

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

[CONFIDENTIALITY]

VR and AR Production for Peatland Education Center	Project number/ cost centre:
	2022.2140.6-001.00

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0. List of abbreviations

AR	Augmented Reality (AR)
BAPPEDA	Development Planning Agency at Sub-national Level
BMZ	German Federal Ministry for Economic Cooperation and Development
CV	Curriculum Vitae
DC	Development Cooperation
EUR	Euro
FGD	Focus Group Discussion
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
KHG	Kesatuan Hidrologis Gambut
PHUs	Peat Hydrology Units
PPEG	Perlindungan dan Pengelolaan Ekosistem Gambut
RPPEG	Rencana Perlindungan dan Pengelolaan Ekosistem gambut
ToR	Terms of reference
VR	Virtual Reality

1. Context

1.1. Brief information about the Project

Integrated Peatland Protection 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 a detailed PHU map. There were 7 RPPEG documents acknowledged by the local government – 2 documents of provincial level and 5 of district level.

ProMangrovePeat operates in 13 Peatland Hydrological Units (KHGs) covering an area of 342,000 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. KHG 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, ProMangrovePeat 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.

In the second phase, the project will emphasize the implementation of management and restoration efforts based on the PHU. Selected PHU in each province will be used as demonstration pilots to develop peat management and protection practices in the two provinces. In addition, innovative educational approaches are crucial to raise awareness and engage local communities in Peatland Protection. Development of a knowledge hub is a key component in 2nd phase; it aims to disseminate information and knowledge on peatland management. This hub is being established both physically and virtually in East and North Kalimantan, with the potential to be replicated in other regions of Indonesia. The hub integrates digital tools, local wisdom, and multi-stakeholder participation to promote informed, inclusive, and adaptive decision-making

One innovative educational tool being developed under this initiative is being developed virtual education using VR/AR in East and North Kalimantan, with a scalable model applicable to other regions in Indonesia. Virtual Reality (VR) and Augmented Reality (AR) These technologies offer immersive educational experiences by simulating peatland conditions and the impacts of various land-use scenarios. It integrates technology, local knowledge, and stakeholder engagement to foster a culture of learning and informed decision-making in Peatland management. One of platform from the whole idea is Education and Awareness in Peatland Protection and Management

1.2. Context of the assignment

The ProMangrovePeat project has selected two KHGs in each province as pilots for demonstrate peat protection and management based on KHG, namely KHG Sungai Belayan-

Sungai Kelinjau and KHG sungai Melintang-Sungai Layah in East Kalimantan; KHG Sungai Mentarang–Sungai Belayu and KHG Sungai Sebuku–Sungai Sembakung. Also KHG pilot project distributes in Kutai Kartanegara and Kutai Barat districts in East Kalimantan; Tana Tidung and Nunukan districts in North Kalimantan.

