REQUEST FOR EXPRESSIONS OF INTEREST (CONSULTING SERVICES - INDIVIDUALCONSULTANT SELECTION)

Thailand
Climate Adaptation and Resilience for South Asia (CARE) Project
Loan No./ Credit No./ Grant No.: IDA-D6220

Assignment Title: Individual Consultant – GIS Specialist - Bangladesh
Reference No. (as per Procurement Plan): TH-RIMES-312956-CS-INDV

The Regional Integrated Multi-Hazard Early Warning System (RIMES) has received/has applied for financing from the World Bank toward the cost of the Climate Adaptation and Resilience for South Asia (CARE) Project and intends to apply part of the proceeds for consulting services.

The consulting services ("the Services") include individual consultant – GIS Specialist – Bangladesh is responsible for working with government departments for developing a comprehensive geospatial database for weather/climate information, including base maps, social, physical, and sector-specific datasets in SAR; in particular, for agriculture, livestock, transport, water, planning and finance sectors in Bangladesh. The GIS Specialist shall assess existing datasets to ensure conformance with spatial data standards and interoperability with other datasets, and will provide technical as well as user capacity building materials and resources to ensure continued maintenance, updating and use of geospatial data by beneficiary ministries/agencies in Bangladesh.

The Terms of Reference (TOR) for the primary procurement stage for the assignment are attached to this request for expressions of interest or can be found at the following website: www.rimes.int and https://www.rimes.int/?q=procurement_notices or via the address given below.

The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)
2nd Floor, Outreach Building,
Asian Institute of Technology Campus,
Klong Nung, Klong Luang, Pathumthani 12120
Thailand

The Regional Integrated Multi-Hazard Early Warning System (RIMES) now invites eligible individual consultant ("Consultants") to indicate their interest in providing the Services. Interested Consultants should provide CV demonstrating that they have the required qualifications and relevant experience to perform the Services. The shortlisting criteria are Master's degree or equivalent qualification in GIS/Remote Sensing, geoinformatics, or related fields; At least five (5) years of experience in GIS/Remote Sensing and its applications for climate resilience in agriculture, finance and planning, water, transport, or related sectors; Extensive knowledge in geospatial data management and analysis, image processing, spatial modeling, data conversion and validation, quality check, visualization and map production; Strong background in open-source GIS/Remote Sensing applications, e.g., QGIS, SAGA GIS, Geo server, etc., and/or experience in ArcGIS, ERDAS, ENVI, etc.; Experience in installation and administration of geospatial software, including troubleshooting of GIS/Remote Sensing related issues; Experience with geospatial integration projects and capacity building trainings; Excellent analytical, writing and communication skills; Proficiency in spoken and written English and Bengali languages; Can

work independently and collaboratively with stakeholders and colleagues to achieve goals; Delivers outputs for which one has responsibility within prescribed time, cost and quality standards; Operates in compliance with organizational regulations and rules.

The attention of interested Consultants is drawn to Section III, paragraphs, 3.14, 3.16, and 3.17 of the World Bank's "Procurement Regulations for IPF Borrowers" July 2016 ("Procurement Regulations"), setting forth the World Bank's policy on conflict of interest.

A Consultant will be selected in accordance with the individual consultants method set out in the Procurement Regulations and to be specifically set out in the Request for Expressions of Interest (REoI).

Further information can be obtained at the address below during office hours 08:00 to 17:00 hours Bangkok Standard Time.

Expressions of interest must be delivered in written form to the address below (in person, or by mail, or by fax, or by e-mail) by September 21, 2022.

The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)
Attn: Dusadee Padungkul, Head, Operation Support Department
2nd Floor, Outreach Building, Asian Institute of Technology Campus,
Klong Nung, Klong Luang, Pathumthani 12120, Thailand
Tel: +66 (0) 2 516 5900
Fax: +66 (0) 2 516 5902
E-mail: rimesprocurement@rimes.int

TERMS OF REFERENCE
GIS Specialist - Bangladesh

1. About RIMES

The Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES) is an international and intergovernmental institution that is owned and managed by its 48 Member and Collaborating States for building capacities in the generation and application of user-relevant multi-hazard early warning information. RIMES was established on 30 April 2009 through the signing by collaborating countries of the RIMES regional cooperation agreement. RIMES was registered with the United Nations under Article 102 of the UN Charter on 1 July 2009. RIMES operates from its regional early warning center, located at the campus of the Asian Institute of Technology in Pathumthani, Thailand.

