



Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

Ministry of Public Works and Transport
Department of Waterways

No. 20441 /MPWT.DOW
Vientiane Capital, Date: 29 JUL 2024

Lao PDR-Southeast Asia Disaster Risk Management Project (P160930)
And Additional Finance_(P170945)
Component 1: Integrated Urban Flood Risk Management

REQUEST FOR EXPRESSIONS OF INTEREST
(INDIVIDUAL CONSULTANT)

For

National Engineer for Geographic Information Systems (GIS)
For Preparation on GIS database and mapping for Waterways sectors
Reference No. AF-C09

1. BACKGROUND: The Government of Lao People's Democratic Republic (GoL), with financing from the World Bank's International Development Association (IDA), is implementing the Lao People's Democratic Republic (PDR) Southeast Asia Disaster Risk Management (SEA DRM) Project with Additional Financing. The Project seeks to reduce the impacts of flooding in target areas and enhance the GoL's capacity to provide hydro-meteorological services and disaster response. The Project adopts a comprehensive approach to DRM through activities related to urban flood risk management, hydromet modernization and early warning systems, and financial preparedness.

Component 1 of the Lao PDR SEA DRM Project with Additional Financing aims to strengthen flood protection and resilient planning in urban areas. It is implemented at the central level by the Department of Waterways (DOW) of the Ministry of Public Works and Transport (MPWT), in close cooperation with other departments of MPWT and the Department of Public Works and Transport (DPWT) of the respective provinces. Component 1.1. of the project finances structural and non-structural flood risk management investments in Oudomxay, Borikhamxay, Vientiane capital, and Luang Prabang, while Component 1.2 finances non-structural investments at the national- and city-scale.

The Lao PDR SEA DRM Project, DOW is seeking a consultant to develop a spatial database for waterways asset management and build capacity to use the database within a Geographic Information System (GIS) system. DOW prefers the use of a free and open source GIS system, such as QGIS. Data will include both baseline and Detailed Damage Assessment related data for Vientiane capital, Muangxay city, Luang Prabang town and Pakxan city.

2. OBJECTIVE OF THE ASSIGNMENT: To provide technical assistance and develop a georeferenced Waterways Asset Management database, of infrastructure and public works on waterways administered and managed by DOW.

- 1) Support the MPWT-DOW Project in all aspects of the planning, development and implementation of Geographic Information System (GIS) for Waterways sectors.
- 2) Identification of available GIS data. Assess existing spatial datasets/layers/objects including, but not limited to current sources from SEADRM-Component 1: (1) Baseline Study for Vientiane capital and and Pakxan city by Dearest in 2022, (2) Unmanned Aerial Surveys and Digital Elevation Model for Vientiane Capital and Luangprabang by Vientiane GEOMATIC Services (VGS) in 2022, (3) Sustainable Urban Design Interventions In Muangxai District, by SCE in 2020, and (4) UNEP on the Digital Terrain Model (DTM) for BXK (to be provided).
- 3) Provide a comprehensive listing of Waterways Asset Management spatial data, including gaps and recommendations. Agree with DOW on additional features to be collected and included within the database.
- 4) Conduct field work to collect primary GIS data for features agreed with DOW.
- 5) Provide functional training to DOW on the use of the GIS system and any related apps to collect data in the field (such as QGIS and QFIELD).

3. DURATION OF THE ASSIGNMENT AND TIME FRAME: The assignment will require Lum-sum contract with the duration of **10-month period from 1 Sep 2024 to 30 June 2025**, including field mission in the target's cities. Extension is based on satisfactory performance. The Consultant will be based in Vientiane Capital, Lao PDR.

4. BRIEF DESCRIPTION AND TASKS TO BE PERFORMED BY CONSULTANT: i) Create the database with existing features already available in DOW for waterways sectors /river works conduct field work as necessary in the four target cities of Muangxay city (Oudomxay), Luangprbang heritage city (Luangprabang), Vientiane capital, and Pakxan city (Bolikhamsay) to collect data (Spatial data and attribution data from GIS environment tools) on additional waterways assets to include in database. ii) Prepare the complete GIS Waterways Asset Management database. iii) Develop GIS based maps with necessary data inputs under different layers, and iv) Conduct training with staff of MPWT-DOW staff from DPWT targets cities to establish an understanding of how to work with spatial data and use the Waterways Asset Management system, including future updates and field data collection.

5. EXPERIENCE AND QUALIFICATIONS: The National Engineer for GIS should have, at minimum criteria: At least A Master's degree in civil & structural or environmental engineering, construction management, or a related field; Minimum 8 years of experience in Geographic Information System (GIS), hydrological, hydraulic software Engineering and/or implementation and Have demonstrated experience in designing and building databases; Minimum 5 years of experience working with international institutions or NGOs; Minimum 5 years of experience working with urban flood risk management; Alternatively, minimum 5 years of experience working with government agencies in Lao PDR; Proficiency in English is required, Good analytical and report-writing skills in English and Lao and Commitment to teamwork and inter-disciplinary collaboration.

6. THE DETAILED SERVICES AND QUALIFICATION REQUIREMENTS is provided in Terms of Reference (TOR) that can be obtained from the point of contact below, and can be downloaded on www.mpwt.gov.la
A National Consultant will be selected in accordance with the procedures of Individual Consultants (IC) method set out in the World Bank's "Procurement Regulations for IPF Borrowers" July 2016, revised November 2017 and August 2018.

Interested Consultant Firms may obtain further information on working days at the address below during office hours; from 8:30 AM - 16:30 PM.

7. EXPRESSIONS OF INTEREST MUST BE DELIVERED:

No later than **4:00 PM** or **10 August 2024** the address below (in person, or by fax, or by e-mail).

Ministry of Public Works and Transport (MPWT), Department of Waterways (DOW),

Project Coordinator, Tel: +856-21-452423 ; ; moukmany.not@gmail.com, cc: marypdmv@gmail.com

Attention: Ms. Moukmany Vannasy, National Project Coordinator, Department of Waterways. 

**Director General
Department of Waterways**



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