- a. A Peatland Knowledge Hub is a centralized platform that stores, organizes, and provides access to peatland information, resources, and data for users. It serves as a go-to source for important content, enabling organizations to share knowledge efficiently. One of option and as part of the whole idea is using VR/AR.
- b. Effective knowledge management and knowledge sharing are essential to addressing the challenges and opportunities in peatland conservation and management. In Indonesia, including East and North Kalimantan, there is a growing body of experiences, innovations, and good practices in managing peatlands. However, access to this knowledge remains limited, particularly among local communities, policymakers, and practitioners.
- c. The Peatland Knowledge Hub was established to close this gap by serving as a centralized platform that supports learning, collaboration, and the dissemination of accurate and timely information. Through a combination of digital tools, interactive media, and inclusive engagement, the Hub aims to enhance public awareness and promote sustainable practices for peatland protection and restoration across Indonesia.
- d. Virtual Reality (VR) and Augmented Reality (AR) These technologies offer immersive educational experiences by simulating peatland conditions and the impacts of various land-use scenarios. Users—including students, communities, and policymakers—can visualize the consequences of degradation and the benefits of restoration. Workshops and community sessions are conducted to introduce these tools and stimulate dialogue around sustainable land management.
- e. The VR and AR experiences will feature a range of content, including: (1). peatland environments: Immersive representations of peatland ecosystems, including vegetation, wildlife, and water features. (2). protection and conservation themes: interactive experiences that highlight conservation challenges and solutions, such as climate change, habitat restoration, and sustainable land use. (3). Educational content: Interactive modules and games that educate users about peatland ecosystems and conservation.
- f. The VR experience will allow users to: (1). explore peatland environments: users can explore peatland ecosystems in a fully immersive environment. (2). interact with wildlife: users can interact with virtual wildlife, such as birds and animals, to learn about their habitats and behaviours. (3). Participate in conservation activities: users can participate in virtual conservation activities, such as planting trees or restoring habitats.
- g. The AR experience will allow users to: (1). can peatland environments: Users can scan real-world peatland environments using AR technology to access additional information and interactive content. (2). Interact with virtual objects: Users can interact with virtual objects, such as 3D models of plants and animals, to learn about peatland ecosystems. (3). Play educational games: Users can play educational games that teach about peatland conservation and management.
- h. The VR and AR experiences will provide several benefits, including: (1). Increased engagement: Immersive and interactive experiences can increase user engagement and motivation to learn about peatland ecosystems. (2). Improved education: Interactive and immersive experiences can improve user understanding and retention of information about peatland ecosystems. (3). Promoting conservation: VR and AR experiences can promote conservation efforts and sustainable land use practices in peatland ecosystems.
- i. The VR and AR experiences will cater to a diverse range of audiences, including: (1). Students: Students of all ages who are learning about peatland ecosystems and conservation. (2). General public: Members of the public who are interested in learning about peatland ecosystems and conservation. (3). Conservation professionals:

Professionals working in conservation and environmental management who can use VR and AR experiences as a tool for education and outreach.

- j. VR and AR can be powerful tools for simulating the impact of land use changes on peatlands, particularly in regions like East and North Kalimantan. By creating immersive experiences, these technologies can effectively illustrate the consequences of land management practices on peatland ecosystems.
- k. VR transports users to realistic representations of existing peatland environments. This immersive experience allows individuals to explore these ecosystems' biodiversity, hydrology, and carbon storage capabilities. For instance, VR can depict the soil condition, land cover, and vegetation of typical healthy peatlands, showcasing specific species and various plant functional types that are essential for maintaining livelihood, carbon balance, and supporting wildlife.
- l. AR can enhance this experience by overlaying real-time data and visualizing the physical environment. Users could point their devices at specific areas within a peatland and see information about social economic condition, different livelihood, carbon stocks, water levels, and vegetation health. This interactive approach can help users understand how these factors are interconnected

1.3. Objective of the assignments

To produce and create immersive and interactive Virtual Reality (VR) and Augmented Reality (AR) content as representations of peatland ecosystems, highlighting their unique characteristics, importance, conservation challenges, and immersive educational experiences by simulating peatland conditions and the impacts of various land-use scenarios.

2. Tasks to be performed by the contractor

To achieve the final product, the consultant must perform the following tasks:

- 1. Concept of Development and Design**
- 2. Data collection; producing of VR/AR, and installation**
- 3. Technical training**
- 4. Reporting**

Task 1. Concept of Development and Design

Consultant should develop and create a concept and design for VR and AR production, including theme, storyline, interactive elements. Also, for task 1, consultant should conduct technical preparation discussion, provide timeline and discuss with GIZ team.

Task 2. Creating and producing VR/AR content, installation, including data collection in the field

- a. Field visit/data collection to collect original data, as a basis to recreate real-world environments and scenes in VR. Gathering accurate visual data to ensure a realistic and immersive VR experience. Also, to enhance the authenticity of the VR experience by using real-world data and environments.
- b. Create a storyboard to visualize the sequence of events and interactions in the VR experience and develop a script that outlines the narrative, dialogue, and sound effects.

c. Create and produce VR and AR

The consultant should create and produce with the concept:

a) Peatland Ecosystem Visualization:

