GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title	
Land and Ecosystem National Threat Evaluation and Risk Assessment (LENTERA)	
Region	GEF Project ID
Asia	12276
Country(ies)	Type of Project
Indonesia	MSP
GEF Agency(ies):	GEF Agency ID
IUCN	IUCN
Executing Partner	Executing Partner Type
Ministry of Environment	Government
GEF Focal Area (s)	Submission Date
Biodiversity	1/29/2026
Project Sector (CCM Only)	
Mixed & Others	
Taxonomy	
Tropical Rain Forests, Tropical Dry Forests, Grasslands, Threatened Species, Livestock Wild Relatives, Invasive Alien Species, Species, Biomes, Biodiversity, Focal Areas, Productive Landscapes, Terrestrial Protected Areas, Community Based Natural Resource Mngt, Protected Areas and Landscapes, Tourism, Infrastructure, Extractive Industries, Forestry - Including HCVF and REDD+, Agriculture and agrobiodiversity, Mainstreaming, Transform policy and regulatory environments, Influencing models, Convene multi-stakeholder alliances, Demonstrate innovative approache, Strengthen institutional capacity and decision-making, Type of Engagement, Partnership, Consultation, Participation, Information Dissemination, Awareness Raising, Behavior change, Communications, Private Sector, Large corporations, SMEs, Financial intermediaries and market facilitators, Stakeholders, Gender Equality, Access and control over natural resources, Knowledge Generation and Exchange, Participation and leadership, Capacity Development, Gender results areas, Gender Mainstreaming, Beneficiaries, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Capacity, Knowledge and Research, Innovation, Knowledge Exchange, Knowledge Generation, Enabling Activities, Indicators to measure change, Adaptive management, Learning, United Nations Framework Convention on Climate Change, Climate Change, Nationally Determined Contribution, Paris Agreement, Climate Change Mitigation, Agriculture, Forestry, and Other Land Use, Climate Change Adaptation, Livelihoods, Disaster risk management	
Type of Trust Fund	Project Duration (Months)
GET	36
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
3,731,927.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)
335,873.00	0.00

Total GEF Financing: (a+b+c+d)	Total Co-financing
4,067,800.00	5,763,959.00
PPG Amount: (e)	PPG Agency Fee(s): (f)
150,000.00	13,500.00
PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)
163,500.00	4,231,300.00
Project Tags	
CBIT: No NGI: No SGP: No Innovation: No Competitive Window: No	

Project Summary

Provide a brief summary description of the project, including: (i) what is the problem and issues to be addressed? (ii) what are the project objectives, and if the project is intended to be transformative, how will this be achieved? iii), how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and/or adaptation benefits, and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the project should be in section B “project description”.(max. 250 words, approximately 1/2 page)

The LENTERA (**L**and and **E**cosystem **N**ational **T**hreat **E**valuation and **R**isk **A**ssessment) project aims to institutionalize a standardized **National Ecosystem Risk Assessment**, using the **IUCN Red List of Ecosystems (RLE)** methodology, as the scientific baseline for Indonesia’s **Environmental Protection and Management Plans (RPPLH)**.

This initiative operationalizes the mandate of the **Ministry of Environment (KLH/BPLH)** under Government Regulation (PP) No. 26 of 2025. While this regulation empowers the Ministry to enforce Environmental Carrying Capacity (D3TLH) limits on development, Indonesia currently lacks a standardized metric to scientifically define 'ecosystem collapse' or 'environmental damage' for complex, non-forest ecosystems.

Focusing on globally unique but under-represented ecosystems in the Wallacea Hotspot—specifically **tropical savannas (Sumba)** and **karst landscapes (Banggai and Muna-Buton in Sulawesi**)—the project addresses this gap through four components. **First**, it establishes a harmonized National Ecosystem Assessment framework to map vulnerability. **Second**, it integrates these RLE metrics into national policy and capacity-building to legally enforce damage thresholds. **Third**, it pilots inclusive, multi-stakeholder spatial planning in the target ecoregions, negotiating legally binding 'No-Go' and 'Restoration' zones. This legal ratification helps direct government priorities to execute on-the-ground physical restoration and conservation actions, ultimately aiming to create or improve the management of 100,000 hectares of terrestrial protected areas, sustainably manage and restore 50,000 hectares of land, and bring an additional 100,000 hectares of landscapes under improved practices. **Finally**, the project facilitates systemic learning through a national digital reporting dashboard and South-South knowledge exchange.

Appropriately meaning 'Lantern' in Indonesian, LENTERA illuminates 'invisible' ecosystem risks to transform Indonesia's environmental inventory into a functional risk assessment tool, safeguarding critical natural capital, reducing GHG emissions, and ensuring compliance with the Kunming-Montreal Global Biodiversity Framework (GBF). Through the interventions, the project will directly benefit 5,000 individuals—with a

commitment to 50% women's participation—and is estimated to mitigate 2.9 million metric tons of CO2e in greenhouse gas emissions over a 20-year period.

Indicative Project Overview

Project Objective

Safeguarding Indonesia's threatened ecosystems by setting a scientific standard for national environmental planning and enhancing institutional systems for enforcement and replication.

Project Components

Component 1. Scientific Baseline & RLE Assessment

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
750,000.00	1,621,262.00

Outcome:

Outcome 1: A standardized, **National Ecosystem Risk Assessment** is established and effectively operationalised, providing the legally required environmental inventory baseline

Indicators:

Number of national priority ecosystem types (karst, savanna) with standardized risk assessments (RLE) officially adopted into the National Environmental Inventory database.

Number of the One Map Policy geoportal thematic layers updated with 'Ecosystem Risk' attributes for target ecoregions.

Output:

Output 1.1: National Ecosystem Typology harmonized with IUCN Global Ecosystem Typology (GET) and Ecoregion maps.

Output 1.2: Comprehensive risk-based National Environmental Inventory completed for priority ecosystems and captured in the national database.

Output 1.3: Targeted RLE Landscape Assessments (Sumba, Banggai, Muna-Buton) completed to define specific 'collapse thresholds' (e.g., aquifer connectivity, fire regimes), integrating Traditional Ecological Knowledge (TEK).

Component 2. Institutional Strengthening & Policy Integration

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
850,000.00	1,250,000.00

Outcome:

Outcome 2:

Regulatory frameworks and institutional capacity are strengthened to enforce Environmental Carrying Capacity (D3TLH) limits and environmental damage standards based on ecosystem risk metrics

Indicators:

-

Adoption of updated Technical Guidelines (Petunjuk Teknis) for Environmental Protection and Management Plan that explicitly integrate RLE 'Risk Status' as a weighting factor for Carrying Capacity (D3TLH) calculations.

Number of government staff (national/sub-national) trained and certified as 'Ecosystem Auditors' capable of interpreting vulnerability metrics (Target: 50% women)

Output:

Output 2.1: Technical Guidelines on the utilization of ecosystem-vulnerability data, ecoregion information, and ecosystem service values integrating RLE Risk Status as an analytical parameter developed and adopted for incorporation into Environmental Protection and Management Plan's assessment of environmental potentials and issues.

Output 2.2: 'Standard Criteria for Environmental Damage' (*Baku Kerusakan*) for Karst, Savanna, and other key ecosystems defined using RLE collapse thresholds (PP 22/2021).

Output 2.3: Gender-responsive Capacity Building curriculum designed and delivered for Environmental Protection and Management (RPPLH) Planners and 'Ecosystem Auditors'.

Component 3. Mainstreaming in Critical Landscapes

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
1,400,000.00	2,100,000.00

Outcome:

Outcome 3:

Legally binding Environmental Protection and Management Plans (RPPLH) are inclusively developed and effectively implemented to enforce science-based development limits and sustainable landscape management.

Indicators:

Area (ha) of Threatened (CR, EN, VU) ecosystems legally designated as 'Protection Zones' or OECMs within revised Environmental Protection and Management Plans/Spatial Plans.

Area (ha) of degraded landscapes under sustainable management practices (e.g., fire management, buffer zones) (Target: 100,000 ha).

Output:

Output 3.1: Inclusive Multi-Stakeholder Ecoregion Forums (*Pokja Ekoregion*) established for Sumba, Banggai, and Muna-Buton to govern the planning process.

Output 3.2: Participatory Zoning and Management Negotiations completed to designate Environmental 'No-Go Zones' and 'Restoration Zones', utilizing Free, Prior, and Informed Consent (FPIC) principle.

Output 3.3: Mainstreaming and/or Legal Ratification of Environmental Protection and Management Plan documents as Local Regulations (*Perda*) in target districts.

Component 4. Knowledge Management & Monitoring

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
445,519.00	350,000.00

Outcome:

Outcome 4: Indonesia serves as a **regional model** for ecosystem risk assessment, facilitating replication and **GBF Target** reporting.

Indicators:

Operational status of the National RLE Dashboard (for reporting to relevant GBF indicators) publicly accessible.

Number of South-South exchange workshops conducted with ASEAN/Global peers (e.g., Colombia, Vietnam) to replicate the policy model.

Output:

Output 4.1: National Policy Feedback & Adaptive Management Loop established to update national guidelines based on pilot lessons and community feedback.

Output 4.2: Digital Systems & GBF Reporting Dashboard established within Ministry systems.

Output 4.3: South-South Exchange & Global Dissemination ('State of Indonesia's Ecosystems' report), highlighting innovations in scientific risk assessment and Traditional Ecological Knowledge (TEK) integration.

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing ($)	Co-financing ($)
108,917.00	168,222.00

Outcome:

Outcome

Regular monitoring documented in PIR, MTR and TE reports

Output:

Output *Effective project implementation and adaptive management maintained through regular steering committee oversight, and project monitoring and evaluation.*

Component Balances

Project Components	GEF Project Financing ($)	Co-financing ($)
Component 1. Scientific Baseline & RLE Assessment	750,000.00	1,621,262.00
Component 2. Institutional Strengthening & Policy Integration	850,000.00	1,250,000.00
Component 3. Mainstreaming in Critical Landscapes	1,400,000.00	2,100,000.00
Component 4. Knowledge Management & Monitoring	445,519.00	350,000.00
M&E	108,917.00	168,222.00
Subtotal	**3,554,436.00**	**5,489,484.00**
Project Management Cost	177,491.00	274,475.00
Total Project Cost ($)	**3,731,927.00**	**5,763,959.00**

Please provide justification

PROJECT OUTLINE

A. PROJECT RATIONALE

Briefly describe the current situation: the global environmental problems and/or climate vulnerabilities that the project will address, the key elements of the system, and underlying drivers of environmental change in the project context, such as population growth, economic development, climate change, sociocultural and political factors, including conflicts, or technological changes. Describe the objective of the project, and the justification for it. (Approximately 3-5 pages) see guidance here

A.1. Baseline Situational Analysis & Threats

The global environmental governance architecture is undergoing a profound paradigm shift towards 'nature-positive' development, driven by the Kunming-Montreal Global Biodiversity Framework (KM-GBF). A central pillar of this framework is Goal A, which mandates maintaining ecosystem integrity and resilience[1]ecosystem. However, as highlighted by IPBES and the UNCCD, countries often lack the tools to measure 'integrity' beyond simple land cover metrics. Indonesia, a megadiverse archipelagic nation, stands at the forefront of this challenge. While it has successfully slowed deforestation (monitored by the Ministry of

Forestry), it faces a more insidious threat: the functional collapse of critical ecosystems due to degradation that remains invisible to conventional satellite monitoring[2]2. For example, distinct pressures that cannot be captured by satellite monitoring—ranging from hunting, pollination failure, and phenological mismatches to soil degradation, genetic erosion, and altered fire regimes—might render landscapes functionally extinct despite retaining their structural greenness.

Indonesia has recently enacted a suite of ambitious environmental regulations that fundamentally shift the governance model from 'resource exploitation' to 'carrying capacity.'

- **Government Regulation (PP) No. 26 of 2025** on *Environmental Protection and Management Planning* establishes a systematic and comprehensive framework designed to guarantee sustainable development that directly aligns with environmental carrying capacity and climate change considerations. The regulation mandates a three-stage procedural approach: first, conducting spatial and non-spatial Environmental Inventories (*Inventarisasi Lingkungan Hidup*) at the national, island, and ecoregion levels; second, designating terrestrial and marine Ecoregions (*Wilayah Ekoregion*)—as emphasized in Article 10—to serve as the foundational baseline for all protection efforts; and third, developing comprehensive 30-year Environmental Protection and Management Plans (RPPLH) across both central and local government tiers. These plans govern natural resource utilization, environmental quality protection, climate change mitigation, strategic policies, monitoring, public participation, and funding mechanisms. Crucially, by simultaneously enacting the National RPPLH 2025-2055, the regulation creates a binding master reference, legally requiring that these environmental directives be fully integrated into all long-term and medium-term development planning[3]3.