RIMES' purpose is to provide early warning services according to differing needs and demands of its Member States, for enhanced preparedness and response to and mitigation of natural hazards. Its specific objectives are:

a) Facilitate the establishment and maintenance of core regional observing and monitoring networks to ensure data availability for early warning;
b) Provide earthquake and tsunami services within the framework of the Intergovernmental Oceanographic Commission of the United Nations Educational, Scientific and Cultural Organization (IOC-UNESCO);
c) Support National Meteorological and Hydrological Services (NMHSs) for providing localized hydro-meteorological risk information within the framework of the World Meteorological Organization (WMO); and
d) Enhance warning response capacities at all levels (national to community) within each national early warning framework.

RIMES provides a portfolio of options for Member States to avail from or contribute to any of these objectives.

2. Background

Socio-economic impacts of climate-related hazards in South Asian countries continue to threaten the countries' economic growth, particularly in key sectors such as agriculture, water, and infrastructure. During the 16th Summit of the South Asian Association for Regional Cooperation (SAARC) in 2010, these countries collectively resolved to strengthen climate resilience. The Climate Adaptation and Resilience for South Asia (CARE) Project aims to contribute in translating this policy into actions through enhanced regional cooperation and knowledge on climate resilience and adaptation, and development of standards and guidelines to facilitate climate-resilient planning and investments.

The Project's Development Objective is to create an enabling environment for climate-resilient policies and investments across South Asia, with the following indicators:
 o Increased access to regional climate data and analytics for climate-informed decision-making;
 o National-level decision-making and planning that are better climate risk-informed;

- o Regional climate resilience guidelines incorporated into national standards;
- o Sectoral investments supported to include climate risks and resilient design; and
Institutional capacities strengthened to undertake climate-informed policies and planning.

The project has three components, for implementation over 5 years:
1) Promoting evidence-based climate-smart decision-making, to enhance access to data required for risk-informed planning and investments;
2) Enabling climate-resilient policies and standards for development, to enhance transformation of policies and capacities for climate resilience and adaptation across South Asia; and
3) Project management and implementation support.

Component 1 is implemented by RIMES. This component involves the creation of a regional resilience data and analytics service (RDAS) platform and decision-support systems (DSSs) for selected sectors of agriculture, water, road transport, planning and finance in Bangladesh, Nepal, and Pakistan. Component 1 also includes capacity development of users of these systems and their products. The RDAS is a cloud-based open-access platform for acquiring, storing, managing, processing, analyzing, visualizing, and reporting data, for use in screening climate risks to inform investments. The DSSs are sector-specific systems, linked to the RDAS, and used to assist users in sectoral planning and decision-making.

The country-specific activities planned for Bangladesh are as follows:
- Enhance/support the Bangladesh Agro-Meteorological Information System (BAMIS);
- Customize the Specialized Expert System for Agro-meteorological Early Warning (SESAME) for the livestock sector;
- Improve the "Online Road Network" and transport DSS with risk information, early warning, climate database and dynamic asset database;
- Enhance the FloCAST for the Flood Forecasting and Warning Center (FFWC)/Bangladesh Water development Board (BWDB);
- Enhance the Delta Portal through integration of climate risks, and digital M&E to support the 2021 Delta Plan, for integrated water resources management
- Develop an integrated climate planning and screening tool for Finance, ERD and Planning

3. Objective
The GIS Specialist – Bangladesh is responsible for working with government departments for developing a comprehensive geospatial database for weather/climate information, including base maps, social, physical, and sector-specific datasets in SAR; in particular, for agriculture, livestock, transport, water, planning and finance sectors in Bangladesh. The GIS Specialist shall assess existing datasets to ensure conformance with spatial data standards and interoperability with other datasets, and will provide technical as well as user capacity building materials and resources to ensure continued maintenance, updating and use of geospatial data by beneficiary ministries/agencies in Bangladesh.