- Develop immersive VR experiences that allow users to explore existing East and North Kalimantan peatland ecosystems. These experiences can include 360-degree views of healthy peatlands and soil conditions, highlighting biodiversity, water retention capabilities, and carbon storage functions.
- Use AR applications to overlay information about the flora and fauna, population, landscape situation, peatland biophysics condition, livelihoods in these ecosystems, and the ecological processes at play.
- Noted: simulates the experience of being on a boat. This can include:

b) Scenario Simulations:

- Create interactive scenarios that depict the impacts of various land-use changes on peatlands. For example, (1). users can experience a simulation showing the effects of deforestation or drainage on peatland health (canal blocking), including increased carbon emissions, loss of biodiversity, and potential fire; (b). Deforestation: A simulation could show the immediate aftermath of tree removal, highlighting increased soil exposure and changes in moisture levels. Users would witness how these actions release carbon into the atmosphere. (c). Agricultural Conversion: Users could experience peatlands being converted into agricultural land. The simulation would depict the loss of biodiversity and changes in hydrology, emphasizing how such practices reduce the ecosystem's ability to sequester carbon. (d). Restoration Efforts: Conversely, AR can showcase successful restoration projects by allowing users to visualize potential outcomes of rewetting and replanting initiatives. This could include a before-and-after view of restored peatlands, illustrating improvements in vegetation cover and carbon storage capacity.
 - Present alternative scenarios where sustainable practices are implemented, demonstrating potential restoration outcomes and benefits to local communities.
- d. Test the VR and AR experience to ensure it is stable and functions as intended.
- e. Gather feedback from users and stakeholders to identify areas for improvement.
- f. Deploy the VR and AR experience on the chosen platform, such as a VR and AR headset or mobile device.
- g. Distribute VR and AR experience to the target audience, either through physical channels or digital platforms.

Task 3. Conduct Technical training

Conduct a technical training for GIZ and relevant stakeholders how to operate, maintenance etc

Task 4. Developing report

The consultant should provide the report

Certain milestones, as laid out in the table below, are to be achieved during the contract term:

Milestones/partial works	Deadline/place/person responsible	Criteria for acceptance/Deliverable/product
Preparation and coordination	2 weeks after the start of the contract (submitted by team leader)	1. A kick off meeting held, 2. A workplan, design and concept accept and approved by GIZ
Field survey/observation	4 weeks after the start of the contract (submitted by team leader)	Conducting field survey and collecting the data/material/information from the field (village in East Kalimantan)
Create and producing VR/AR content, installation, including data collection/field visit	During period in 8 weeks to 27 weeks after the start of the contract (submitted by team leader)	1. Create a storyboard 2. Create VR and AR Environment 3. Test VR and AR. 4. Gather feedback from users and stakeholders to identify areas for improvement. 5. Deploy the VR and AR experience on the chosen platform, such as a VR headset or mobile device. 6. Accept and approve by GIZ
Conduct technical training	28 weeks after the start of the contract (submitted by team leader)	1 x technical training in North Kalimantan
Reporting and Recommendation	32 weeks after the start of the contract (submitted by team leader)	Report in Bahasa Indonesia and with executive summary in English

Period of assignment: from 25 August 2025 until 15 March 2026

The consultancy work will be output-based in its monitoring and payment based on the deliverables that are produced. The consultant will be paid based on the completion of specific tasks or the achievement of certain deliberations below:

Estimated Payment	Type of Deliberations	Expected Delivery Report	Progress Achievement
Interim payment 1 after approval of Output 1	<ul style="list-style-type: none"> Kick off meeting held, workplan accept, design option and approve by GIZ 	10 September 2025	35%
Interim payment 2	<ul style="list-style-type: none"> Conduct field visit/data collection to collect data in north and East Kalimantan Create a storyboard. VR and Environment Development Test the VR and AR. Gather feedback from users and stakeholders to identify areas for improvement. Deploy the VR and AR experience on the chosen platform, such as a VR headset or mobile device 	20 January 2026	45%
Final Payment after approval of Output 3, 4	<ul style="list-style-type: none"> 1x-time technical training in North Kalimantan 	28 February 2026	20%
	<ul style="list-style-type: none"> Final report in Bahasa Indonesia with executive summary in English 		

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.