- **Government Regulation (PP) No. 22 of 2021** on *Environmental Protection and Management Implementation* establishes strict liability for 'Environmental Damage' and requires the restoration of damaged ecosystems[4]4.

- **Government Regulation (PP) No. 46 of 2017** on *Environmental Economic Instruments* mandates the valuation of natural resources to support sustainable financing mechanisms like payments for ecosystem services[5]5.

- **Ministerial Decree No. 694 of 2025** on the Determination of Indonesia’s Ecoregions.

Environmental Carrying CapacityDespite these robust legal mandates, a critical implementation gap persists. The government lacks a scientifically standardized, legally defensible methodology to define 'ecosystem collapse' or 'environmental damage' for complex non-forest ecosystems. Currently, the calculation of relies

on simplified proxies (e.g., water availability vs. population demand)[6]6. This approach fails to capture the tipping points of complex systems—such as the fracture of a karst aquifer or the fundamental shift of a savanna ecosystem—leaving the ambitious 'brakes' of PP 26/2025 effectively disconnected from the ecological reality on the ground. Without a standardized assessment—such as the RLE—local governments cannot scientifically determine the 'tipping points' of these ecosystems to inform the Environmental Protection and Management Plans.

Without a functional risk assessment tool, Indonesia's other terrestrial ecosystems—beyond forests— are facing rapid, unmonitored degradation. Conservation efforts and funding have overwhelmingly focused on humid tropical rainforests, inadvertently marginalizing other critical landscapes , such as **Tropical Savannas** and **Karst landscapes**. These landscapes and the different ecosystems they host are often misclassified in national land-use systems; savannas are frequently labeled as 'critical' or 'degraded' lands ripe for afforestation or conversion, while karst landscapes are viewed primarily as geological commodities rather than biological arks.

This oversight presents a severe threat to Indonesia's biodiversity. The Nusa Tenggara savannas represent ancient, distinct biomes with high endemism adapted to seasonal dryness, not degraded forests. Similarly, Indonesia's karst systems (covering ~154,000 km²) act as essential 'water towers' and evolutionary hotspots for micro-endemic flora and fauna. The lack of distinct recognition for these ecosystems in spatial planning has left them vulnerable to rapid conversion for monoculture agriculture, infrastructure, and extractive industries (cement and nickel mining).

For the Tropical Savanna and Karst Landscapes of Indonesia, key barriers remain, e.g., 1) sectoral fragmentation: spatial planning (RTRW) often conflicts with environmental planning (RPPLH); in karst regions like Sulawesi, mining concessions often overlap with aquifer recharge zones because the 'ecosystem service value' of the karst has never been quantified or mapped into the Ecoregion data layers, and 2) ecological mismanagement: in Savanna landscapes (e.g., Sumba), fire suppression policies and afforestation programs (planting trees in natural grasslands) often degrade the ecosystem further, while in Karst landscapes (e.g., Banggai and Buton), limestone mining disrupts hydrological connectivity, drying up community water sources.

Under the baseline (without GEF support), Indonesia will continue implementing its environmental governance reforms under PP No. 26 of 2025. Nevertheless, it will lack three critical elements:

- A nationally standardized, scientifically defensible definition of ecosystem collapse, applicable across ecosystem types and administrative levels.
- Institutional learning mechanisms that allow learnings from pilots and early adopters to be translated into enhanced national policy, technical guidelines, and replication.

- An integrated whole-of-government and whole-of-society operating model, where science, planning, communities, and the private sector act on a shared ecosystem risk framework.

A.2. Project's Approach & Baseline Investments

The project proposes to bridge the implementation gap by introducing the **IUCN Red List of Ecosystems (RLE)**[7] as a potential national technical standard for the 'Environmental Inventory' mandated by PP 26/2025. By harmonizing national data with the global RLE standard, the project empowers the **Ministry of Environment/Environmental Control Agency (KLH/BPLH)** to act as an effective 'Ecological Auditor.'

The IUCN Red List of Ecosystems (RLE) is the global standard for assessing the conservation status of ecosystems. Unlike species assessments that count individuals, the Red List of Ecosystems (RLE) assesses the risk of **ecosystem collapse**—the endpoint where an ecosystem loses its defining features and functions. It uses five rule-based criteria to assign risk categories (from *Least Concern* to *Collapsed*):

- **Criterion A (Reduction in Geographic Distribution):** Measures the loss of ecosystem area (e.g., deforestation of mangroves) over past, present, or future timeframes.
- **Criterion B (Restricted Geographic Distribution):** Identifies naturally rare or fragmented ecosystems (e.g., mountaintop forests, specific karst formations) that are inherently susceptible to threats.
- **Criterion C (Environmental Degradation):** measures abiotic decline, such as water pollution, hydrological disruption in peatlands, or climatic changes, that degrades the *quality* of the ecosystem even if the area remains stable.
- **Criterion D (Disruption of Biotic Processes):** Measures the loss of key biological interactions, such as the loss of pollinators, seed dispersers, or coral bleaching, which leads to 'silent collapse.'
- **Criterion E (Quantitative Analysis):** Uses modeling to estimate the probability of collapse within a specific timeframe.

The approach has a number of potential uses , such as:

1. **Defining 'Environmental Damage' (PP 22/2021):** RLE thresholds (e.g., 'Endangered') provide the scientific basis for declaring an ecosystem legally 'damaged,' triggering liability.
2. **Zoning (PP 26/2025):** Ecosystems assessed as 'Critically Endangered' can be designated as 'Environmental Protection Zones' (No-Go Zones) in spatial plans.

3. **Prioritizing Restoration (GBF Target 2):** Identifies 'Vulnerable' ecosystems where restoration is most cost-effective to prevent collapse.

Crucially, RLE supports the **Environmental Protection and Management Plans (RPPLH)**. PP 26/2025 requires the RPPLH to be based on an Environmental Inventory describing the 'Potentials and Issues' of each region. RLE provides the necessary vulnerability metrics and functional-condition indicators to characterize these risks with precision.

The requested GEF funds will provide the technical **'software'** (methodology, assessments, and capacity building) required to make the government's regulatory **'hardware'** (Environmental Protection and Management Plans and Environmental Control Agency/BPLH) functional across the targeted landscapes and Indonesia's other, diverse landscapes. Simultaneously, the Government of Indonesia's robust co-financing ensures that the institutional machinery—ranging from the national environmental data infrastructure to the operational deployment of sub-national planners and actions to enforce and monitor the newly designated zones—is fully resourced to adopt and implement these innovative standards on the ground.

Further, the project also builds upon substantial but fragmented existing investments:

- **One Map Policy (*Kebijakan Satu Peta*)**: Led by BIG and the Coordinating Ministry for Economic Affairs, this initiative has successfully harmonized boundaries but lacks attribute data on ecosystem *function* and *quality*. LENTERA provides the essential 'quality layer' for this existing infrastructure.
- **BRIN Biodiversity Research**: The National Research and Innovation Agency (BRIN) has consolidated Indonesia's biological collections. This project leverages that taxonomic baseline, moving from species lists to ecosystem-level functional assessment.
- **PROPER Mechanism**: The Ministry of Environment's existing industrial rating system (PROPER) rates company compliance. This project potentially provides the metrics to upgrade PROPER criteria to include 'Ecosystem Integrity,' rewarding companies that move beyond pollution control to ecosystem restoration.

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[1] **Convention on Biological Diversity (CBD).** (2022). *The Kunming-Montreal Global Biodiversity Framework.* Montreal: CBD Secretariat.

[2] **IPBES.** (2018). *The IPBES assessment report on land degradation and restoration.* Bonn: IPBES Secretariat.

[3] **Government of Indonesia.** (2021). *Government Regulation (PP) No. 26 of 2025 concerning Beschiking and Regelling of Environmental Protection and Management Planning.* Jakarta: State Secretariat.

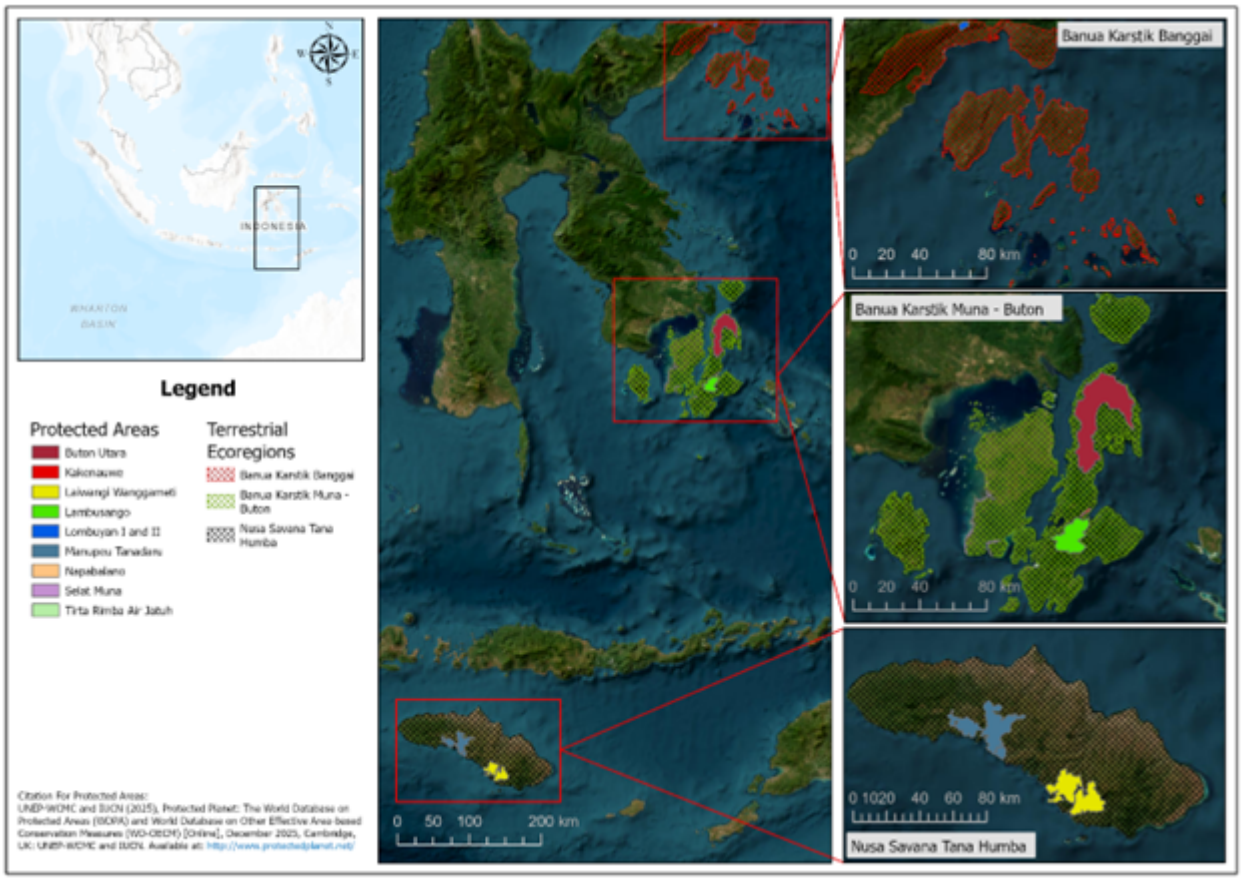
[4] **Government of Indonesia.** (2021). *Government Regulation (PP) No. 22 of 2021 concerning Implementation of Environmental Protection and Management.* Jakarta: State Secretariat.

[5] **Government of Indonesia.** (2017). *Government Regulation (PP) No. 46 of 2017 concerning Environmental Economic Instruments.* Jakarta: State Secretariat.

[6] **Ministry of Environment and Forestry (KLHK).** (2024). *Technical Guidelines for Determining Environmental Carrying Capacity (D3TLH).* Jakarta: KLHK.

[7] **IUCN.** (2016). *IUCN Red List of Ecosystems Categories and Criteria (Version 2.2).* Gland, Switzerland: IUCN.

