

Terms of reference (ToR) for the procurement of services below the EU threshold

CONFIDENTIAL

Peat Mangrove Ecosystem Ecology Analysis in North and East Kalimantan	Project number/ cost centre: 2022.2140.6-001.00
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0. List of abbreviations

AG	Commissioning party
AN	Contractor
AVB	General Terms and Conditions of Contract for supplying services and work
FK	Expert
FKT	Expert days
KZFK	Short-term expert
ToRs	Terms of reference

1. Context

Peatland Restoration and Management Project (ProMangrovePeat) is a bilateral collaborative project between the Government of Indonesia and the German Federal Government through the German Federal Ministry for Economic Cooperation and Development (BMZ). It is implemented by the Directorate of Peat Degradation Control under the Ministry of Environment and the German Agency for International Cooperation (GIZ). It builds upon the achievements of the first phase of PROPEAT. During Phase 1, the primary objective was the development of an integrated management plan of the peatland ecosystem supported by detailed PHU map. There were 7 RPPEG documents acknowledged by the local government – 2 documents of provincial level and 5 of district level.

PROMANGROPEAT operates in 13 Peatland Hydrological Units (PHUs) covering an area of 349,000 hectares in North Kalimantan, and 16 KHGs with a total area of 347,000 hectares in East Kalimantan. Some peatlands in North Kalimantan are situated in the Kayan-Sembakung Delta region adjacent to mangrove ecosystems. PHU areas in the provincial span are the districts of Tana Tidung, Nunukan, Bulungan and Malinau. In East Kalimantan, the largest peatland areas are found mainly in the Central Mahakam region, which covers the districts of Kutai Kartanegara, East Kutai and West Kutai, with smaller peat- land areas in Berau and Paser districts. Together with its main partners and stakeholders, PROMANGROPEAT supports various activities relating to the development of baseline information; policymaking and integrated planning processes; implementing sustainable land use management; strengthening livelihood and economic development; implementing action research; and supporting the dissemination of knowledge, lessons learned and best management practices.

Despite the recognized ecological importance of both mangroves and peatlands, the specific characteristics and dynamics of their interface—the transitional zone where these distinct systems converge—remain largely unexplored. Most existing scientific literature focuses on mangrove or peatland ecosystems as separate entities, with limited attention to the complex interactions that occur at their boundaries. Deepening our ecological understanding of the mangrove-peat interface is critical for addressing key issues such as climate change mitigation, biodiversity conservation, coastal resilience, and effective ecosystem restoration.

Regional variations across Indonesia should be carefully considered in designing such a study to capture the full spectrum of interface characteristics. In Kalimantan, for example, mangrove-peat systems are typically classified as lowland coastal peatlands with high rainfall, making them an important and representative area for generating relevant data. Understanding the unique formation processes and characteristics of these ecosystems can reveal insights into their carbon storage potential and ecological stability.

Moreover, analyzing **hydrological dynamics** and **biodiversity zonation** within these interfaces is essential for informing strategic decisions related to rewetting, conservation, and land-use planning. The overarching research question centres on how unique eco-hydrological interactions at mangrove-peat interfaces influence carbon dynamics, biodiversity patterns, and ecosystem resilience.

As previously mentioned, mangrove-peat interface is also identified in North Kalimantan where shrimp aquaculture occupied most of the area. Given the growing urgency of addressing climate and ecological challenges, advancing research on mangrove-peat interfaces is both timely and essential. A better understanding of this transition zones will not only fill a critical knowledge gap but also support evidence-based policy and management strategies for coastal and peatland ecosystems. This interface zone, though often overlooked, may hold key insights for

building resilient coastal landscapes in a rapidly changing world. The objective of this assignment is to obtain the deeper understanding on ecology in peat mangrove interface as ecosystem transition.