Further requirements (1.7)

The Contractor should consider also the incorporation of cross-cutting themes, including Gender Equality, Disability and Social Inclusion (GEDSI) strategies.

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.

General background of the team members, technical requirements and experiences:

- A company with 6 years proven experience in developing VR and AR projects, preferably in the field of environmental conservation or education.
- Understanding the business process for VR-AR development and production.
- Experience in creating content related to ecosystem management, preferably peatland ecosystems.
- Proven experience in developing VR and AR content using platforms such as Unity, Unreal Engine, or A-Frame and etc
- Experience in creating 3D models and animations for VR and AR content.
- Proficiency in programming languages such as C#, Java, or JavaScript etc
- Experience on working or in close cooperation Indonesian government
- Knowledge on capacity building to relevant stakeholder.

Team Composition:

- Company with expertise in VR/AR platforms and programming languages, with Maximum 4 experts (1 Lead consultant; 1 Expert for VR and AR designer; 1 Expert for VR Developer, and 1 Expert for AR Developer)
- Experienced 3D modelers and animators with expertise in creating 3D models and animations for VR and AR content.
- Have knowledge in peatland ecosystem management or relevant topics who can provide input on the content and accuracy of the VR and AR experiences.

Tools and Technologies:

- Experience with VR/AR platforms such as Unity, Unreal Engine, or A-Frame.
- Proficiency in 3D modelling software such as Blender, Maya, or 3ds Max.
- Experience with animation software such as Blender or Adobe Animate.

Soft skills of the team members:

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

- Team skills
- Initiative
- Communication skills
- Sociocultural competence
- Efficient, partner- and client-focused working methods
- Interdisciplinary thinking

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

Team Leader (1 person)

Tasks of Team Leader

- a. Overall responsibility for the advisory packages of the contractor (quality and deadlines)
- b. Coordinating and ensuring communication with GIZ ProMangrovePeat, partners and others involved in the project
- c. Personnel management, identifying the need for short-term assignments within the available budget, as well as planning and steering assignments and supporting local and international short-term experts
- d. Regular reporting in accordance with deadlines
- e. Responsible for all the taskforce delivered
- f. Actively coordinate with relevant stakeholders to ensure the process of development of a credible monitoring system is acceptable.
- g. Responsible for acceptance of the product
- h. Lead to creating immersive VR experiences using software development kits (SDKs) and programming languages. VR experiences that simulate peatland ecosystems, allowing users to explore and interact with these environments.
- i. Lead to creating AR experiences using SDKs and programming languages that provide information on peatland ecosystems, including plant and animal species, and conservation efforts.

Qualifications of Team Leader

- a. Education/training (2.1.1): Master's degree in information technology and data scientist.
- b. Language (2.1.2): Professional business language proficiency in English and Bahasa Indonesia
- c. General professional experience (2.1.3): 8 years of professional experience and strong understanding in computer science, engineering, information technology, machine learning and software as well.
- d. Specific professional experience (2.1.4): 6 years of professional experience in VR and AR platforms and programming languages (VR/AR platforms such as Unity, Unreal Engine, or A-Frame). Proficiency in 3D modelling software such as Blender, Maya, or 3ds Max. Experience with animation software such as Blender or Adobe Animate.
- e. Leadership/management experience (2.1.5): 4 years of management/leadership experience as project team leader or manager in a company
- f. Regional experience (2.1.6): 1 year of experience in projects in East/North Kalimantan
- g. Development cooperation (DC) experience (2.1.7): 2 years of experience in DC projects
- h. Other (2.1.8): Not Applicable

Expert 1: VR Developer (1 person)