Figure 1 Project Landscapes Covering Three Ecoregions



To demonstrate the benefits of this approach, the project focuses on three specific Terrestrial Ecoregions (*Wilayah Ekoregion Darat* - WED) situated within the **Wallacea Biodiversity Hotspot**. This region, defined by the deep oceanic trenches separating the Asian and Australian continental shelves, is a global epicenter of endemism and evolutionary distinctiveness. The selection of these specific pilot sites was driven by a set of strategic ecological, geographic, and operational criteria. Geographically, the project targets Wallacea because it is a globally significant hotspot that has historically received far less attention and funding from international donors, including the GEF, compared to the major rainforest blocks of western Indonesia. Ecologically, the selected landscapes represent the critical non-forest ecosystems—savannas and karst—that define Wallacea's unique biological character yet remain under-represented in conservation planning. Karst landscapes were chosen to align with escalating national priorities; the Government of Indonesia recently championed their critical role in water security and climate resilience

by proposing a dedicated resolution on Karst Ecosystems at the 7th UN Environment Assembly (UNEA-7) in December 2025. Focusing on the Sulawesi karst systems also enables this initiative to strategically complement and provide the risk-assessment baseline for the ongoing GEF project on karst conservation (BIO-KARST, GEF ID 12003). Meanwhile, the Sumba savanna was selected to address an urgent policy conflict: while savannas are formally recognized as critical biodiversity habitats requiring active conservation, vast tracts of these dryland ecosystems are currently being targeted for large-scale agricultural conversion under national security mandates. The Ministry of Environment seeks to highlight the ecological vulnerability of these areas before they are irreversibly degraded. Operationally, these three specific ecoregions below were selected because they encompass contiguous, unique, and geographically bounded island ecosystems that offer a manageable scale to effectively pilot and test the new national risk assessment methodology.

1. **Nusa Savana Tana Humba (Terrestrial Ecoregion Zone/WED 59)** Located on Sumba Island in East Nusa Tenggara (NTT) Province, this ecoregion encompasses the administrative jurisdictions of **East Sumba, Central Sumba, West Sumba, and Southwest Sumba** districts. Ecologically defined as Tropical Savanna and Dry Forest, the *Tana Humba* landscape is one of the most unique savanna ecosystems in Wallacea. Unlike anthropogenic grasslands formed by recent deforestation, this area is a mosaic of ancient savannas, gallery forests, and deciduous dry forests. It is a globally renowned Key Biodiversity Area (KBA) for avian endemism, hosting species such as the Sumba Cockatoo (*Cacatua sulphurea citrinocristata*) and the Sumba Hornbill (*Rhyticeros everetti*). The landscape is also deeply intertwined with the *Marapu* belief system, where specific hills and forests are protected as sacred sites. The project will address threats from inappropriate fire management, overgrazing, and the expansion of monoculture agriculture, utilizing RLE assessments to guide sustainable land-use planning (RPPLH) that respects both ecological integrity and cultural heritage.
2. **Banua Karstik Banggai (Terrestrial Ecoregion Zone/WED 67)** Covering the Banggai Archipelago in Central Sulawesi Province, this ecoregion spans the administrative jurisdictions of **Banggai, Banggai Islands, and Banggai Laut** districts. Defined by its Karst Landscape and Lowland Forest, the *Banua Karstik Banggai* serves as a critical biological bridge between the Sulawesi mainland and the Moluccas. Its dramatic limestone formations and karst forests act as the primary water catchment for the islands' communities, ensuring resilience against droughts. Biologically, the area supports the endangered Banggai Cardinalfish (*Pterapogon kauderni*) in its coastal interface and unique terrestrial fauna such as the Peleng Tarsier (*Tarsius pelengensis*) and Banggai Cuscus (*Strigocuscus pelengensis*). Facing increasing pressure from nickel and limestone mining interests, the project will utilize RLE to delineate 'environmental no-go zones' within the RPPLH, prioritizing the protection of karst aquifers and endemic habitat.
3. **Banua Karstik Muna-Buton (Terrestrial Ecoregion Zone/WED 73)** Situated in Southeast Sulawesi Province, this massive karst landscape covers seven administrative regions: **Muna, West Muna, Buton, North Buton, South Buton, and Central Buton districts, as well as Baubau City**. The ecoregion contains the largest remaining contiguous block of karst forests in Southeast Sulawesi, characterized by rugged limestone hills, extensive cave systems, and subterranean rivers. It is a primary stronghold for the Lowland Anoa (*Bubalus depressicornis*),

an endemic dwarf buffalo, and supports a high diversity of bats and karst-adapted flora. Critical for regional climate regulation and water security, the area is nevertheless threatened by asphalt mining (Buton is famous for natural asphalt) and limestone extraction. The project intervention will focus on integrating the value of karst ecosystem services into the spatial planning (RTRW) and environmental planning (RPPLH) processes of the encompassing regencies.

[1] **Convention on Biological Diversity (CBD).** (2022). *The Kunming-Montreal Global Biodiversity Framework.* Montreal: CBD Secretariat.

[2] **IPBES.** (2018). *The IPBES assessment report on land degradation and restoration.* Bonn: IPBES Secretariat.

[3] **Government of Indonesia.** (2021). *Government Regulation (PP) No. 26 of 2025 concerning Beschiking and Regelling of Environmental Protection and Management Planning.* Jakarta: State Secretariat.

[4] **Government of Indonesia.** (2021). *Government Regulation (PP) No. 22 of 2021 concerning Implementation of Environmental Protection and Management.* Jakarta: State Secretariat.

[5] **Government of Indonesia.** (2017). *Government Regulation (PP) No. 46 of 2017 concerning Environmental Economic Instruments.* Jakarta: State Secretariat.

[6] **Ministry of Environment and Forestry (KLHK).** (2024). *Technical Guidelines for Determining Environmental Carrying Capacity (D3TLH).* Jakarta: KLHK.

[7] **IUCN.** (2016). *IUCN Red List of Ecosystems Categories and Criteria (Version 2.2).* Gland, Switzerland: IUCN.

B. PROJECT DESCRIPTION

Project description

This section asks for a theory of change as part of a joined-up description of the project as a whole. The project description is expected to cover the key elements of good project design in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PIF guidance document. (Approximately 3-5 pages) see guidance here

Indonesia stands at a critical juncture in its environmental governance. For decades, the nation has managed its natural resources primarily through the lens of 'quantity'—measuring hectares of forest cover or tons of carbon. However, as the Triple Planetary Crisis accelerates, this two-dimensional view is no longer sufficient. Ancient savannas are frequently mislabeled as 'degraded' land ripe for afforestation , and karst landscapes surface-mapped as 'shrubland' are losing their subterranean aquifer capacity. The Ministry of Environment (KLH/BPLH) has been granted a powerful mandate to act as the nation's 'Ecological Auditor,' empowered to set binding limits on development based on Environmental Carrying Capacity (*Daya Dukung Daya Tampung* - D3TLH). Yet, the Ministry currently lacks the standardized, scientifically robust, and legally defensible metric

required to define exactly when an ecosystem has crossed the line from 'degraded' to 'collapsed.' Without this metric, the ambitious regulatory 'brakes' provided by Government Regulation PP 26/2025 are not yet reaching their true potential.

The project is designed with the following logic:

IF the Ministry of Environment (BPLH) and other relevant governmental institutions are equipped with the globally recognized **IUCN Red List of Ecosystems (RLE)** methodology to assess ecosystem risk,

AND this methodology is legally integrated into the mandatory 'Environmental Inventory' and 'Carrying Capacity' (D3TLH) calculations mandated by PP 26/2025 to define 'Environmental Damage,'

THEN the resulting **Environmental Protection and Management Plans (RPPLH)** will scientifically identify highly sensitive areas as legally binding ' Environmental No-Go Zones' and degraded areas as 'Restoration Priorities,' which in turn mandates the allocation of government budgets and stakeholder investments to execute on-the-ground restoration and conservation, leading to positive biophysical outcomes on the ground,

BECAUSE the RLE provides the scientific evidentiary basis required to withstand legal challenges, enforce the 'brakes' on unsustainable licensing, and ensure compliance with **GBF Targets 1 (Spatial Planning)** and **2 (Restoration)**.

The project's logic is built on the premise that *better science leads to binding limits*. The Theory of Change (ToC) outlines a systematic progression from generating standardised environmental data to achieving tangible, positive environmental and biophysical outcomes on the ground. The logic begins by addressing the foundational barrier of unstandardized ecosystem data (Component 1) by establishing an RLE-based scientific baseline. This scientific foundation is then translated into policy (Component 2) by integrating RLE risk thresholds into national Environmental Carrying Capacity (D3TLH) calculations and damage criteria. The critical causal leap occurs in Component 3: by moving from theoretical data to the establishment of inclusive, legally binding environmental 'No-Go' and 'Restoration' zones at the landscape level, the project assumes that local compliance and enforcement will follow in the long run. This compliance is the linchpin that directly triggers positive biophysical outcomes—such as maintained aquifer connectivity in karst regions, stabilised natural fire regimes in savannas, and the prevention of ecosystem collapse. Finally, Component 4 captures these biophysical and regulatory successes, scaling them through a national reporting dashboard and South-South exchanges to create a continuous loop of systemic learning. The ToC is structured around three mutually reinforcing causal pathways:

- **Causal Pathway 1: The Science-Policy Bridge (Standardization)**
    - *Barrier:* Fragmented environmental data and lack of standardized metrics for 'ecosystem collapse.'
    - *Intervention:* Establish the National Ecosystem Assessment framework using RLE; Harmonize National Typology with IUCN Global Ecosystem Typology (GET).

- *Result:* A unified, authoritative 'National Environmental Inventory' that speaks the language of both national law (PP 26/2025) and global targets (GBF).
- *Assumption*: Scientific consensus can be reached among disparate national agencies to adopt the GET and RLE frameworks as the definitive baseline metric over existing, fragmented sectoral classifications.

- **Causal Pathway 2: The Regulatory Enforcement Mechanism (Integration)**
  - *Barrier:* 'Carrying Capacity' (D3TLH) calculations are disconnected from ecological tipping points.
  - *Intervention:* Integrate RLE Risk Status into the Environmental Carrying Capacity (D3TLH) formula and 'Environmental Damage' criteria (PP 22/2021); Conduct gender-responsive capacity building for environmental planners.
  - *Result:* 'Critically Endangered' ecosystems are mathematically defined as having 'Zero Remaining Capacity,' triggering mandatory licensing moratoriums and environmental 'No-Go Zones' in RPPLH plans.
  - *Assumption*: The Ministry of Environment/Environmental Control Agency (KLH/BPLH) retains the political will and supra-sectoral environmental authority necessary to mandate and enforce strict ecological limits across other powerful development sectors (e.g., mining, agriculture, infrastructure).

- **Causal Pathway 3: Landscape Resilience (Operationalization)**
  - *Barrier:* High development pressure in fragile landscapes (Savanna/Karst) due to 'invisible' values.
  - *Intervention:* Establish inclusive, gender-responsive multistakeholder forum; Negotiate RLE-based zoning; Facilitate legal ratification of RPPLH through local regulations (Perda)
  - *Result:* Legally binding spatial plans (RTRW/RPPLH) that protect aquifer recharge zones and savannas, reducing disaster risk and GHG emissions. Because these plans dictate regional spending, their ratification legally unlocks and directs government co-financing (APBD) and stakeholder resources to execute on-the-ground physical restoration and conservation actions, leading to positive biophysical outcomes (e.g., maintenance of subterranean hydrology, recovery of endemic flora/fauna, and reduction of GHG emissions from land degradation).
  - *Assumption*: Local actors (local governments, communities, and private sector) will comply with the spatial plans, and local authorities possess the resources and mandate to enforce these plans to realize actual ecological gains.

- **Causal Pathway 4: Systemic Learning and Replication (Scaling)**

    - *Barrier:* Lack of accessible data and models for replicating ecosystem risk assessments across the region.

    - *Intervention:* Create a Policy Feedback Loop based on pilot lessons and community feedback; Develop a National RLE Dashboard for GBF reporting; Facilitate South-South exchange, e.g. with Colombia and Vietnam.

    - *Result:* Institutionalized capacity for GBF reporting (Indicator A.1), transparency in environmental data, and a replicable model in other parts of Indonesia and other ASEAN nations.

    - *Assumption*: The national government remains committed to international transparency (GBF reporting), and the policy feedback loop is actively utilized by regulators to dynamically update national guidelines based on field realities.