2. Tasks to be performed by the contractor

The contractor is responsible for providing the following services:

a. Desk review and gap analysis

The consultant will review scientific literature, regional data and any related documents on mangrove-peat characteristics. Identify knowledge gaps related to eco-hydrology, carbon storage and biodiversity among others. The key findings of desk review will be discussed with the project team and serve as basis for the next steps.

b. Field survey design

The consultant will develop methodology for field sampling including site selection, sampling frequency, and parameters. This, later on, will be discussed with the project team and the national consultants. S/he should ensure the design includes spatial variation such as land-sea gradient, salinity zones, peat depth and vegetation type.

c. Hydrological property and dynamics assessment

To provide initial assessment and analyze the hydrological connectivity between peatland and mangrove from relevant parameters such as tidal influence, groundwater dynamics, and/or stream pattern. It aims to unravel the intricate water dynamics that sustain these vital ecosystems, identify threats posed by hydrological alterations, and provide the scientific basis for their effective conservation, restoration, and sustainable management in the face of environmental change and human pressures.

d. Ecological and biodiversity assessment

To capture the unique ecological and biodiversity in the transition zone between mangrove and peatland along with the ecological zonation or community structure across the interface. The assessment aims to provide ecological understanding to protect and wise utilization of invaluable ecosystems. To obtain knowledge of microbenthic diversity in the transition ecosystem as indicator of ecosystem changes.

e. Data Analysis and Reporting

The consultant will structure and manage the collected data to facilitate effective analysis. GIS and remote sensing will be used to map land cover, peat extent and/or hydrological flow. Detailed technical reports and supporting documents will be closely coordinated with project advisor.

Milestones/partial works	Deadline/place/person responsible	Criteria for acceptance
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Output1. Desk review and gap analysis	10.11.2025	Inception report with detailed structure, initial insight of the desk review, spatial analysis, elaborate methodology and work plan including field survey design.
Output 2. First draft of technical report and presentation of the key findings	10.02.2026	- Structured data collection is shared to the project advisor including field work documentation, raw data, maps etc
Output 3. Technical report	10.04.2026	- Up to 3 pages summary of the key findings of the study specifically tailored for national and regional decision making. - Final report is incorporated feedback, meet the agreed-upon structure and quality standards.

Period of assignment: from 1 October 2025 until 30 April 2026.

Deliverables

The contractor shall be responsible for preparation and submission of the following deliverables:

1. **Inception report (up to 10 pages)** Detailed structure, methodology and work plan, including timelines and field survey design.
2. **Comprehensive analytical study (approx. 40-50 pages)**, covering the above points on hydrological dynamic, ecological and biodiversity aspects and further relevant materials.
3. **Briefing papers (up to 3 pages)** summaries of the key findings of the study specifically tailored to national and regional decision making.
4. **Draft for scientific publication**
5. **Presentation of key findings and scenarios & feedback minutes**

3. Concept

In the tender, the tenderer is required to show *how* the objectives defined in Chapter 2 (Tasks to be performed) are to be achieved, if applicable under consideration of further method-related requirements (technical-methodological concept). In addition, the tenderer must describe the project management system for service provision.

Note: The numbers in parentheses correspond to the lines of the technical assessment grid.

Technical-methodological concept

Strategy (1.1): The tenderer is required to consider the tasks to be performed with reference to the objectives of the services put out to tender (see Chapter 1 Context) (1.1.1). Following this, the tenderer presents and justifies the explicit strategy with which it intends to provide the services for which it is responsible (see Chapter 2 Tasks to be performed) (1.1.2).

The tenderer is required to present the actors relevant for the services for which it is responsible and describe the **cooperation (1.2)** with them.

The tenderer is required to present and explain its approach to **steering** the measures with the project partners (1.3.1) and its contribution to the **results-based monitoring system** (1.3.2).

The tenderer is required to describe the key **processes** for the services for which it is responsible and create an **operational plan** or schedule (1.4.1) that describes how the services according to Chapter 2 (Tasks to be performed by the contractor) are to be provided. In particular, the tenderer is required to describe the necessary work steps and, if applicable, take account of the milestones and **contributions** of other actors (partner contributions) in accordance with Chapter 2 (Tasks to be performed) (1.4.2).

The tenderer is required to describe its contribution to knowledge management for the partner (1.5.1) and GIZ and to promote scaling-up effects (1.5.2) under **learning and innovation**.

Project management of the contractor (1.6)

The tenderer is required to explain its approach for coordination with the GIZ project. In particular, the project management requirements specified in Chapter 2 (Tasks to be performed by the contractor) must be explained in detail.