Tasks of VR Developer

- a. VR developers are responsible for designing, building, and maintaining virtual and augmented reality experiences
- b. Actively discuss and coordinate with relevant stakeholders in North and East Kalimantan, including with GIZ ProMangrovePeat
 - Responsible for data collection in the field and other sources. In the process of data collection and management, the expert responsible for ensuring that data collected from various sources (including data from the fields) can be stored securely and well-structured. For secondary data, information sources should be provided.
- c. Collaborating with peatland experts, conservationists, and local communities to ensure the accuracy and relevance of VR and AR experiences. And. other stakeholders to develop VR and AR experiences.
- d. Testing and debugging VR and AR applications to ensure they meet requirements and are free of errors.
- e. Staying up to date with the latest VR and AR technologies, trends, and best practices.
- f. Responsible as service supporting for maintenance of the product up to 6 months after launching.
- g. Creating immersive VR experiences using software development kits (SDKs) and programming languages. VR experiences that simulate peatland ecosystems, allowing users to explore and interact with these environments.
- h. Visualizing data on peatland health, carbon storage, characteristic and biophysics, communities and biodiversity to help stakeholders understand the importance of

conservation Designing and building virtual environments, characters, and objects for VR experiences.

- i. Implementing interactive elements, such as controllers and gestures, to enable users to interact with VR environments.
- j. Optimizing VR applications for performance, ensuring smooth and seamless experiences.
- k. Creating VR training programs for peatland managers, conservationists, and local communities to learn about sustainable management practices.

Qualifications of VR Developer

- a. Education/training (2.2.1): Master's degree in computer science, engineering, information technology.
- b. Language (2.2.2): professional business language proficiency in English and Bahasa Indonesia
- c. General professional experience (2.2.3): 7 years of professional experience and strong understanding in computer science, engineering, information technology, machine learning and software as well.
- d. Specific professional experience (2.2.4): 5 years of professional experience in VR and AR development, proficiency relevant programming in VR and AR development
- e. Leadership/management experience (2.2.5): Not Applicable
- f. Regional experience (2.2.6): 2 years of experience in projects in North and East Kalimantan)
- g. Development Cooperation (DC) experience (2.2.7): 2 years of experience in DC projects
- h. Other (2.2.8): Not Applicable

Expert 2: AR Developer (1 person)

Task of AR Developer

- a. Creating AR experiences using SDKs and programming languages that provide information on peatland ecosystems, including plant and animal species, and conservation efforts.
- b. Creating AR applications that enhance fieldwork, such as identifying plant species, monitoring water levels, or tracking wildlife, peatland biophysics.
- c. Designing and building digital overlays, such as 3D models, images, and videos, to enhance real-world environments.
- d. Implementing tracking technologies, such as marker-based or marker less tracking, to enable AR experiences.
- e. Integrating AR experiences with devices, such as smartphones, tablets, or smart glasses.
- f. Collaborating with peatland experts, conservationists, and local communities to ensure the accuracy and relevance of VR and AR experiences. And. other stakeholders to develop VR and AR experiences.
- g. Testing and debugging VR and AR applications to ensure they meet requirements and are free of errors.

- h. Staying up to date with the latest VR and AR technologies, trends, and best practices.
- i. Responsible as service supporting for maintenance of the product up to 6 months after launching.

Qualifications of AR Developer

- a. Education/training (2.3.1): graduate degree in computer science, engineering, information technology.
- b. Language (2.3.2): professional business language proficiency in English and Bahasa Indonesia
- c. General professional experience (2.3.3): 7 years of professional experience and strong understanding in computer science, engineering, information technology, machine learning and software as well.
- d. Specific professional experience (2.3.4): 5 years of professional experience in VR and AR development, proficiency relevant programming in VR and AR development
- e. Leadership/management experience (2.3.5): Not Applicable
- f. Regional experience (2.3.6): 2 years of experience in projects in North and East Kalimantan)
- g. Development Cooperation (DC) experience (2.3.7): 2 years of experience in DC projects
- h. Other (2.3.8): Not Applicable

Expert 3: VR and AR Designer (1 person)

Tasks of VR and AR Designer

- a. Developing concepts and ideas for VR and AR experiences that meet project goals and objectives.
- b. Designing intuitive and user-friendly interfaces that enable users to navigate and interact with VR and AR environments.
- c. Creating 3D models, animations, images, video and special effects that enhance the VR and AR experience.
- d. Designing interactive elements, such as controllers and gestures, that enable users to interact with VR environments.
- e. Collaborating with developers, artists, and other stakeholders to ensure seamless integration of design elements.
- f. Creating prototypes and testing VR and AR experiences to ensure they meet project goals and objectives.
- g. Iterating and refining design elements based on user feedback and testing results.