      While establishing legally binding spatial zones is essential, the LENTERA project recognizes that durable conservation requires actively mitigating the root drivers of degradation: habitat loss, land-use conversion, and pollution. To address habitat loss in the *Nusa Savana Tana Humba* ecoregion, the project goes beyond zoning by establishing inclusive *Pokja Ekoregion* forums to transition communities to Integrated Fire Management, negotiating sustainable grazing quotas with local cattle associations, and using scientific baselines to halt destructive afforestation in ancient savannas. Similarly, to combat land-use conversion and aquifer pollution in the *Banua Karstik Banggai and Muna-Buton* landscapes, the project leverages economic and regulatory tools to change private-sector behavior. For example, by piloting Nature-related Financial Disclosures (TNFD) with extractive industries to highlight operational water risks, and by mediating conflicts between mining operations and local Water User Groups based on scientifically defined carrying capacities (D3TLH), LENTERA ensures that structural threats are managed through collaborative governance and market alignment rather than relying solely on restricted boundaries.

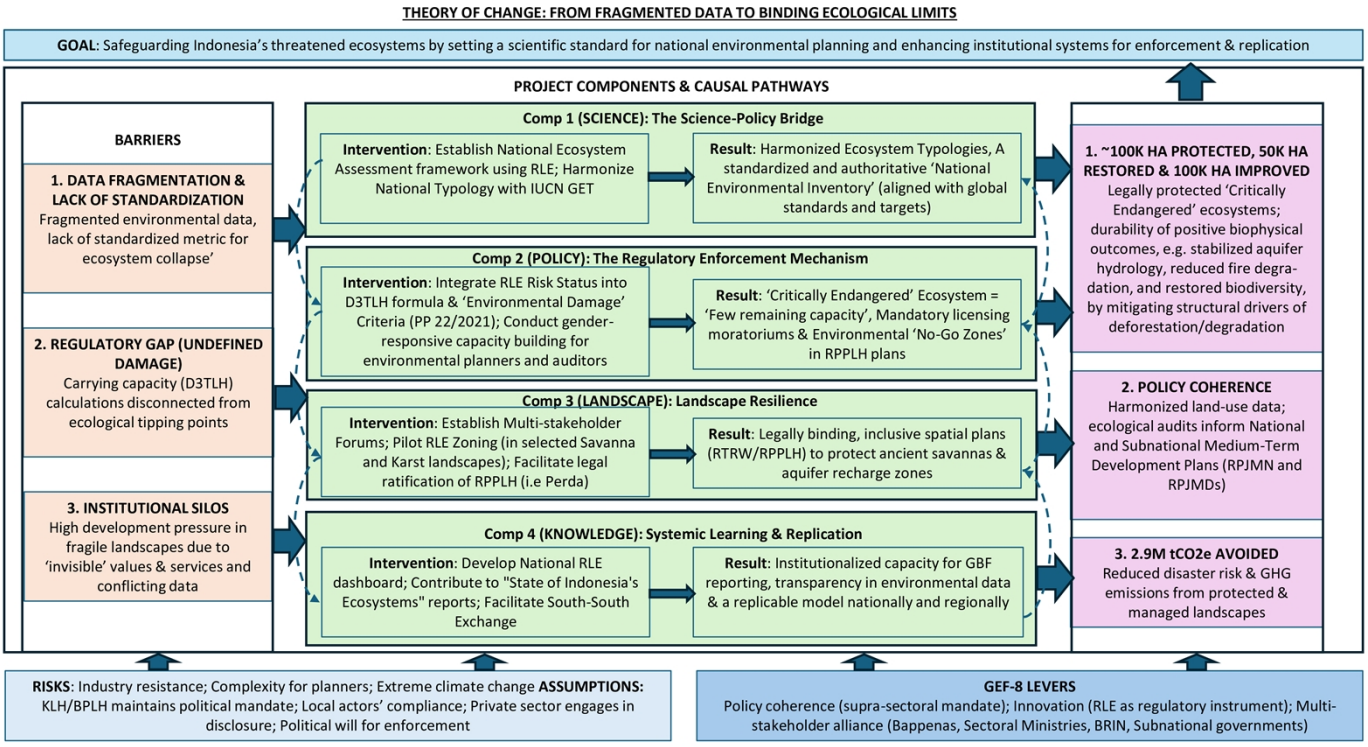
GEF-8 Levers:

- **Policy Coherence:** The project leverages the **Ministry of Environment's** new supra-sectoral mandate to harmonize conflicting land-use data between sectors (Forestry, Mining, Agrarian Affairs).

- **Innovation:** It deploys the RLE (GBF Headline Indicator A.1) not merely as a reporting tool, but as a *regulatory* instrument for spatial planning, a global-first application.

Multi-Stakeholder Alliance: It builds a coalition including **Bappenas** (planning), **BRIN** (science), and **Local Governments**, ensuring that the 'Ecological Audit' informs the National Medium-Term Development Plan (RPJMN) and Sub-national Medium-Term Development Plans (RPJMDs).

Diagram 1: Project Theory of Change



Component 1: Scientific Baseline & RLE Assessment

Outcome 1: A standardized, **National Ecosystem Risk Assessment** is established and effectively operationalised, providing the legally required environmental inventory baseline

- **Output 1.1:** National Ecosystem Typology harmonized with IUCN Global Ecosystem Typology (GET) and Ecoregion maps.
- **Output 1.2:** Comprehensive risk-based National Environmental Inventory completed for priority ecosystems and captured in the national database.
- **Output 1.3:** Targeted RLE Landscape Assessments (Sumba, Banggai, Muna-Buton) completed to define specific 'collapse thresholds' (e.g., aquifer connectivity, fire regimes), integrating Traditional Ecological Knowledge (TEK).
- **Global Environmental Benefits**: Establishes Indonesia's first standardized national Red List of Ecosystems aligned with IUCN Global Ecosystem Typology, providing replicable methodologies to

identify and safeguard Key Biodiversity Areas. Supports GBF Targets 1 & 2 and enhances global biodiversity data interoperability and climate resilience.

This component establishes the authoritative scientific foundation required under **PP 26/2025** for strengthening the *Environmental Inventory (Inventarisasi Lingkungan Hidup)*. It operationalizes ecosystem typologies, ecoregion boundaries, and RLE-based vulnerability metrics to generate standardized, legally defensible ecosystem-risk information for a more robust national and subnational planning.

- **Activity 1.1: Convening expert working groups to harmonize the national ecosystem typology with the IUCN Global Ecosystem Typology (GET) and official ecoregion maps:** The project will convene expert working groups (BRIN, KLH, Kemenhut, IUCN, BPS) to refine, subdivide and cross-walk the **22 Priority Ecosystems** identified in the Indonesian Biodiversity Strategy and Action Plan (IBSAP 2025-2045)[1]8 with the **IUCN Global Ecosystem Typology (GET)**. This ensures that Indonesia's national data is interoperable with global reporting frameworks.

- **Activity 1.2: Developing the risk-based national environmental inventory (*Inventarisasi*) by overlaying RLE attributes onto official ecoregions to define ecosystem quality:** This activity transforms ecosystem typologies into spatially explicit units within the national Environmental Inventory. It overlays harmonized RLE ecosystem types onto the **official Ecoregion Map (*Peta Ekoregion Indonesia*)** established by KLH/BPLH (including updates under SK Menteri LH No. 694/2025). Using ecoregions defined by biogeographic patterns, and ecological processes as the assessment units ensures that all risk assessments are:

    - legally valid within the planning framework of PP 26/2025, and
    - directly applicable to RPPLH technical materials, which rely on ecoregion-based characterization of environmental *potentials and issues*.

  This process converts broad ecological concepts into concrete spatial units for the *National Environmental Inventory*.

- **Activity 1.3: Conducting participatory RLE landscape assessments in pilot ecoregions to scientifically define 'collapse thresholds' for critical ecosystem functions:** This project will conduct spatially explicit RLE assessments for the existing ecosystems in the three target Ecoregions to define specific 'collapse thresholds' relevant to their ecology:

- Nusa Savana Tana Humba (WED 59): The assessment will distinguish 'ancient savanna' from 'degraded forest,' establishing indicators for functional collapse driven by altered fire regimes and invasive species. This provides the scientific basis to halt inappropriate afforestation programs.

- Banua Karstik Banggai (WED 67) & Banua Karstik Muna-Buton (WED 73): The assessments will consider hydrological integrity and surface fragmentation. They will define collapse thresholds based on aquifer connectivity and habitat loss, providing the 'hard data' needed to challenge mining concessions in water recharge zones.

Component 2: Institutional Strengthening & Policy Integration

Outcome 2:

Regulatory frameworks and institutional capacity are strengthened to enforce Environmental Carrying Capacity (D3TLH) limits and environmental damage standards based on ecosystem risk metrics

- **Output 2.1:** Technical Guidelines on the utilization of ecosystem-vulnerability data, ecoregion information, and ecosystem service values integrating RLE Risk Status as an analytical parameter developed and adopted for incorporation into Environmental Protection and Management Plan's assessment of environmental potentials and issues.

- **Output 2.2:** 'Standard Criteria for Environmental Damage' (*Baku Kerusakan*) for Karst, Savanna, and other key ecosystems defined using RLE collapse thresholds (PP 22/2021).

- **Output 2.3:** Gender-responsive Capacity Building curriculum designed and delivered for Environmental Protection and Management Planners and 'Ecosystem Auditors'.

- **Global Environmental Benefits**: Creates a regulatory model for mainstreaming ecosystem risk into development policy by embedding RLE collapse thresholds into legal frameworks. Advances GBF Target 14, enhances compliance with CBD and UNCCD, and sets a precedent for science-based environmental governance globally.

This component strengthens institutions and regulatory systems for environmental planning at the national level, so that ecosystem vulnerability evidence derived from RLE, ecoregion information, and ecosystem service values can be *used and incorporated* into RPPLH and environmental control instruments. It ensures that scientific risk assessments are translated into enforceable planning and regulatory decisions under PP 26/2025 and PP 22/2021.

- **Activity 2.1: Operationalizing Environmental Carrying Capacity (D3TLH) by developing technical guidelines (*Petunjuk Teknis*) for integrating RLE risk status and ecosystem service values into Environmental Protection and Management (RPPLH) planning:** The project will support KLH/BPLH in developing **Technical Guidelines (*Petunjuk Teknis*)** on the *utilization* of:
    - RLE-based ecosystem vulnerability data,
    - national ecoregion information, and
    - Ecosystem services,

  to be incorporated into Environmental Protection and Management Plan **(RPPLH)**, particularly in the Potentials and Issues *(Potensi dan Masalah PPLH)* chapter and the formulation of environmental management directives. These guidelines serve as an operational reference for planners, ensuring that ecosystem risks are consistently translated into Environmental Protection and Management Plan technical materials across national and subnational levels.

- **Activity 2.2: Formulating and legalizing 'standard criteria for environmental damage' (*Baku Kerusakan*) for non-forest ecosystems based on scientific RLE collapse thresholds:** Translating RLE 'Collapse Thresholds' into the legal **'Standard Criteria for Environmental Damage'** (*Baku Kerusakan Lingkungan*) required by PP 22/2021. This provides the KLH/BPLH with the legal benchmarks needed to enforce restoration orders and liability against polluters.

- **Activity 2.3: Designing and delivering a gender-responsive certification curriculum to train government planners as 'Ecosystem Auditors' capable of interpreting vulnerability data:** Designing and delivering a training curriculum for BPLH and Provincial/District Environment Agency (DLH) staff. This training will certify them as 'Ecosystem Auditors' capable of interpreting RLE data to evaluate Environmental Impact Assessments (AMDAL) and spatial plan, focused on strengthening their ability to **interpret and operationalize ecosystem-vulnerability data** for environmental planning and control.

Component 3: Mainstreaming in Critical Landscapes (Pilot Implementation)

Outcome 3: Legally binding Environmental Protection and Management Plans (RPPLH) are inclusively developed and effectively implemented to enforce science-based development limits and sustainable landscape management.

- **Output 3.1:** Inclusive Multi-Stakeholder Ecoregion Forums (*Pokja Ekoregion*) established for Sumba, Banggai, and Muna-Buton to govern the planning process.

- **Output 3.2:** Participatory Zoning and Management Negotiations completed to designate Environmental 'No-Go Zones' and 'Restoration Zones', utilizing Free, Prior, and Informed Consent (FPIC) principle.

- **Output 3.3:** Mainstreaming and/or Legal Ratification of Environmental Protection and Management documents as Local Regulations (*Perda*) in target districts.

- **Global Environmental Benefits**: Delivers tangible conservation in high-pressure ecoregions: protecting Sumba's fire-resilient savannas and globally significant bird species, and safeguarding Sulawesi's karst freshwater systems and subterranean biodiversity. Operationalizes GBF Target 3 and provides a participatory model for land-use conflict resolution.

