Consultancy Services for GIS Mapping under Community water stewardship project

Terms of References (ToRs) for consultant

GENERAL

This document contains Terms of Reference (TORs) for the Consultant, to be engaged by WWF-Pakistan (hereinafter called the Employer), for project mapping by using GIS techniques under Community Water Stewardship project.

OBJECTIVES AND SCOPE OF SERVICES

WWF-Pakistan is implementing a Pepsi-Cola funded project on Community Water Stewardship titled “Community Water Stewardship: Replenishing the Water Resources in Lahore and Multan (Phase – II)”

Water Stewardship is a concept developed and advocated by WWF International globally to promote efforts of collective action for conserving and restoring water resources which serve community purposes. As part of the global network, WWF-Pakistan has also been an advocate of the concept and has been working actively on implementing water stewardship since past ten years. Under the proposed concept, WWF-Pakistan intends to partner with PepsiCo. and relevant government organizations, such as Water and Sanitation Agency (WASA) and Irrigation Department to replenish groundwater through multiple interventions in the region of Lahore and Multan. The concept proposes different possible interventions to replenish groundwater i. By constructing groundwater recharge wells, ii. By installing rainwater harvesting systems in approximately 150 households in a selected community in Lahore within PepsiCo. watershed, iii. Reuse ablution water system, iv. By restoring existing areas into wetlands or by constructing new wetlands, within the watershed, where water ponding occurs, v. Land cover management and vi. On form water management practices.
In this regard, to map out the interventions and their spread in the project areas (Lahore and Multan), and to compile & manage hydrological dataset, employer's freshwater team intends to hire a GIS specialist to compile database and map out of water stewardship intervention as a tangible output whenever required to team.

This consultancy is vital for the identification of potential sites for major interventions and to meet following objectives:

- Spatial Mapping and database of major interventions
- Development of land use/land cover map
- Delineation of watershed and hydrological network
- Temporal and spatial Groundwater & waste water analysis
- Baseline survey
- Rainfall (Rain gauge interpolation) based on available data
- Groundwater Simulation (GIS+ project team)
- Web-based online interactive map of major interventions in Lahore and Multan
- Water Information Management System (Based on Soil analysis, water quality analysis, Electrical resistivity data and other real time data monitoring integration).
- Gain Competitive Insights and overlay analysis for future prospects.

**DELIVERABLES**

- GIS based maps of major interventions
- Hydrology of the study area
- Land use land cover
- Watershed
- Groundwater mapping of study area.
- Interactive Water Information Management System
• Any other tasks as may arise with time and assigned by the Project Coordinator and project Manager

Requirements:

The consultant must have experience relevant to project scope. Qualifications in the areas of Remote Sensing and GIS in water resource mapping and assessment would be an advantage.

TIME FRAME

From: March 2022

To: December 2022