

MANGROVE FOR COASTAL RESILIENCE

IDF Grant No. TF-B8468

REQUEST FOR EXPRESSIONS OF INTEREST (REOI)

ASSIGNMENT TITLE:

CONSULTING SERVICES OF DIGITAL IMAGE ANALYSIS OF REMOTE SENSING FOR MANGROVE MAPPING IN SUPPORT OF IMPROVING THE NATIONAL MANGROVE MAP 2024

Indonesia's National Medium-Term Development Plan (RPJMN) 2020-2024 highlights key policy targets and mandates for the rehabilitation and conservation of mangroves. Mangroves in Indonesia not only contribute significantly to food security and livelihoods while supporting biodiversity and increasing forest and land cover, but they also play a critical role in supporting Indonesia's climate change mitigation commitments through carbon sequestration.

The conservation and sustainable management of mangrove ecosystems have recently become a vital component of environmental management. Mangroves, characterized by their unique coastal habitat, play a crucial role in biodiversity conservation, climate change mitigation, and the provision of ecosystem services. However, these essential ecosystems face various threats, including habitat loss, pollution, and unsustainable practices, necessitating collaborative efforts for their preservation and restoration.

In response to these challenges, the Mangrove for Coastal Resilience (M4CR) Project has been initiated, aiming to implement sustainable landscape management and rehabilitation activities. This effort seeks to mitigate the adverse effects of anthropogenic activities on mangrove ecosystems and promote their long-term resilience. A critical aspect of such initiatives is the ability to accurately monitor and assess changes in the extent, coverage, health of mangroves, and related land-use patterns over time.

Mangrove mapping is a vital component of ensuring the sustainability of coastal ecosystems. The M4CR Project has become a pivotal initiative in the conservation and mapping of mangroves in Indonesia. The project's primary focus is on enhancing the quality of the national mangrove map through the validation of algorithmic methods and accuracy testing of mapping processes.

Accurate mangrove mapping is essential for supporting environmental conservation policies and sustainable natural resource management. In this context, validating algorithmic methods and conducting accuracy tests are crucial steps to ensure the reliability of the information produced.

The Project on Algorithm Development and Accuracy Testing for Mangrove Mapping and Improvement of the 2024 National Mangrove Map under the Mangrove for Coastal Resilience (M4CR) initiative plays a crucial role in supporting the interpretation and delineation of satellite imagery using algorithms, as well as enhancing biophysical land information. This project not only focuses on technological and methodological advancements but also prioritizes human capacity building, with plans to recruit 10 GIS consultants equipped with the latest methods and algorithms to support their work.

In addition, this project directly supports the 2024 National Mangrove Map (PMN) and Project 1.2.4 of the Grand Design Software Ecosystem. It will serve as a foundation for planning future algorithm usage as part of the Grand Design Software Ecosystem and will be implemented in the development of the Integrated Data Platform for PMN updates currently being developed by PT. Nagayasha Rahardja.



As a result, this project aims not only to improve the accuracy of mangrove mapping but also to strengthen the national technical infrastructure and capabilities within the scope of M4CR. Through these efforts, the project aspires to establish a more integrated, accurate, and sustainable mapping system, ultimately supporting the preservation of mangrove ecosystems and the coastal resilience of Indonesia.

The primary goal of this activity is to ensure that the algorithmic methods used in mangrove mapping can be effectively and accurately verified, even with an acceptable margin of error, and implemented within the development of the Integrated Data Platform currently underway. By conducting comprehensive validation, it is expected that the accuracy of the national mangrove map can be significantly improved, providing a robust foundation for the enhancement of the 2024 National Mangrove Map (PMN) and its development in subsequent years.

The consulting services ("the Services") include (i).Prepare and conduct an in-depth analysis of various algorithmic methods used in mangrove mapping; (ii) Collect accurate and relevant field data for mapping accuracy testing; (iii) Process data and perform analysis using specialized software for spatial mapping and analysis; (iv) Validate the algorithmic methods by comparing mapping results with verified field data; (v) Develop recommendations to improve the national mangrove mapping based on validation results, including ensuring implementation in one of the modules of the Integrated Data Platform development.

By outlining the background, objectives, and scope of this activity, the validation of algorithmic methods and accuracy testing in mangrove mapping under the 2024 M4CR Project is expected to contribute significantly to achieving more accurate, effective, and efficient mangrove mapping.

The duration of the assignment is expected to be around 6 months.

M4CR now invites eligible consulting firms ("Consultants") to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. Interested consultants must provide sufficient description of similar assignments (including location/country, name of the Employer/Client, type of services provided, period of contract, contract amount, starting and completion dates), and availability of appropriate skills among permanent staff, etc. The shortlisting criteria are:

- a. Having relevant experience in consultancy services for remote sensing and mangrove mapping, with at least one project completed in the last two (2) years in either the government or private sector, including subcontracting experience.
- b. Possessing project experience with the highest value of similar work within the last ten (10) years, amounting to at least 50% (fifty percent) of the total HPS/Budget Ceiling value.
- c. Holding a Business Identification Number (NIB) with qualifications for Other Management Consulting Activities (KBLI 70209).
- d. The company holds a valid Taxpayer Status Confirmation (KSWP) based on the results of Taxpayer Status Confirmation verification.
- e. Willing to submit the Contractor's Environment & Social Management Plan (C-ESMP) document after being declared the winner.
- f. Willing to sign the Code of Ethics for the M4CR Project Institution and comply with all components contained therein.
- g. Willing to implement the C-ESMP prepared and report on the mitigation efforts undertaken as part of the C-ESMP.

Key Experts will not be evaluated at the shortlisting stage.

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" November 2020 ("Procurement Regulations"), setting forth the World Bank's policy on conflict of interest.

Consultants may associate with other firms to enhance their qualifications in the form of a joint venture or a sub-consultancy. In case of an association, the EOI must explicitly specify whether the association is in the form of a Joint Venture (all members shall be jointly and severally liable for the entire assignment), or Sub-consultancy. In the case of a joint venture, the member firm appointed to represent the joint venture must be clearly identified and all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected. Only the qualifications and experience of members of joint venture, but not of sub-consultants, shall be considered in the EOI evaluation process.

A Consultant will be selected in accordance with the Consultant Qualification Selection (CQS) method set out in the Procurement Regulations.

Further information can be obtained at the address below during office hours.

08.00 – 16.30 WIB.

Please complete

- Company legality
- List of company experience
- List of personnel owned
- Cooperation Agreement Letter (if necessary)

Expressions of interest must be delivered in a written form to the address below (in person, or by mail, or by e-mail) by **20 December 2024**.

Procurement Committee BPDH

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