

Terms of Reference for Consulting Services

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Consultant - GIS/RS and Data Management



Review and recommendations for IWMI's GIS, RS and Data management (GRandD) unit

1. Preamble

The International Water Management Institute (IWMI) has made substantial investments in establishing capacity for the use of geographic information system (GIS) and remote sensing (RS) tools over the past 25 years at the headquarters of the Institute and in its regional offices. Some of the regional offices identified a need for these technologies as early as 1990, and other offices started using it later based on the requirements of individual projects. Today, most of the regional offices and many research program teams have invested in GIS/RS tools, and have some staff with experience in using these tools. The expectation is that the need for these tools will continue to expand. However, despite the widespread use of GIS/RS across IWMI's research programs and the creation of a specific GIS, RS and Data Management (GRandD) unit at the Institute's headquarters in Colombo, Sri Lanka, there is currently inadequate provisions for coordination, oversight and management of enterprise infrastructure for Institute-wide data and GIS/RS services. The capacity of the GRandD unit to provide timely and responsive services across the full geographic and thematic spread of IWMI's research program is proving to be a challenge.

The current arrangements for GIS/RS and data management services are considered suboptimal to maximize the potential benefits and increased efficiencies of using geo-spatial tools and data management techniques in research work. The need for more effective arrangements has become apparent as the regional offices and programs realize that they are unable to keep up with the growing demand for GIS/RS tools and data management within the currently available staff and budgets.

Much of IWMI's GIS/RS capacity exists within the GRandD unit, with some additional staff involved in research programs at the Institute's headquarters, and the regional offices managed and funded by individual projects. This has led to some investment in redundant infrastructure and an uneven spread of GIS/RS capabilities across the regional offices. Increased inter-office coordination and support have been proposed as a means to increase efficiencies and the use of GIS/RS, and also a coordinated data management strategy across IWMI.

IWMI is seeking to deliver GIS/RS and data management services more efficiently and economically to support its diverse research-for-development portfolio.

2. Issues for consideration

Currently, the GIS/RS activities at IWMI follows a hybrid organizational model, where a proportion of GIS/RS tasks are handled by the GRandD unit, including management of the centralized data repository to which research staff across the Institute are expected to submit data. The GRandD unit also provides geo-spatial services for the respective regional offices on request. A draft business development plan has been developed by the unit to guide more effective use of GIS/RS and data management resources across IWMI (Annex A). The intention is to move from the existing model of informal sharing and cooperation toward a more formalized enterprise structure characterized by a centralized geographic information office working collaboratively with relevant staff at headquarters and in the regional offices to enable the following:

- Efficient utilization of human resources and provision of a high standard of service.
- Reduce duplication through the use of centralized and distributed shared services
- Improve efficiencies in data storage, retrieval and discovery.
- Improve integration through the establishment of common standards.
- Increase awareness and support for GIS/RS through education and outreach.

There are, however, differences in opinion within the research programs and in the regional offices on the most appropriate model and level of centralization, and this will be a major focus of the review conducted and recommendations provided by the consultant.

(Continued)

3. Specific tasks

IWMI is seeking a consultant to lead an assessment of the strengths, weaknesses and opportunities to improve the performance and cost-effectiveness of GIS/RS and data management services provided for the Institute's research programs. The consultant will:

- (i) review the GRandD unit, including its role, capability, and capacities for the provision of services, as well as the demand from, and capabilities in, other research programs and regional offices;
- (ii) review IWMI data management arrangements and plans to enable the transition to full compliance with the CGIAR open-access policies;
- (iii) identify current and emerging state-of-the-art tools and techniques for GIS/RS applications and data management strategies that could be relevant for IWMI;
- (iv) identify opportunities and business models for IWMI to provide these services to external clients; and
- (v) prepare a cost-effective business plan for GIS/RS and data management services for IWMI and related research programs, including clarifying the role and value of a central unit vis-a-vis the research programs and regional offices, and the required standards of service provision.

The consultant will be responsible for an IWMI-wide review of (i) the current and projected needs for GIS, RS and data management services, including assessment of alternate mechanisms for the cost-effective, responsive and timely delivery of these services to support research and development programs; and (ii) opportunities to expand service provision to external clients and partners. The consultant will be based at the headquarters of IWMI in Colombo, Sri Lanka, with the availability of teleconferencing facilities to conduct discussions with the Institute's regional offices. The consultant will have a minimum of 10 years of experience in the use of GIS/RS and data management tools in research and development settings, including 5 years in a management role. Familiarity with GIS/RS and data management applications in the areas of IWMI's research program will be required. The consultant will report to the Deputy Director General (Research for Development).

The consultancy will be for a maximum of 8 weeks.

4. Reporting

The consultant will submit an inception report (in the second week), including an initial assessment of the role of IWMI's GRandD unit and an updated work plan for the consulting services. A draft version of the final report will be submitted by the end of the sixth week, with a presentation of the consultant's findings and draft report to relevant IWMI staff and management. The final report will be submitted within 10 days of receipt of comments and clarifications from IWMI.

The International Water Management Institute (www.iwmi.org) is an international, non-profit, scientific research organization dedicated to providing evidence-based solutions to sustainably manage water and land resources for food security, people's livelihoods and the environment. IWMI is a member of the CGIAR System Organization, a global research partnership for a food-secure future.

IWMI is an equal opportunity employer and emphasizes the importance of regional and gender diversity in identifying candidates for this position and its staff more generally.