This component functions as the **'Policy Laboratory'** for the project. While Component 2 focuses on creating the national regulatory *guidelines* (the 'manual'), Component 3 focuses on the *inclusive testing and application* of those guidelines to create actual, binding RPPLH documents in high-pressure landscapes. Aligned with the "Whole-of-Government" and 'Whole-of-Society' approaches, it serves as a multi-stakeholder crucible where diverse actors collaborate to resolve land-use conflicts using RLE science. This approach includes the involvement of *Masyarakat Adat* at project sites as project partners, utilising traditional and local knowledge systems to underpin conservation interventions.

- **Activity 3.1: Establishing inclusive, gender-balanced multi-stakeholder ecoregion forums (*Pokja Ekoregion*) to govern the participatory planning and conflict resolution process:** This activity establishes the governance structures required to draft the RPPLH, ensuring representation extends beyond government officials. In the **Nusa Savana Tana Humba**, the forum will explicitly integrate *Marapu* indigenous leaders to ensure sacred natural sites are mapped as 'Protection Zones,' alongside women's weaving collectives who rely on specific dye-producing plants. Conversely, in the **Sulawesi Karst landscapes (Banggai and Muna-Buton)**, the forums will focus heavily on mediating conflicts between industrial actors (nickel/asphalt mining companies), local water utilities (PDAM), and women's water-user groups, creating a transparent platform to negotiate trade-offs between extraction and water security.

- **Activity 3.2: Facilitating participatory zoning negotiations to designate 'No-Go Zones' and 'Restoration Zones' using Free, Prior, and Informed Consent (FPIC) principles:** Using the data from Component 1, stakeholders will negotiate the specific zoning regulations within the RPPLH. In the **Savanna landscape**, this involves shifting from a policy of total fire suppression to an integrated fire management regime that mimics natural cycles, as well as establishing sustainable grazing quotas with cattle ranching associations. In the **Karst landscapes**, the activity focuses on the 'invisible' underground; stakeholders will use hydrological maps to designate 'No-Go Zones' for mining where aquifers are vulnerable, and define 'Restoration Zones' where connectivity for the Anoa and Tarsier must be re-established.

- **Activity 3.3: Advocating for and securing the legal ratification of Environmental Protection and Management Plan (RPPLH) documents as binding local regulations (*Perda*) through strategic engagement with regional legislative councils:** This activity ensures that the RPPLH documents produced in the laboratories do not remain 'paper tigers' but are legally adopted as binding regulations. The project will facilitate direct technical and advocacy engagement with the **Regional**

Legislative Councils (DPRD) in the target regencies to ratify the Environmental Protection and Management Plans as Local Regulations (Perda). To secure cross-party political buy-in, the advocacy strategy will frame the Environmental Protection and Management Plans as a mechanism for 'Cultural Preservation & Food Security' in Sumba (appealing to Marapu traditions) and 'Water Sovereignty' in Sulawesi (appealing to voter concerns over clean water).

Component 4: Knowledge Management, Monitoring & Scaling

Outcome 4: Indonesia serves as a **regional model** for ecosystem risk assessment, facilitating replication and **GBF Target** reporting.

- **Output 4.1:** National Policy Feedback & Adaptive Management Loop established to update national guidelines based on pilot lessons and community feedback.
- **Output 4.2:** Digital Systems & GBF Reporting Dashboard established within Ministry systems.
- **Output 4.3:** South-South Exchange & Global Dissemination ('State of Indonesia's Ecosystems' report), highlighting innovations in scientific risk assessment and Traditional Ecological Knowledge (TEK) integration..
- **Global Environmental Benefits**: Secures enduring impacts through a digital GBF dashboard for real-time biodiversity reporting and South-South exchanges that accelerate global uptake of RLE policy integration. Strengthens global knowledge commons and bridges the science-policy gap for ecosystem conservation.

This component serves as the project's 'Systemic Learning Engine,' ensuring that the specific lessons from the Ecoregion Laboratories (Component 3) are captured, codified, and used to adapt the National Guidelines (Component 2) and Methodologies (Component 1), while also facilitating replication across the ASEAN region.

- **Activity 4.1: Operationalizing a national policy feedback loop to systematically update technical guidelines based on lessons learned and evaluation workshops from the ecoregion laboratories:** This activity establishes a formal feedback mechanism between the field pilots and the national regulator (KLH/BPLH). It involves regular 'Ecoregion Evaluation Workshops' where implementation challenges—such as data gaps in remote savannas or conflict resolution bottlenecks in mining areas—are systematically analyzed. These lessons are used to formally update the Technical Guidelines for Environmental Protection and Management Plans (Component 2) and the RLE Assessment Standards (Component 1), ensuring the national system remains practical, adaptive, and grounded in on-the-ground reality rather than rigid theory.

- **Activity 4.2: Developing and integrating a national RLE dashboard into Ministry systems to enable transparent public access and real-time reporting on GBF headline indicators:** Developing a national digital dashboard for relevant GBF Headline Indicators, such as Indicator A.1 (Red List of Ecosystems) and A.2 (Extent of Ecosystems) . This dashboard will be integrated into the Ministry of Environment's data systems, enabling transparent, real-time reporting to the CBD and providing public access to Ecoregion Carrying Capacity data.
- **Activity 4.3: Facilitating South-South knowledge exchange and global dissemination of Indonesia's ecosystem risk governance model to ASEAN peers and international partners:** Leveraging the global IUCN network to facilitate structured technical exchanges with countries facing similar challenges, such as Colombia (a leader in RLE policy integration) and Vietnam. This activity also includes the production of a periodic 'State of Indonesia's Ecosystems' report to communicate findings to policymakers, the private sector, and the wider public.

Social & Environmental Safeguards: The project will adhere to IUCN's Environmental and Social Standards. Key safeguards to be triggered and managed include:

- **Standard on Involuntary Resettlement and Access Restrictions:** Mitigating any economic displacement caused by new 'No-Go Zones' (e.g., restrictions on mining or agricultural expansion in aquifer recharge zones) through alternative livelihood programs.

- **Standard on Indigenous Peoples and Local Communites:** Ensuring full respect for rights and traditional knowledge in mapping activities, e.g., engaging the **Marapu indigenous communities** in Sumba to protect sacred natural sites from misclassification.

- **Standard on Cultural Heritage**: Ensuring that tangible and intangible cultural heritage, including sacred sites, customary landscapes, and culturally embedded ecosystem uses, are systematically identified, mapped, and integrated into environmental protection and management plans, and that management decisions do not restrict access to or undermine the cultural practices of Indigenous Peoples and local communities.

- **Standard on Biodiversity and Sustainable Use of Natural Resources**: Ensuring that ecosystem inventories and restoration frameworks prioritise native species and ecological integrity, avoid inappropriate afforestation in ancient savannas and other non-forest biomes, and apply best-practice restoration principles informed by IUCN knowledge to address land degradation and biodiversity loss without creating new ecological risks.

- **Standard on Gender Equality and Women's Empowerment**: Ensuring the project adopts a gender-responsive strategy that goes beyond analysis, actively supports women's participation in decision-making, assesses differentiated ecosystem dependencies, and includes safeguards to prevent social backlash or unintended risks of gender-based violence linked to shifting benefit structures.

- **Standard on Vulnerable and Marginalised Groups:** Identifying and accounting for socio-economic vulnerabilities beyond Indigenous status, including households with limited livelihood diversification, land-poor groups, and those most exposed to access restrictions, to ensure equitable outcomes from environmental protection and management planning.

- **Standard on Human Rights**: Ensuring that the development of environmental protection and management plans does not result in de facto human rights infringements, particularly related to access to land, natural resources, and livelihoods, through inclusive planning, transparency, and grievance mechanisms.

- **Standard on Community Health, Safety and Security:** Assessing and managing any indirect or induced risks to community safety arising from the downstream enforcement of management plans, even where enforcement is outside the direct control of the project.

- **Standard on Labour and Working Conditions**: Clarifying during the PPG phase whether community members will be engaged in fire management or related activities, and, if so, ensuring appropriate labour safeguards and ESCOP measures are applied.

- **Standard on Resource Efficiency and Pollution Prevention**: Confirming that planned activities do not introduce pollution risks and ensuring that any alternative livelihood initiatives developed in response to access restrictions are subject to environmental and social screening before implementation.

Gender Equality & Women Empowerment: The project recognizes that women are often the primary users of ecosystem services (e.g., water, non-timber forest products) and are disproportionately affected by ecosystem collapse.

- **Strategy:** The project will conduct a gender analysis of ecosystem dependencies in the pilot landscapes. It will ensure women's equal participation in the 'Ecosystem Auditor' training and decision-making bodies.

- **Action:** The project will actively engage women-led enterprises and groups within the landscapes **(Component 3)**, ensuring their specific resource dependencies inform the planning process through activities such as:

    - Sumba Savanna: Partnering with women's weaving collectives (*Ikat*) to map and protect plant species essential for natural dyes, ensuring the RPPLH secures their resource base.

    - Sulawesi Karst: Empowering women's Water User Groups to act as community monitors for water quality, ensuring their voices are central in negotiations with mining companies regarding aquifer protection.

To consolidate gender responsive outcomes, the project will focus on reporting gender-specific results through the PIRs, MTRs and TE, as well as implementing the project's Gender Action Plan.

Stakeholder and Private Sector Engagement: The project commits to a continuous, inclusive stakeholder engagement process. During the PPG phase, detailed consultations will be held in **East Nusa Tenggara (Sumba), Central Sulawesi (Banggai), and Southeast Sulawesi (Buton/Muna)** to validate the selection of pilot landscapes and ensure alignment with local aspirations. This includes FPIC with identified Indigenous Peoples and Local Communites. The private sector is a key partner, not just a regulated entity. The project will collaborate with the Indonesia Business Council for Sustainable Development (IBCSD) and specific industry associations to:

- **Karst Landscapes:** Pilot the application of RLE data for **Nature-related Financial Disclosures (TNFD)** with Nickel and Asphalt mining companies, demonstrating how protecting karst aquifers reduces operational water risks.
- **Savanna Landscapes:** Work with **Cattle Ranching Associations** to demonstrate how 'Nature-Positive' zoning and sustainable grazing capacities prevent ecosystem collapse and secure long-term fodder availability.

The project also recognises Indigenous Peoples and Local Communities as rights-holders and long-term custodians of the pilot landscapes, whose livelihoods, cultural identity, and resilience are directly dependent on ecosystem integrity. Their customary governance systems and Indigenous and local ecological knowledge are critical to robust ecosystem assessment and the legitimacy of subnational environmental planning instruments.

- Strategy: In accordance with GEF Environmental and Social Standards and the principle of Free, Prior, and Informed Consent (FPIC), the project will ensure the meaningful and continuous participation of IPLCs across all relevant components. Indigenous and local ecological knowledge will be systematically integrated into ecosystem condition assessments (Component 1) and into the drafting and revision of subnational Environmental Protection and Management Plans (RPPLH) (Component 2). IPLC representatives will be included in technical consultations and decision-making at landscape and subnational levels.
- Action: The project will engage IPLCs as co-assessors, knowledge holders, and co-planners within the pilot landscapes, ensuring customary practices and priorities are reflected in formal planning and governance outcomes through activities such as:
    - Working with customary institutions and Indigenous leaders to document traditional grazing systems, seasonal land-use patterns, and customary fire management practices, and

integrating these inputs into ecosystem condition assessments and Environmental Protection and Management Plans zoning to prevent savanna degradation and ecosystem collapse.

- Partnering with Indigenous and local communities to map sacred sites, customary water sources, and community-held knowledge of subterranean hydrology, ensuring these data directly inform karst ecosystem assessments and are formally embedded in Environmental Protection and Management Plans.

A. Table: Stakeholder Engagement

Meaningful stakeholder engagement is central to the project's design, recognizing that the shift from 'resource exploitation' to 'ecological carrying capacity' requires broad societal buy-in. The project will establish a **Multi-Stakeholder Project Steering Committee (PSC)** chaired by the Ministry of Environment (KLH/BPLH), ensuring strategic oversight and coordination across the various mandates given to different Ministries.

Table: Stakeholder Engagement

Stakeholders	Project Implementation Role
Ministry of Environment / Environmental Control Agency (KLH/BPLH)	**Executing Lead.** As the primary beneficiary, BPLH will use project outputs to fulfill its mandate for Environmental Inventory (PP 26/2025) and Damage Control (PP 22/2021). It leads the coordination of ecosystem risk assessments in key ecosystems, such as peatlands and karst, and development of pollution standards.
Ministry of National Development Planning (Bappenas)	**Policy Integrator.** Ensures RLE data informs the National Medium-Term Development Plan (RPJMN 2025-2029) and the Indonesia Biodiversity Strategy and Action Plan (IBSAP). Facilitates cross-sectoral planning.
Ministry of Forestry	**Key Partner.** The Ministry manages the forest estate. It will use RLE data to re-evaluate 'critical land' classifications in Savanna ecosystems (preventing inappropriate afforestation) and align Forest Management Units (KPH) with Karst ecosystem services.