The tenderer is required to draw up a **personnel assignment plan** with explanatory notes that lists all the experts proposed in the tender; the plan includes information on assignment dates (duration and expert days) and locations of the individual members of the team complete with the allocation of work steps as set out in the schedule.

The tenderer is required to describe its backstopping concept. The following services are part of the standard backstopping package, which (like ancillary personnel costs) must be factored into the fee schedules of the staff listed in the tender in accordance with Section 3.3.1 of the GIZ AVB:

- Service-delivery control
- Managing adaptations to changing conditions
- Ensuring the flow of information between the tenderer and GIZ
- Assuming personnel responsibility for the contractor's experts
- Process-oriented steering for implementation of the commission
- Securing the administrative conclusion of the project

4. Personnel concept

The tenderer is required to provide personnel who are suited to filling the positions described, on the basis of their CVs (see Chapter 7), the range of tasks involved and the required qualifications.

The below specified qualifications represent the requirements to reach the maximum number of points in the technical assessment.

Team leader

Tasks of the team leader

- Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- Coordinating and ensuring communication with GIZ, partners and others involved in the project
- Personnel management, in particular identifying the need for short-term assignments within the available budget, as well as planning and steering assignments
- Regular reporting in accordance with deadlines

Qualifications of the team leader

- Education/training (2.1.1): university qualification **master's degree** in ecology, environment engineering, natural/water resource management and/or relevant study
- Language (2.1.2): C1-level language proficiency in English
- General professional experience (2.1.3): 15 years professional experience in wetland ecology and forestry sector
- Specific professional experience (2.1.4): 10 years in tropical peatland ecosystem
- Leadership/management experience (2.1.5): 8 years of management/leadership experience as project team leader or manager in a research project
- Regional experience (2.1.6): 8 years of experience in projects in Sumatra, Kalimantan or Papua
- Development cooperation (DC) experience (2.1.7): n.a
- Other (2.1.8): Proven research experience in tropical peatland

Key expert 1 Ecology and Biodiversity

Tasks of key expert 1

- Responsible for ecology and biodiversity aspects of the study
- Assessing the ecological impact of degradation peat mangrove ecosystems and determining the primary causes of degradation
- Support the team leader in organizing field surveys and ensure the quality of data collected
- Contribute to the reporting

Qualifications of key expert 1

- Education/training (2.2.1): university qualification **master's degree** in forestry, natural resource management and/or relevant study
- Language (2.2.2): B2 -level language proficiency in English
- General professional experience (2.2.3): 10 years professional experience in peat or mangrove ecology
- Specific professional experience (2.2.4): 5 years in biodiversity in wetland ecosystems
- Leadership/management experience (2.2.5): n.a
- Regional experience (2.2.6): 3 biodiversity assessment projects in Kalimantan, Sumatera, or Papua

- Development Cooperation (DC) experience (2.2.7): n.a
- Other (2.2.8): Proven research experience in wetland biodiversity

Soft skills of team members

In addition to their specialist qualifications, the following qualifications are required of team members:

- Team skills
- Initiative
- Communication skills
- Socio-cultural skills
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

Short-term expert pool maximum 2 members

For the technical assessment, an average of the qualifications of all specified members of the expert pool is calculated. Please send a CV for each pool member (see below Chapter 7 Requirements on the format of the bid) for the assessment.

Tasks of the short-term expert pool

- Conducting field survey and data collection
- Analyse data and structure the data to be shared to GIZ

Qualifications of the short-term expert pool

- Education/training (2.6.1): 1 expert with university qualification **bachelor's degree** in engineering or remote sensing or relevant study, 1 expert with university qualifications in biology, forestry or relevant study (Bachelor)
- Language (2.6.2): 2 experts with A1-level language proficiency in English
- General professional experience (2.6.3): 1 expert with 3 years of professional experience in the geoinformatics sector, 1 expert with 3 years of professional experience in the forestry sector
- Specific professional experience (2.6.4): experience in data collection and analysis
- Regional experience (2.6.5): experience in field work/research in Kalimantan, Papua, Sumatera
- Development cooperation (DC) experience (2.6.6): n.a
- Other (2.6.7): Experience in participating of field assessment/ research

The tenderer must provide a clear overview of all proposed short-term experts and their individual qualifications.