Qualifications of VR and AR Designer

- a. Education/training (2.4.1): graduate degree in computer science, engineering, information technology.
- b. Language (2.4.2): professional business language proficiency in English and Bahasa Indonesia

- c. General professional experience (2.4.3): 8 years of professional experience and strong understanding in computer science, engineering, information technology, machine learning and software as well.
- d. Specific professional experience (2.4.4): 7 years of professional experience in VR and AR design and development
- e. Leadership/management experience (2.4.5): Not Applicable
- f. Regional experience (2.4.6): 2 years of experience in projects in North and East Kalimantan
- g. Development Cooperation (DC) experience (2.4.7): 2 years of experience in DC projects
- h. Other (2.4.8): Not Applicable

Short-term expert pool for Peatland Management and Protection (1 person)

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 for Peatland Management and Protection Expert

- a. Support the Team Leader, VR Developer, AR Developer, VR and AR Designer for data analysis, reviewing, giving insight and support information related peatland ecosystem (characteristics, ecology, biodiversity, community, potential and challenges etc) for ensuring the quality, reliability and accuracy information that can guide VR and AR production

Qualifications of the short-term Peatland Management and Protection Expert

- a. Education/training (2.6.1): Doctor's degree in Forestry, Agriculture, Biology, Environment Science.
- b. Language (2.6.2): professional business language proficiency in English and Bahasa Indonesia
- c. General professional experience (2.6.3): 5 years of professional experience working with environmental topics
- d. Specific professional experience (2.6.4): 6 years of professional experience and strong understanding in peatland ecosystems (including their characteristics), combining deep scientific knowledge with practical experience in their management, conservation, and restoration.
- e. Regional experience (2.6.5): 1 year of experience in projects in North and East Kalimantan
- f. Development Cooperation (DC) experience (2.6.6): Not Applicable
- g. Other (2.6.7): Not Applicable

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 2024/2025 \(GERMAN ONLY\)](#)).

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
Team Leader	1	55	55	Output Based
Expert 1 - VR Developer	1	60	60	Output Based
Expert 2 - AR Developer	1	60	60	Output Based
Expert 3 - VR and AR Designer	1	45	45	Output Based
Designation of short-term expert pool	1	15	15	Output Based
Travel expenses	Quantity	Number per expert	Total	Comments

Per-diem allowance in country of assignment				
Perdiem travel day				
• Team Leader	1	4	4	Perdiem, travel days, Output Based
• Expert 1 - VR Developer	1	4	4	
• Expert 2 - AR developer	1	2	2	
• Expert 3 - VR and AR Designer	1	2	2	
Perdiem in Location				
• Team Leader	1	16	16	Perdiem, during travel days in village East Kalimantan), Output Based
• Expert 1 - VR Developer	1	16	16	
• Expert 2 - AR Developer	1	14	14	
• Expert 3 - VR and AR Designer	1	14	14	
Overnight allowance in country of assignment				
In Samarinda and location (East Kalimantan)				
Accommodation Team Leader	1	15	15	Accommodation during in Samarinda and field, Output Based
Accommodation Expert 1- VR Developer	1	15	15	Accommodation during in Samarinda and field, Output Based
Accommodation Expert 2 - AR Developer	1	15	15	Accommodation during in Samarinda and field, Output Based
Accommodation Expert 3 - VR and AR Designer	1	15	15	Accommodation during in Samarinda and field, Output Based
In Tanjung Selor (North Kalimantan)				
Accommodation Team Leader	1	3	3	1 Person (for Team Leader)), Output Based
Accommodation Expert 1 - VR Developer	1	3	3	1 Person (Expert 1-VR Developer), Output Based
Transport	Quantity	Number per expert	Total	Comments
Domestic flights	2	4	8	1 Round trip, Economy flights to East Kalimantan (Samarinda) for Team leader, VR Developer, AR Developer, VR and AR Designer