National Research and Innovation Agency (BRIN)	**Scientific Authority.** BRIN serves as the scientific lead for RLE methodology adaptation and hosts the National Ecosystem Database. It ensures scientific rigor and data sovereignty.
Geospatial Information Agency (BIG)	**Geospatial Standards.** Ensures all maps produced comply with the **One Map Policy** standards, facilitating integration into the national geoportal.
Central Statistical Bureau (BPS)	**Partner:** Compilation of data for indicator A2 under GBF.
Provincial and District/Municipal Governments (in East Nusa Tenggara, Central Sulawesi, and Southeast Sulawesi)	**Implementers.** Key agents for decentralized governance. Provincial Planning Agencies (Bappeda) and Environment Agencies (DLH) will revise local Spatial Plans (RTRW) and Environmental Protection and Management Plans (RPPLH) based on assessment results.
Private Sector (Mining, Asphalt, Cattle Ranching)	**User & Tester.** Companies in the pilot landscapes will be engaged to pilot RLE metrics for TNFD reporting, testing the business case for avoiding 'Critically Endangered' ecosystem zones.
IPLCs & Civil Society	**Knowledge Holders.** Indigenous Peoples and Local Communities will provide Traditional Ecological Knowledge (TEK) to validate ecosystem condition, historical baselines, and sacred sites

Knowledge management: The project adopts a 'systemic learning' approach to ensure sustainability and replication, anchored in **Component 4**.

- **Systemic Learning Engine:** Through **Activity 4.1**, the project establishes a 'Policy Feedback Loop' where lessons from the Savanna and Karst Laboratories are formally used to update national RPPLH Technical Guidelines.
- **National Dashboard: Activity 4.2** will launch a public-facing digital platform visualizing the 'Red List status' of Indonesia's Ecoregions, serving as a transparency tool for the public and investors.
- **South-South Exchange: Activity 4.3** facilitates structured learning exchanges with **Colombia** (RLE in National Policy) and **Vietnam** (NEA implementation) to accelerate Indonesia's learning curve and position it as a regional leader in Ecoregion-based governance.

[1] **BAPPENAS.** (2024). *Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025-2045.* Jakarta: Ministry of National Development Planning.

[1] **BAPPENAS.** (2024). *Indonesian Biodiversity Strategy and Action Plan (IBSAP) 2025-2045.* Jakarta: Ministry of National Development Planning.

Coordination and Cooperation with Ongoing Initiatives and Project.

Does the GEF Agency expect to play an execution role on this project?

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing

No, at the moment the GEF agency is not expected to play a role in execution. This project will be executed by the Ministry of Environment (KLH/BPLH).

Planned cooperation with other relevant GEF-financed projects and other initiatives: The project is designed to build upon and complement existing investments rather than duplicating them. The following table outlines key synergies (more initiatives will be explored during the PPG):

Other initiatives	Main partner(s)	Intersections with project outputs
GEF-8 BIO-KARST Project (Biodiversity and Inclusive Governance for Resilience Karst Ecosystem and Community Livelihood)	UNDP, Ministry of Environment (KLH/BPLH)	**Outputs 1.2 & 1.3 (National Inventory & RLE Assessments):** LENTERA's targeted RLE ecosystem collapse thresholds for Wallacea karst landscapes (Banggai, Muna-Buton) will directly enrich and complement BIO-KARST's Output 1.1.1 (National Karst Inventory). This expands the national dataset beyond BIO-KARST's pilot sites (Maros-Pangkep, Sangkulirang-Mangkalihat, and Gunungkidul). **Output 2.2 (Standard Criteria for Environmental Damage):** LENTERA's legally defined karst collapse thresholds will strengthen the regulatory mechanisms and policy coherence targeted under BIO-KARST Outcome 1.1 .

Other initiatives	Main partner(s)	Intersections with project outputs
GEF-7 FOLUR Impact Program (Food Systems, Land Use and Restoration)	UNDP, FAO, Coordinating Ministry for Food Affairs (formerly CMEA)	**Output 3.1 (Ecoregion Forums):** LENTERA's inclusive *Pokja Ekoregion* forums in Sulawesi will closely coordinate with BIO-KARST's Output 1.1.2 (Multi-stakeholder Karst Governance Forums) to ensure a unified, harmonized national approach to karst governance and stakeholder engagement. **Output 1.2 (RLE Assessment):** LENTERA provides the 'Ecosystem Risk' layer for FOLUR's target landscapes (e.g., South Sulawesi), ensuring commodity supply chains (cocoa/coffee) avoid 'Critically Endangered' ecosystems. **Output 3.1 (Spatial Plans):** LENTERA translates FOLUR's landscape management goals into binding Environmental Protection and Management Plans **(RPPLH)** and Spatial Plans **(RTRW)** zones, preventing agricultural expansion into high-risk areas.
GEF-7 CONSERVE Project (Catalyzing Optimum Management of Nature Heritage)	UNDP, Ministry of Forestry (Forestry Planning)	**Output 3.1 (Spatial Plans):** CONSERVE focuses on biodiversity in 'Other Usage Areas' (APL). LENTERA provides the scientific 'Risk of Collapse' metric required to designate these areas as **OECMs** (Other Effective Area-based Conservation Measures) under the new national framework. **Output 2.3 (Auditor Training):** Joint capacity building for local planners on managing biodiversity outside of conservation areas.
GEF-5 RIMBA Corridor Project (Sumatra)	UNEP, Ministry of Forestry, Ministry of	**Output 1.2 (RLE Assessment):** LENTERA maps the 'ecosystem quality' within the RIMBA corridor (Riau, Jambi, West Sumatra), identifying the critical

Other initiatives	Main partner(s)	Intersections with project outputs
	Agrarian and Spatial Planning	'stepping stone' ecosystems required to maintain connectivity.
CEPF Wallacea Investment (Critical Ecosystem Partnership Fund)	Burung Indonesia, Conservation International	**Output 2.1 (Carrying Capacity/D3TLH):** The project establishes the 'Carrying Capacity' limits needed to enforce the corridor's integrity against infrastructure pressure. **Output 3.1 (Sumba/Sulawesi):** CEPF is the primary investor in Civil Society in Wallacea. LENTERA will align its **Karst and Savanna** zoning with CEPF's Key Biodiversity Area (KBA) priorities, ensuring that small grants to local NGOs align with the new national risk metrics.
UNESCO Global Geoparks Network	Geopark Management Bodies, UNESCO	**Output 3.2:** For Karst pilots, the project strengthens the conservation pillar of Geopark status using RLE data to map hydro-geological risks.
One Map Policy (Kebijakan Satu Peta)	Geospatial Information Agency (BIG), Coordinating Ministry for Economic Affairs	**Output 1.3:** The project ensures all RLE maps are ingested into the One Map geoportal.
Global Ecosystem Atlas	The Group on Earth Observation (GEO)	**Output 1.2:** The National Environmental Inventory will be linked with the Global Ecosystem Atlas with potential support from GEO.

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
100000	0	0	0

Indicator 1.1 Terrestrial Protected Areas Newly created

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
0	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
100000	0	0	0

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)
Buton Utara Wildlife Reserve	8877	Habitat/Species Management Area	35,000.00						
Kakenauwe Nature Reserve	17885	Strict Nature Reserve	200.00						
Laiwangi Wanggameti National Park	555571253	National Park	20,000.00						
Lambusango Wildlife Reserve	8883	Habitat/Species Management Area	8,600.00						
Lombuyan I and II Wildlife Reserve	1936	Habitat/Species Management Area	1,000.00						
Manupeu Tanadaru National Park	8662	National Park	35,000.00						
Tirta Rimba Air Jatuh Nature Reserve	8876	Protected Landscape/Seascape	200.00						

Indicator 3 Area of land and ecosystems under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

50000	0	0	0

Indicator 3.1 Area of degraded agricultural lands under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 3.2 Area of forest and forest land under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
30,000.00			

Indicator 3.3 Area of natural grass and woodland under restoration

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
Natural grass	20,000.00			

Indicator 3.4 Area of wetlands (including estuaries, mangroves) under restoration

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
100000	0	0	0

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
100,000.00			

Indicator 4.2 Area of landscapes under third-party certification incorporating biodiversity considerations

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.4 Area of High Conservation Value or other forest loss avoided

Disaggregation Type	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Indicator 4.5 Terrestrial OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Documents (Document(s) that justifies the HCVF)

Title

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	2900000	0	0	0
Expected metric tons of CO_2e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	2,900,000			
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting	2026			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	2,500			
Male	2,500			
Total	**5,000**	**0**	0	**0**

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)

Core Indicator 1: Improved management effectiveness via RLE-based zoning in the Nusa Savana Tana Humba (Sumba) and Banua Karstik (Sulawesi) Ecoregions. The target hectares reflect the designation of specific "Protection Zones" or “No-Go Areas” within the Environmental Protection and Management Plans for critical aquifer recharge areas (Karst) and sacred forest/savanna mosaics (Sumba) that will be managed for strict conservation. Existing Protected Areas in these landscapes include, e.g.; Manupeu Tanah Daru National Park (~88,000 ha) and Laiwangi Wanggameti National Park (~47,000 ha) in Sumba, and Lambusango Wildlife Reserve (~28,000 ha) and Buton Utara Wildlife Reserve (~82,000 ha) in Buton.

Core Indicator 3:

CI 3.2 (30,000 ha): After the RLE is conducted, likely there are degraded forest landscapes identified as "Vulnerable" or "Endangered". These areas are prioritized for restoration interventions funded by government and partners.

CI 3.3 (20,000 ha): After the RLE is conducted, likely there are degraded savanna/grassy landscapes identified as "Vulnerable" or "Endangered". These areas are prioritized for restoration interventions funded by government and partners.

These areas are located outside protected areas.

Core Indicator 4: Sustainable management of degraded Savanna and Karst landscapes. These production or multi-use areas will be managed under new Environmental Protection and Management Plans that mandate Integrated Fire Management (in Savannas) and Sustainable Grazing, as well as Buffer Zone Management around Karst extraction sites to maintain hydrological connectivity.

Core Indicator 6: (Estimate) Prevention of emissions from two sources: (1) Savanna (Tropical Shrubland) Wildfires: Shifting from uncontrolled burning to managed fire regimes significantly reduces annual emissions. (2) Soil Carbon & Biomass: Preventing the conversion of ancient, carbon-rich soils and karst/dry forests into monoculture or mining pits via the enforcement of environmental "No-Go" zones through the Carrying Capacity (D3TLH) mechanism. This is linked to Core Indicator 3.

Core Indicator 11: (50% Women). Direct beneficiaries from the Ecoregion Forums, including women’s weaving collectives (Ikat) securing natural dye resources and Water User Groups securing clean water access, as well as participants in "Green Jobs" related to ecosystem monitoring.

The 100,000 ha of protected area (CI 1) corresponds directly to the establishment and legal ratification of strict "Environmental No-Go Zones" through Output 3.2 (Participatory Zoning) and Output 3.3 (Legal Ratification of RPPLH via Perda). The 50,000 ha of restored land (CI 3) corresponds to the actively degraded "Restoration Zones" negotiated under Output 3.2, targeting specific savanna and dry forest areas identified by the scientific RLE baseline (Output 1.3). The 100,000 ha of improved practices (CI 4) corresponds to multi-use landscapes managed through integrated fire management and sustainable grazing agreements established under Output 3.2. Finally, the 2.9 MtCO2e mitigation target (CI 6) computed in the EX-ACT tool is generated from the interventions within 50,000 ha (representing conservative calculations), specifically through the implementation of managed fire regimes in 20,000 ha of savannas and the prevention of conversion in 30,000 ha of dry forests, identified under Outputs 3.1., 3.2, and 3.3.