4. Scope of Work

Ensure Collaborative Design and Development Process
- o Work closely with the Country Coordinator, Sectoral Experts, IT Experts, Data Analysts, and RIMES CARE Project staff to ensure integration of user needs, requirements and recommendations in the design and development of a comprehensive geospatial database
- o Coordinate with national mapping and relevant stakeholder agencies on geospatial data access and sharing

- o Receive inputs from regular consultations with project beneficiaries and stakeholders on the geospatial data and capacity building requirements
- o Coordinate with Component 2 of the CARE project on the integration of climate inclusive hazard and risk assessment maps related to agriculture, transport, and other relevant sectors

Assess Existing Geospatial Data
- o Within three (3) months of contract effectiveness, review existing national, regional, and global geospatial datasets, taking into consideration the data source, structure, content, metadata, format, projection, scale, precision and accuracy, resolution, quality, access, usage, purpose, challenges, and gaps.
- o Within six (6) months of contract effectiveness, identify and develop a catalog for all relevant sector-specific data including base maps, and social and physical data like demography, administrative boundaries, land cover, elevation, slope, hydrography, etc.
- o Within nine (9) months of contract effectiveness, summarize and report on the outcomes of the assessment.

Geospatial Database Development
- o Develop a system for geospatial data collection, validation, processing, analysis, management, and storage based on national and/or international standards
- o Develop a comprehensive geospatial database including, weather and climate information, sector-specific data (for example, cropland cover map, irrigated areas, soil map, crop-specific information for agriculture sector; grazing map, cattle/poultry-specific data for livestock subsector; basins, watersheds, major aquifers, drainage for water resource sector; road and bridge infrastructure network for transport sector), base maps, social and physical data, etc.
- o Develop metadata and metadata catalog of all geospatial data integrated into RDAS and national DSSs
- o Develop a comprehensive plan for continued maintenance and updating of the geospatial database, including data quality checks and capacity building
- o Provide recommendations and technical inputs on spatial data integration into RDAS and national DSSs, including appropriate spatial tools and functionalities
- o Document work progress and prepare a final technical report on the development process

Facilitate Capacity Development and Documentation
- o Prepare GIS training curriculum, exercises, and technical manuals using Free and Open-Source Software for GIS (FOSS4G), e.g., QGIS
- o Develop short training videos featuring basic and advanced GIS tools and functionalities
- o Conduct basic/advanced GIS trainings for developing and updating geospatial data for use in climate resilient applications in various sectors, e.g., agriculture, livestock, transport, water, finance, planning, etc.
- o Support outreach events, e.g., virtual knowledge sharing series co-organized by RIMES PIU, IT and Sectoral Teams
- o Assist in the development of virtual helpdesks, videos, and other materials related to development and updating of geospatial datasets
- o Participate in discussions, meetings, consultations with targeted stakeholder ministries/agencies
- o Other relevant work as assigned by the Technical Lead, Systems Development or Project Director

5. Reporting Requirements

The GIS Specialist in Bangladesh will report to the RDAS-DSS Lead and coordinate with Data Analysts. S/he will be based in Dhaka and will work under the direct supervision of the RDAS-DSS Lead and Project Director who will monitor the work progress and quality of deliverables.

6. Qualifications

- o Master's degree or equivalent qualification in GIS/Remote Sensing, geoinformatics, or related fields
- o At least five (5) years of experience in GIS/Remote Sensing and its applications for climate resilience in agriculture, finance and planning, water, transport, or related sectors
- o Extensive knowledge in geospatial data management and analysis, image processing, spatial modeling, data conversion and validation, quality check, visualization and map production
- o Strong background in open-source GIS/Remote Sensing applications, e.g., QGIS, SAGA GIS, Geo server, etc., and/or experience in ArcGIS, ERDAS, ENVI, etc.
- o Experience in installation and administration of geospatial software, including troubleshooting of GIS/Remote Sensing related issues
- o Experience with geospatial integration projects and capacity building trainings
- o Excellent analytical, writing and communication skills
- o Proficiency in spoken and written English and Bengali languages
- o Can work independently and collaboratively with stakeholders and colleagues to achieve goals
- o Delivers outputs for which one has responsibility within prescribed time, cost and quality standards
- o Operates in compliance with organizational regulations and rules

7. Contract Duration

The contract will be for 1 year subject to a 6-month probationary period, and annual performance review.