critical challenges for the effective use of the system currently still are:

- that many users are not accustomed to Internet use and do not yet regularly access and use the plans via Internet,
- and/or inadequate computer literacy (high staff turnover),
- unreliable Internet access at woreda level, lack of operational budgets for EVDO's.

2. Objective and Scope of the Assignment

The objective of the assignment is to upgrade the Planning and Reporting Tool (PRT) for the SLM Program. The PRT should have online and offline functionality. The offline system guarantees a working environment when there is no internet connection and then it synchronizes when connected.

It is also expected to adopt the functionalities from the current system (PRT) and add additional features as follows:

Tasks

- Define requirements through user interviews, document analysis, project implementation process descriptions, referring to SLM-PRT Analysis Report (April 2014) and various written comments by stakeholders.
- Add additional features to the PRT such as generating Applications for Funding, procurement plan, results based reporting, detailed database of each micro-watershed and more.
- Develop functional requirements (Business Requirements Document), User Cases, GUI (Graphical User Interface), and Screen and Interface designs. Develop and implement the upgraded PRT in accordance with the agreed tasks from start to end.
- Upgrade the PRT according to business (i.e. project implementation) logic in a way that the planning, reporting and monitoring processes and aggregation of the data become easy, including easy access to micro-watershed level data; the system should have room to include GIS maps of the micro-watersheds.
- Upgrade the PRT ensuring that the SLMP Harmonized Results Framework is included (see Manual for Results-Based Monitoring & Evaluation, March 2015).
- Ensure that the system is capable of providing quick analyses of trends and comparisons against indicator targets. These tools will be developed in consultation with the PRT Working Group.
- The PRT must have the ability to provide periodic (bi-annual and annual) reports. The consultant firm should ensure that there are provisions for users to be able to customize the kind of reports generated.

- Include offline application so that the system can run offline and the data will be synchronized with the central data base when Internet connection is available.
- Ensure that the upgraded PRT is according to international web design standards.
- In order to ensure the quality of the data a quality control mechanism has to be in place. The quality control mechanism will be developed in consultation with PRT Working Group. And the following functions are also expected from the system:
 - Automated backup system
 - Different levels of users and user management
 - Login control
 - Repository of past plans (Annual Work Plans) for reference
 - Date stamp and documentation of the user entering the data
 - Ethiopian budget year based functions
 - Export of data and summary report to other formats
 - File repository and attachment handling functionality
- Develop a User Technical Manual and On-line Help.

3. Milestones (Tasks, Deliverables)

Milestone		Time period*
Task	Deliverable	
Conduct user interviews, document analysis, requirement interviews/workshops, business process descriptions and business process analysis, user cases and scenarios, and current version PRT functionality analysis	Produce functional requirement list and present the findings and the document to PRT Working Group	

Define with the PRT Working Group the functionalities of the system. Evaluate the current architecture of the database. Catalog system functionalities. Assess database structure and propose new structure for validation by PRT Working Group.	Catalog of system functionalities. Assessment of the database structure and proposal of new structure for validation by PRT Working Group	
Develop, test and validate the application's user interface, functions, menus, dialog boxes and forms in consultation with PRT Working Group. The upgraded PRT is to be tested with end users, in particular SLMP Regional and Woreda staff.	User interface with full set of functions, menus, dialog boxes and forms	
Develop documentation for user management, database maintenance and structural details.	Different documentation including User Manual	
Warranty	Warranty of 6 months	

*Time frame will be proposed by the consulting firm.

4. Outputs and Reporting

As listed in the above table's deliverables column.

The consultant firm will report to the PRT Working Group. Day to day interaction on the assignment will be with the Senior System Development Expert at the federal GIZ-SLM Office (GIZ-SLM PM+E Team) in Addis Ababa.

The following is the procedure for review of inception report(s), progress report(s), and draft and final reports:

- a. The consultant firm is expected to keep the GIZ-SLM PM+E team and the PRT Working Group informed of all the activities undertaken, progress made therein and future plans.
- b. The consultant firm and the GIZ-SLM PM+E team can decide the format(s) of report writing mutually. The consultant firm will be under obligation to change/alter the format (s) as and when desired by the GIZ-SLM PM+E team.

- c. The consultant firm shall prepare a Monthly Report mentioning progress made.

Deliverable 1: Functional requirements document

Deliverable 2: Proposed new structure and selection of technologies

Deliverable 3: User interface with full set of functions, menus, dialog boxes and forms

Deliverable 4: First demonstration of the developed system

Deliverable 5: Second demonstration of the developed system

Deliverable 6: System test result and analysis

Deliverable 7: Deployment of the system on preferred server

Deliverable 8: System documentation including User Manual

5. Location and Timeframe

The assignment shall be performed in Addis Ababa and some other woredas of different regions of Ethiopia; starting from mid-October 2015.

6. Consultants' Qualifications

- 1) The consultant firm should have the following qualifications, at the minimum:

- a. Should be experienced in designing software for related area.
- b. At least 2 years' experience in designing and developing software for similar activities.
- c. At least three such software developed.
- d. Proven record of financial and institutional soundness of the firm.
- e. Proven record of maintaining software development professionals in the regular payroll of the firm.

- 2) List of key professionals whose CV and experience will be evaluated

#	Key Professionals	Specific Expertise Desired	Minimum Qualification and Professional Experience Desired
1	Project Manager	Having headed minimum three end-to-end software development projects with similar level of intricacies.	MSc in Computer Science or MBA with minimum 3years of experience in heading projects of similar nature and overall experience of minimum 6 years.
2	System Architect	Having designed minimum two end-to-end software systems, preferably for web application.	BSc in Computer Science with minimum 5 years of experience in the relevant field.
3	Data Base Specialist	Having experience in designing and managing the database for minimum two projects, preferably for web application.	BSc in Computer Science with minimum 5 years of experience in the relevant field.

4	Software Developer	Having developed minimum three software systems with similar level of intricacies, preferably web application development.	BSc in Computer Science with minimum 4 years of experience in the relevant field.
5	Testing Engineer	Having relevant experience in minimum two projects, preferably web application development.	BSc in Computer Science with minimum 3 years of experience in handling the relevant field.

Annex: List of Available Materials

#	Material	Content
1	SLM-PRT Analysis Report, June 2014	Report on evaluation and test of the Planning and Reporting Tool (PRT)
2	Sustainable Land Management Program Planning and Reporting Tool – User Guide, October 2012	User Guide for users of the PRT version 1
3	SLMP Woreda IT Survey	Survey to assess the situation at the Woreda level with regard to office equipment, staff computer literacy, power supply, and communication status (Internet connectivity)
4	Manual for Results–Based Monitoring & Evaluation, Sustainable Land Management Program (SLMP), The Federal Democratic Republic of Ethiopia Ministry of Agriculture, Addis Ababa, March 2015	Outline of the role of the PRT and the SLM Harmonized Results Framework
5	Project Implementation Manual for Sustainable Land Management Project-2 (2014-2018), Addis Ababa, Ethiopia, March 2014	Elaboration of project components and sub-components
6	Sustainable Land Management (SLM I), Project Completion Report, Addis Ababa, Ethiopia, January 2014	Evaluation of achievements during SLMP – Phase I

Note: Additional materials can and will be made available.