	2	2	4	1 Round trip, Economy flights to North Kalimantan (Tarakan), for Team Leader and VR Developer Output Based
CO₂ compensation for air travel <i>Link to working aid and table for determining the budget and Guidance for GIZ service providers on avoiding, reducing and offsetting GHG emissions on setting the budget.</i>	1	4	4	A fixed budget of IDR 1.218.058,- (EUR 16*19.046*4 persons) is earmarked for settling carbon offsets against evidence. (Jakarta to Samarinda/Balikpapan). Economy Flights to East Kalimantan (Samarinda/Balikpapan) for Team Leader, VR Developer, AR Developer, VR and AR Designer Based on calculation from https://www.atmosfair.de
	1	2	2	A fixed budget of IDR 876.116,- (EUR 23*19.046*2 persons) is earmarked for settling carbon offsets against evidence. (Jakarta to Tarakan). 1 round trip, economy flights to North Kalimantan (Tarakan), for Team Leader and VR Developer Based on calculation from https://www.atmosfair.de
Travel expenses (train, car)				
Local transport to and from airport-home return	2	4	8	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)
Local transport airport Samarinda to hotel in Samarinda	2	2	4	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)
Transport Samarinda to Pelabuhan Kayu Batu-Muara Muntai (round trip)	2	2	2	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)
Transport (Boat) Kayu Batu- Muara Muntai to Desa Minta (round trip)	1	1	1	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)
Transport local in Desa Minta (boat)	8	3	34	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)

Transport (Boat) Desa Minta to Desa Muara Enggelam	3	1	3	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)
Local transport (boat) in Desa Muara Enggelam	6	2	12	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)
Transport (Boat) Desa Muara Enggelam- Kayu Batu harbour	1	2	2	4 persons (for Team Leader, VR Developer, AR Developer, VR and AR Designer)
Transport in homebase to Airport homebase (return trip)	2	2	4	1 round trip 2 persons (for Team Leader and VR Developer)
Transport airport to Tarakan harbor-return	2	1	2	1 Round trip, for 2 persons (for Team Leader and VR Developer)
Transport (speedboat) Tarakan-Tanjung Selor-return	2	2	4	1 round trips, for 2 persons (for Team Leader and VR Developer)
Transport hotel-harbor in Tanjung Selor	2	1	2	1 round trip, for 2 persons (for Team Leader and VR Developer)
Local transport in Tanjung Selor	2	1	2	2 days, for 2 persons (for Team Leader and VR Developer)
Other costs	Number	Quantity	Total	Comments
TV LCD monitor	2	1	2	TV LED 60" (with FREE BRACKET TV) Subjected to Evidence, Based on GIZ rules For North Kalimantan 1 unit For East Kalimantan 1 unit
VR/AR hardware	8	1	8	Meta Quest 3 512GB VR Headset Bundle Subjected to Evidence, Based on GIZ rules For North Kalimantan 4 units For East Kalimantan 4 units
Tablet PC	6	1	6	Specification dimensions 254.3 x 165.8 x 6 mm (10.01 x 6.53 x 0.24 in); Memory 256GB 12GB RAM; Android Subjected to Evidence, Based on GIZ rules

				For North Kalimantan 3 units For East Kalimantan 3 units
Google Cardboard	100	1	100	For All 3-6 Inch Smartphones Google VR Headset 3D Subjected to Evidence, Based on GIZ rules For North Kalimantan 50 pieces For East Kalimantan 50 Pieces
Training (Meeting Package)	1	1	1	For 10 participants in Tanjung Selor North Kalimantan
Expedition hardware based to Tanjung Selor (North Kalimantan) and Samarinda (East Kalimantan)	1	1	1	
Source person (local guide) in Desa Minta and Muara Enggelam	14	1	14	

6. Inputs of GIZ or other actors

GIZ are expected to make the following available:

- Highly coordinate to Dinas Perpustakaan Daerah, Information Technology Agency (Dinas Komunikasi dan Informatika) and Planning Agency (Bappeda) of North Kalimantan, Dinas Lingkungan Hidup Provinsi Kalimantan Utara, Direktorat Perlindungan dan Pengelolaan Ekosistem Gambut-KLH
- Peatland experts (professional or university)

7. 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 14 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 it took. CVs can also be submitted in English (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 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.

8. Annexes

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