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Moderate	Risk: Extreme weather events (El Niño fires) disrupt pilot activities or accelerate ecosystem collapse beyond project control. Assessment: Climate change is a driver of the very collapse being measured. Mitigation: Integrate climate scenarios into the RLE assessment (Criterion E - Quantitative Risk Analysis) to identify climate-resilient refugia and prioritize them for protection.
Environmental and Social	Moderate	The project involves land-use planning that could restrict access to resources for local communities, including indigenous peoples and local communities. Due to the project sites and activities already being identified, the preliminary ESMS screening promotes the development of an ESMP during the PPG phase, along with social baseline assessments, an Indigenous Peoples Plan and an Access Restriction Mitigation Process Framework. It is further encouraged that the project should aim to embed social needs into policy developments should processes be rolled out in the future. Overall, the impacts of identified risks are site specific, their extent can be determined with a reasonable degree of certainty, few if any of them are irreversible, and mitigation measures could be readily designed and implemented to successfully address these concerns. Taking these factors into account, the project is rated moderate risk.
Political and Governance	Moderate	Risk: Increased climate variability (such as raising temperatures, erratic rainfalls, droughts risks) escalates forest-fires in the target states and landscapes, which might undermine the project's implementation and impacts, especially 'fire-smart' ecological restoration. Assessment: During the PPG phase, the project will conduct a 'climate and disaster risk' screening. The results of the screening will be further validated during the field/landscape level consultations. Mitigation: the project will develop mitigation actions to address this risk at the PPG, based on the results of climate and risk screening and landscape consultations. These mitigation actions will be incorporated in the design of the project's interventions, as well as relevant SES (Social-Environmental Safeguard) documents.
INNOVATION		
Institutional and Policy	Moderate	Institutional and Policy Moderate Risk: The relatively new Ministry of Environment/Environmental Control Agency (KLH/BPLH), carved out of the Ministry of Environment and Forestry in the previous administration, may face challenges in asserting its 'supra-sectoral' authority over established line ministries (e.g., Energy/Mining, Agriculture), potentially leading to regulatory gridlock where 'Carrying Capacity' limits are ignored by sectoral licensing

		bodies. While PP 26/2025 provides a strong mandate, operationalizing cross-sectoral compliance can be difficult due to sectoral silos. Mitigation: As a potential mitigation, the project may establishes a high-level Project Steering Committee chaired by KLH/BPLH but with active Bappenas participation to ensure RLE-based limits are integrated into the binding National Medium-Term Development Plan (RPJMN), ensuring cross-sectoral alignment.
Technological	Moderate	Risk: The RLE scientific methodology (Criteria A-E) is too complex for local planners (Bappeda/DLH) to use in daily Carrying Capacity (D3TLH) calculations. Assessment: Local capacity is variable; scientific rigor must be balanced with usability. Mitigation: Develop simplified 'Traffic Light' maps (Red/Yellow/Green) for policymakers. Focus Component 2 on developing a user-friendly digital dashboard and practical, hands-on training for local staff.
Financial and Business Model		
EXECUTION		
Capacity	Moderate	Risk: Sub-national government agencies (DLH and Bappeda) in the pilot landscapes (Sumba, Banggai, Muna-Buton) may lack the sustained technical proficiency or staff retention required to independently update RLE assessments or interpret complex 'Ecosystem Collapse' metrics after project closure. Technical capacity varies significantly between Java and the outer islands. Further high staff rotation is a known barrier. Mitigation: The project moves beyond one-off workshops by designing an 'Ecosystem Auditor' certification curriculum embedded into key performance indicators for the relevant staff members. It also partners with local universities (e.g., in Sulawesi and NTT) to act as 'Scientific Hubs' to support local governments
Fiduciary		
Stakeholder	Moderate	The project commits to a continuous, inclusive stakeholder engagement process. While there has been limited engagement during the concept development, during the PPG phase, detailed consultations will be held in East Nusa Tenggara (Sumba), Central Sulawesi (Banggai), and Southeast Sulawesi (Buton/Muna) to validate the selection of pilot landscapes and ensure alignment with local aspirations. This includes FPIC with identified indigenous peoples. The private sector is also a key partner, not just a regulated entity. Meaningful stakeholder engagement is central to the project's design, recognizing that the shift from 'resource exploitation' to 'ecological carrying capacity' requires broad societal buy-in. Therefore, considered efforts are required to address the challenges in onboarding diverse stakeholders into collaborative management during the project implementation. With this in mind, the project will further conduct stakeholder engagement with all the actors concerned at the beginning of the project execution to facilitate buy-in and ownership of the project.
Other		

Overall Risk Rating	Moderate	An overall Moderate risk rating is appropriate, as the project is operating in a challenging but realistic context where risks are known and largely manageable. The most material risk relates to potential resistance from private sector actors, but this is not unexpected and can be addressed through early engagement and by positioning RLE as a tool for risk management rather than restriction. Taken together, the risks do not threaten the project's feasibility and are adequately mitigated through adaptive design, capacity-building, and integration of safeguards.

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm if any country policies that might contradict with intended outcomes of the project have been identified, and how the project will address this.

For projects aiming to generate biodiversity benefits (regardless of what the source of the resources is - i.e., BD, CC or LD), please identify which of the 23 targets of the Kunming-Montreal Global Biodiversity Framework the project contributes to and explain how. (max. 500 words, approximately 1 page)

This project is best placed under the GEF-8 **Biodiversity Focal Area**, although it does address cross-cutting challenges in high-value ecosystems.

Table: Alignment with National Priorities, GEF-8 Objectives, and KMGBF Targets

Project Outcomes & Outputs	Contribution to National/State Priorities	Contribution to GEF-8 Focal Area Objectives	Contribution to KM-GBF Targets
Outcome 1: A standardized, **National Ecosystem Risk Assessment** is established and effectively operationalised, providing the legally required environmental inventory baseline	**PP 26/2025 (Environmental Inventory):** Directly operationalizes the mandate for a 'National Environmental Inventory' by providing the scientific methodology to measure ecosystem *quality* and *risk*.	**Goal A (Ecosystem Integrity):** Provides the essential baseline metric (Risk of Collapse) to track progress towards Goal A. **BD-1-1 (Protected Areas):** Improves management effectiveness of the PA	**Target 1 (Spatial Planning):** Provides the foundational scientific baseline (RLE) and spatial mapping required to identify highly vulnerable non-forest ecosystems for integration into spatial plans.

Project Outcomes & Outputs	Contribution to National/State Priorities	Contribution to GEF-8 Focal Area Objectives	Contribution to KM-GBF Targets
Outputs: **1.1:** National Ecosystem Typology harmonized with IUCN Global Ecosystem Typology (GET) and Ecoregion maps.	**IBSAP 2025-2045:** Implements the strategy's core pillar on 'Ecosystem-based Management' and data standardization.	estate by identifying 'invisible' risks (e.g., hydrological collapse in karst) that standard deforestation monitoring misses.	**Target 21 (Knowledge/Data):** Generates and standardizes critical ecosystem data, explicitly integrating Traditional Ecological Knowledge (TEK), to guide national and subnational decision-making.
1.2: Comprehensive risk-based National Environmental Inventory completed for priority ecosystems and captured in the national database.	**One Map Policy:** Resolves data conflicts by providing a unified 'Ecosystem Function' layer for the national geoportal.		
1.3: Targeted RLE Landscape Assessments (Sumba, Banggai, Muna-Buton) completed to define specific 'collapse thresholds' (e.g., aquifer connectivity, fire regimes).			
Outcome 2: Regulatory frameworks and institutional capacity are strengthened to enforce Environmental Carrying Capacity (D3TLH) limits and environmental damage standards based on ecosystem risk metrics	**PP 26/2025 (Carrying Capacity):** Provides the specific weighting factors needed to calculate Environmental Carrying Capacity (D3TLH). Without RLE, D3TLH might	**BD-Policy Coherence (Target 14):** Mainstreams biodiversity values into the core of development planning (Carrying Capacity/D3TLH), ensuring that spatial	**Target 14 (Policy Mainstreaming):** Legally mainstreams biodiversity risk metrics into national development planning by embedding RLE thresholds into

Project Outcomes & Outputs	Contribution to National/State Priorities	Contribution to GEF-8 Focal Area Objectives	Contribution to KM-GBF Targets
Outputs: **2.1:** Technical Guidelines on the utilization of ecosystem-vulnerability data, ecoregion information, and ecosystem service values integrating RLE Risk Status as an analytical parameter developed and adopted for incorporation into Environmental Protection and Management Plans' assessment of environmental potentials and issues. **2.2:** 'Standard Criteria for Environmental Damage' (*Baku Kerusakan*) for Karst, Savanna, and other key ecosystems defined using RLE collapse thresholds (PP 22/2021). **2.3:** Capacity Building curriculum designed and delivered for RPPLH Planners and 'Ecosystem Auditors'.	remain a theoretical concept without enforcement power. **PP 22/2021 (Environmental Damage):** Defines legal scientific thresholds for 'Environmental Damage' (*Baku Kerusakan*), enabling liability enforcement in non-forest ecosystems. **RPJPN 2025-2045:** Supports the 'Green Economy' transformation by setting science-based limits on natural resource utilization.	plans account for ecosystem limits. **BD-Mainstreaming:** Shifts biodiversity from a 'sectoral' concern (Forestry) to a 'development constraint' (Planning/Environment) that governs all land-use sectors.	Environmental Carrying Capacity (D3TLH) regulations. **Target 23 (Gender Equality):** Delivers gender-responsive capacity building to ensure women's equal participation as certified 'Ecosystem Auditors' in environmental governance.

Project Outcomes & Outputs	Contribution to National/State Priorities	Contribution to GEF-8 Focal Area Objectives	Contribution to KM-GBF Targets
Outcome 3: Legally binding Environmental Protection and Management Plans (RPPLH) are inclusively developed and effectively implemented to enforce science-based development limits and sustainable landscape management.	**National Geopark Strategy:** Strengthens conservation in the *Banua Karstik* landscapes (Banggai, Muna-Buton) by mapping subterranean risks to aquifers.	**BD-1-3 (Restoration - Target 2):** Identifies 'Vulnerable' ecosystems where restoration is feasible and urgent, guiding the restoration target.	**Targets 1 & 3 (Spatial Planning & Conservation):** Directly designates 'No-Go Zones' and secures legal protection (Local Regulations) for 200,000 ha of threatened ecosystems.
Outputs: **3.1:** Multi-Stakeholder Ecoregion Forums (*Pokja Ekoregion*) established for Sumba, Banggai, and Muna-Buton to govern the planning process.	**Provincial Spatial Plans (RTRW):** Provides the legal evidentiary basis to designate 'Protection Zones' in areas previously zoned for production (e.g., Mining/Agriculture).	**BD-1-1 (Protected Areas - Target 3):** Justifies expansion of OECMs in Karst/Savanna areas outside the formal PA network. **LD-1:** Promotes sustainable land management in fragile karst/savanna landscapes.	**Target 2 (Restoration):** Negotiates and secures land tenure for 'Restoration Zones' in degraded areas.
3.2: Participatory Zoning and Management Negotiations completed to designate Environmental 'No-Go Zones' and 'Restoration Zones'.	**Food Security:** Protects 'ancient savannas' in Sumba from inappropriate afforestation, securing grazing lands and water resources.	**CCM-1-4:** Promotes Nature-based Solutions (NbS) by preventing the collapse of high-carbon soils and biomass.	**Target 22 (Inclusive Participation):** Ensures planning is governed by inclusive forums, mandating representation for women and utilizing FPIC for Indigenous Peoples.

Project Outcomes & Outputs	Contribution to National/State Priorities	Contribution to GEF-8 Focal Area Objectives	Contribution to KM-GBF Targets
3.3: Mainstreaming and/or Legal Ratification of Environmental Protection and Management Plan documents as Local Regulations (*Perda*) in target districts. **Outcome 4:** Indonesia serves as a **regional model** for ecosystem risk assessment, facilitating replication and **GBF Target** reporting. **Outputs:** **4.1:** National Policy Feedback & Adaptive Management Loop established to update national guidelines based on pilot lessons. **4.2:** Digital Systems & GBF Reporting Dashboard established within Ministry systems.	**Indonesia's Foreign Policy:** Positions Indonesia as a leader in ASEAN on science-based environmental governance and 'Nature-Positive' planning. **CBD National Reporting:** Ensures Indonesia can report on **Headline Indicator A.1** (Red List of Ecosystems) with high confidence.	**Knowledge Management:** Facilitates replication of the RLE methodology across the region (South-South exchange with Colombia/Vietnam), amplifying Global Environmental Benefits beyond national borders.	**Target 21 (Knowledge & Data):** Establishes a digital GBF Reporting Dashboard or mechanisms within Ministry systems to make ecosystem risk data transparent and publicly accessible. **Target 20 (Capacity Building & Tech Transfer):** Facilitates South-South exchange to transfer ecosystem risk governance models, highlighting TEK integration, to

Project Outcomes & Outputs	Contribution to National/State Priorities	Contribution to GEF-8 Focal Area Objectives	Contribution to KM-GBF Targets
			ASEAN peers and global partners.
4.3: South-South Exchange & Global Dissemination ('State of Indonesia's Ecosystems' report).			