5. Costing requirements

Assignment of personnel and travel expenses

Per diem allowances are reimbursed as a lump sum up to the maximum amounts permissible under tax law for each country as set out in the country table in the circular from the German Federal Ministry of Finance on travel expense remuneration (downloadable from

the [German Federal Ministry of Finance – tax treatment of travel expenses and allowances for international business travel as of 1 January 2025 \(GERMAN ONLY\)](#)).

Accommodation allowances are reimbursed as detailed in the specification of inputs below.

With special justification, additional Accommodation costs up to a reasonable amount can be reimbursed against evidence.

All business travel must be agreed in advance by the officer responsible for the project

Sustainability aspects for travel

GIZ has undertaken an obligation to reduce greenhouse gas emissions (CO₂ emissions) caused by travel. When preparing your tender, please incorporate options for reducing emissions, such as selecting the lowest-emission booking class (economy) and using means of transport, airlines and flight routes with a higher CO₂ efficiency. For short distances, travel by train (second class) or e-mobility should be the preferred option.

CO₂ emissions caused by air travel must be offset. GIZ specifies a budget for this, through which the carbon offsets can be settled against evidence.

There are many different providers in the market for emissions certificates, and they have different climate impact ambitions. The [Development and Climate Alliance \(German only\)](#) has published a [list of standards \(German only\)](#). GIZ recommends using the standards specified there.

Specification of inputs

Fee days	Number of experts	Number of days per expert	Total	Comments
Designation of TL/key expert	2	25	2 x 25 days	Lumpsum
Designation of short-term expert pool	2	20	2 x 20 days	Lumpsum
Travel expenses	Quantity	Number per expert	Total	Comments
Per-diem allowance in country of assignment	4	20 days	20 days x 4 persons	Lump sum
Overnight allowance in country of assignment	4	19 nights	19 nights x 4 persons	Lump sum
Transport	Quantity	Number per expert	Total	Comments

Domestic flights	4 persons	2 trips	2 trips x 4 persons	Flights to Tarakan/ Berau from origin city
CO₂ compensation for air travel	4 persons	2 trips		A fixed budget of IDR 2,928,000 is earmarked for settling carbon offsets against evidence.
Travel expenses (train, car) • Car • Boat	8 trips 20 trips	1 roundtrip 2 unit		Travel within the survey location or nearby village/city, transfer to/from airport etc.
Other costs	Number	Price	Total	Comments
Procurement of materials and equipment	1	IDR 8,000,000	Up to 8,000,000	The budget contains the following costs material for survey.
Laboratory analysis	1	IDR 15,000,000	Up to IDR 15,000,000	Lump sum
Flexible Renumeration	1	IDR 18,340,000	Up to IDR 18,340,000	Subject to approval and against evidence
Local Guide (daily labor)	1 package	IDR 9,000,000	Up to 9,000,000	Lump sum

Flexible remuneration item

Up to IDR 18,340,000 for budgetary implications or other contingencies. Based on a written request with justification and to be authorized by GIZ (not to be budgeted with).

6. Requirements on the format of the tender

The structure of the tender must correspond to the structure of the ToR. In particular, the detailed structure of the concept (Chapter 3) should be organised in accordance with the positively weighted criteria in the assessment grid (not with zero). The tender must be legible (font size 11 or larger) and clearly formulated. It must be drawn up in English (language).

The complete tender must not exceed 10 pages (excluding CVs). If one of the maximum page lengths is exceeded, the content appearing after the cut-off point will not be included in the assessment. External content (e.g. links to websites) will also not be considered.

The CVs of the personnel proposed in accordance with Chapter 4 of the ToRs must be submitted using the format specified in the terms and conditions for application. The CVs shall not exceed 4 pages each. They must clearly show the position and job the proposed person held in the reference project and for how long. The CVs can also be submitted in Indonesian (language).

Please calculate your financial tender based exactly on the parameters specified in Chapter 5 Quantitative requirements. The contractor is not contractually entitled to use up the days, trips, workshops or budgets in full. The number of days, trips and workshops and

the budgets will be contractually agreed as maximum limits. The specifications for pricing are defined in the price schedule.