

Terms of Reference
INDIVIDUAL CONSULTANT AS GIS SPECIALIST

Position Title: GIS Specialist

No of Position(s): One (01)

Duration: Initially 01 Year or till project life i.e 26th April, 2026 (whichever is earlier)

Location: Islamabad (occasional visits to fields)

Reports to: Project Coordinator (PPDU).

Closing Date: _____

Background:

The Ministry of Water Resources, being one of the prioritized Ministries is sponsoring a number of water as well as hydropower sector projects in PSDP and a long list of potential projects are in pipeline. Accordingly, a Project Planning and Development Unit (PPDU) has been established in the Ministry for monitoring of ongoing projects and identification of viable prioritized projects/new investment initiatives. PPDU, MoWR now seeks the services of an Individual Consultant “GIS Specialist” (herein after termed the “Consultant”) that can provide technical assistance to ascertain/assess the impact of activities taken under original projects/loans as well as activities completed.

Scope of Work:

The objective of this Consultancy is to provide GIS analysis inputs for the Water Resource Project Management mapping exercise. The Consultant will digitize the layer using I.T tools and develop maps for data collection. He/she will also verify the data collected and prepare the final maps that can be uploaded in a web portal. The GIS Specialist will work on and advise to upgrade the geospatial data base application for the different initiatives of the Ministry. He/she will see all the Water related activities funded by Ministry of Water Resources (MoWR) in a lenses using GIS. The specialist will help in the procurement of images and geo referenced data sets and any other such like activities. He/she will maintain a GIS web portal and upgrade digital maps using latest technological tools desired by the MoWR for better presentation of complex data used for decision making.

Detailed Tasks:

- Assist the Project Team to develop a methodology for data collection;
- Review existing databases related to MoWR existing and potential water projects and conduct a gap analysis;
- Digitizing Water sector projects of MoWR using google maps, Topo sheets and any other sources including satellite images;

- Develop maps that can be used to locate water reservoirs, Dams and Command areas etc.
- Develop Scan and geo-reference field maps;
- Provide support to the Web Portal developer in the process of developing the Web Portal;
- Provide technical support and input for the implementation of GIS-related activities undertaken through MoWR;
- Provide backstopping support and technical guidance to other units with respect to any GIS activities undertaken by MoWR;
- Work closely with other technical staff for upgrading geo-spatial database applications and for the procurement of images and geo-referenced data required by the MoWR;
- Establish data collection/analysis, reporting and management information systems Support in the maintenance of GIS web portals and upgrade digital maps, using latest technological tools,
- Prepare and evaluate concept papers on hazard assessment, vulnerability assessment, capacities assessment and risk assessment/modeling related projects;
- Continually identify, acquire and enrich the database with external spatial data relevant to MoWR activities;
- Will keep close coordination with relevant institutes for data sharing and warehousing of data related to Water sector projects;
- Prepare maps and undertake spatial analyses including development of thematic maps, analysis of remote sensing data for the themes of interest;
- Undertake field visits when needed, in conjunction with field staff, in order to verify the maps and spatial analyses produced and to determine levels of accuracy;

Qualification and Experience:

- Must possess a master's or advance degree in, Geography, Computer Sciences, GIS, or closely related field;
- At least ten (10) years professional experience in using GIS in different fields of water resources engineering.
- Previous work with Water sector projects will be an added advantage for the candidate.
- Demonstrated analytical and writing skills and ability to deliver high quality outputs while working with a diverse range of stakeholders.
- Strong written and oral communication skills, with demonstrated ability to make effective presentations to diverse audiences.

Remuneration:

The remuneration will be given according to experience and qualification.