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment:

We confirm that gender dimensions relevant to the project have been addressed as per GEF Policy and are clearly articulated in the Project Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PIF development as required per GEF policy, their relevant roles to project outcomes and plan to develop a Stakeholder Engagement Plan before CEO endorsement has been clearly articulated in the Project Description (Section B).

Yes

Were the following stakeholders consulted during project identification phase:

Indigenous Peoples and Local Communities:

Civil Society Organizations: Yes

Private Sector:

Provide a brief summary and list of names and dates of consultations

*Please kindly **see Annex I.** Preliminary Stakeholder Engagement Plan for the summary of PIF consultations.*

On July 1-4 2025, the Ministry of Forestry together with IUCN convened a four-day "Indonesia Red List of Ecosystems" workshop to build a shared understanding among key national stakeholders, initiate technical alignment, and define institutional roles and next steps for Indonesia's national Red List of Ecosystems process. The workshop brought together 56 individuals from Ministry of Forestry, Ministry of National

Development Planning (Bappenas), National Research and Innovation Agency (BRIN), Ministry of Marine Affairs and Fisheries, Ministry of Environment, NGOs, and academic institutions. Among the ways forward discussed was the development of a GEF concept note to help support RLE assessments for key ecosystems.

The Ministry of Environment/Environmental Control Agency (KLH/BPLH) organized the 'Karst Ecosystem Protection and Management Symposium' on December 16, 2025, in Jakarta, to formulate scientific-based governance and policy recommendations for the protection and management of karst ecosystems in Indonesia. This event gathered experts from government, academia (UGM, IPB, ITB), and research institutions (BRIN) to discuss ecosystem zoning, health assessments, and socio-economic challenges. IUCN was also invited to speak about the potential of Red List of Ecosystems on karst in Indonesia.

Additional preliminary stakeholder consultations were conducted with two Indonesian civil society organisations on 19 December 2025 to inform the project concept and design. These consultations focused on the relevance, feasibility, and potential implementation considerations of ecosystem risk assessment and policy integration in the Indonesian and landscape specific context. List of Consultees: 1) Vidya Nalang, Knowledge Management Manager, Yayasan Kehati 2. Ria Saryanthi, Consultant and former Conservation Partnership Advisor, Burung Indonesia / CEPF Wallacea Biodiversity Hotspot . Yayasan Kehati (The Indonesian Biodiversity Foundation) is a prominent national independent grant-making institution dedicated to biodiversity conservation, sustainable resource management, and empowering local community initiatives across Indonesia. It is closely working with the Ministry of Environment to help develop and monitor the implementation of IBSAP. Burung Indonesia, the national partner of BirdLife International, is a leading conservation NGO with extensive field experience in habitat protection, species conservation, and landscape-level governance, particularly within the karstic and savanna landscapes in the highly endemic Wallacea region. To ensure a comprehensive, rights-based, and inclusive project design, extensive additional consultations with a broader range of civil society organizations, Indigenous Peoples (IPs), and Local Communities (LCs) will be systematically conducted during the PPG stage.

(Please upload to the portal documents tab any stakeholder engagement plan or assessments that have been done during the PIF development phase.)

Private Sector

Will there be private sector engagement in the project?

Yes

And if so, has its role been described and justified in the section B project description?

Yes

Environmental and Social Safeguard (ESS) Risks

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed project or program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE

Medium/Moderate

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Project Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	GEF Project Grant($)	Agency Fee($)	Total GEF Financing ($)
IUCN	GET	Indonesia	Biodiversity	BD STAR Allocation: BD-1	Grant	3,731,927.00	335,873.00	4,067,800.00
Total GEF Resources ($)						**3,731,927.00**	**335,873.00**	**4,067,800.00**

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount ($)

150000

PPG Agency Fee ($)

13500

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non-Grant	PPG($)	Agency Fee($)	Total PPG Funding($)
IUCN	GET	Indonesia	Biodiversity	BD STAR Allocation: BD-1	Grant	150,000.00	13,500.00	163,500.00
Total PPG Amount ($)						**150,000.00**	**13,500.00**	**163,500.00**

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total($)
IUCN	GET	Indonesia	Biodiversity	BD STAR Allocation	2,453,902.00
IUCN	GET	Indonesia	Land Degradation	LD STAR Allocation	450,417.00
IUCN	GET	Indonesia	Climate Change	CC STAR Allocation	1,326,981.00
Total GEF Resources					**4,231,300.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
BD-1-2	GET	3,731,927.00	5763959
Total Project Cost		**3,731,927.00**	**5,763,959.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	Ministry of Environment/ Environmental Control Agency (KLH/BPLH)	In-kind	Recurrent expenditures	5763959
Total Co-financing				**5,763,959.00**

Describe how any "Investment Mobilized" was identified

Not Applicable

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

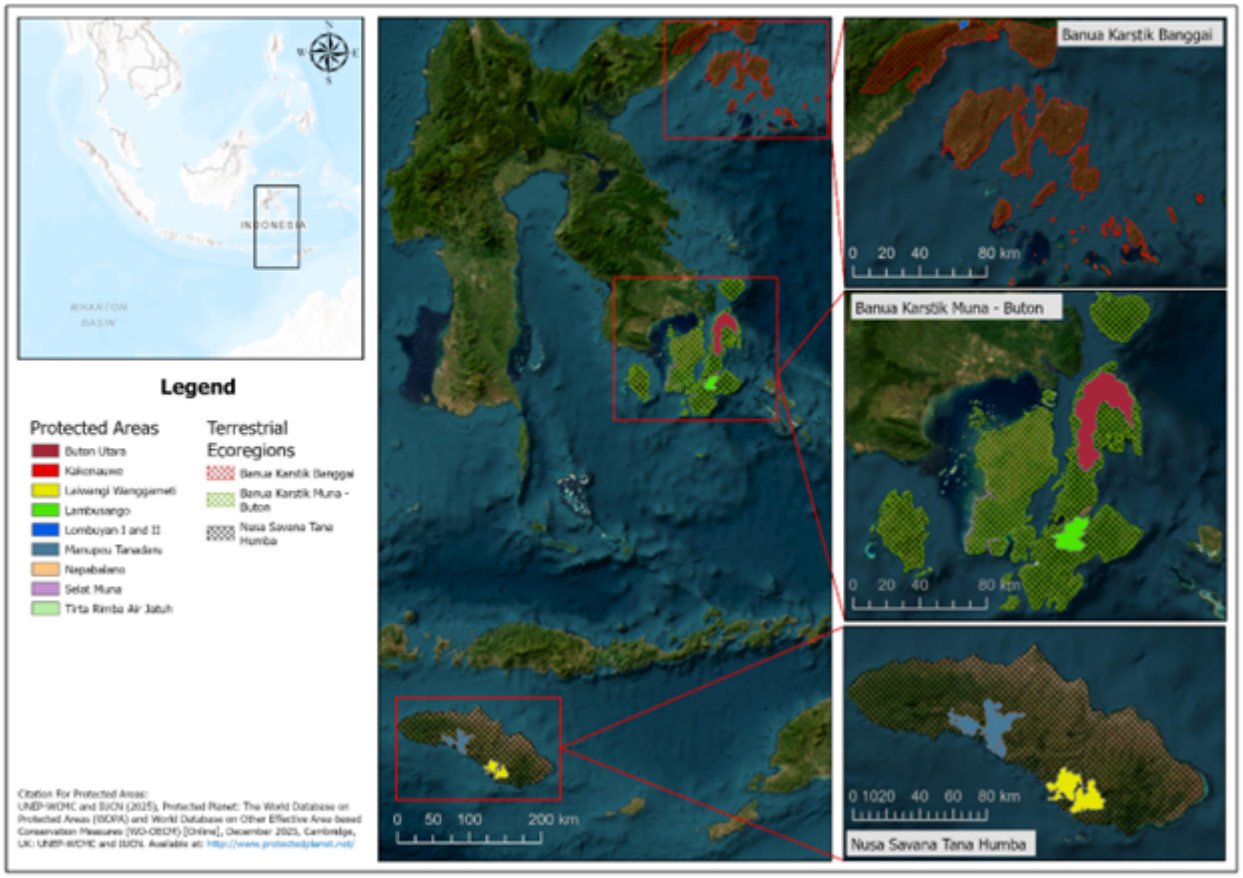
GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Janie Rioux	1/28/2026	Satrio Wicaksono		satrio.wicaksono@iucn.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date (MM/DD/YYYY)
Erik Teguh Primiantoro, S. Hut. MESew	GEF Operational Focal Point Indonesia Senior Advisor to the Minister for International Relations and Environmental Diplomacy	Ministry of Environment/Environmental Protection Agency	12/30/2025

ANNEX C: PROJECT LOCATION

Please provide geo-referenced information and map where the project interventions will take place



GeoName	District	Central Coordinates
Nusa Savana Tana Humba (Terrestrial Ecoregion Zone 59)	East Sumba District (*Sumba Timur*)	9°58'S, 120°20'E
	Central Sumba District (*Sumba Tengah*)	9°29'S, 119°42'E

	West Sumba District (*Sumba Barat*)	9°39'S, 119°23'E
	Southwest Sumba District (*Sumba Barat Daya*)	9°32'S, 119°08'E
Banua Karstik Banggai (Terrestrial Ecoregion Zone 67)	Banggai District	0°57'S, 122°33'E
	Banggai Islands District (*Banggai Kepulauan*)	1°35'S, 123°30'E
	Banggai Laut District	1°40'S, 123°33'E
Banua Karstik Muna-Buton (Wilayah Ekoregion Darat 73)	Muna District	4°54'S, 122°38'E
	West Muna District (*Muna Barat*)	4°50'S, 122°28'E
	Buton District	5°09'S, 121°55'E
	North Buton District (*Buton Utara*)	4°42'S, 123°01'E
	South Buton District (*Buton Selatan*)	5°34'S, 122°42'E
	Central Buton District (*Buton Tengah*)	5°17'S, 122°22'E
	Baubau City (*Kota Baubau*)	5°27'S, 122°36'E

GeoName	Protected Area	Central Coordinates
Nusa Savana Tana Humba	Manupeu Tanadaru National Park	9° 43.426’ S, 119° 41.246’ E
	Laiwangi Wanggameti National Park	10° 4.752’ S, 120° 9.625’ E
Banua Karstik Banggai	Buton Utara Wildlife Reserve	4° 38.438’ S, 122° 59.235’ E
	Kakenauwe Nature Reserve	5° 10.003’ S, 122° 54.976’ E
	Lambusango Wildlife Reserve	5° 17.978’ S, 122° 50.653’ E
	Lombuyan I and II Wildlife Reserve	0° 49.410’ S, 122° 53.593’ E
	Napabalano Nature Reserve	4° 38.228’ S, 122° 42.487’ E
	Selat Muna Game Reserve	5° 14.359’ S, 122° 20.771’ E
	Tirta Rimba Air Jatuh Nature Reserve	5° 27.210’ S, 122° 39.066’ E

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(PIF level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title
GEF8 PIF_Indonesia_LENTERA_IUCN_Preliminary ESMS Screening

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
Significant Objective 1	Significant Objective 1	Principal Objective 2	Significant Objective 1

ANNEX F: TAXONOMY WORKSHEET

ANNEX F: Taxonomy Worksheet

Level 1	Level 2	Level 3	Level 4
Influencing models			
	Transform policy and regulatory environments		
	Strengthen institutional capacity and decision-making		
	Convene multi-stakeholder alliances		
	Demonstrate innovative approaches		
	Deploy innovative financial instruments		
Stakeholders			
	Local People		
	Private Sector		
		Capital providers	
		Financial intermediaries and market facilitators	
		Large corporations	
		SMEs	
		Individuals/Entrepreneurs	
		Non-Grant Pilot	
		Project Reflow	
	Beneficiaries		
	Local Communities		
	Civil Society		
		Community Based Organization	
		Non-Governmental Organization	
		Academia	
		Trade Unions and Workers Unions	
	Type of Engagement		
		Information Dissemination	
		Partnership	
		Consultation	
		Participation	
	Communications		
		Awareness Raising	
		Education	
		Public Campaigns	
		Behavior Change	
Capacity, Knowledge and Research			
	Enabling Activities		
	Capacity Development		
	Knowledge Generation and Exchange		
	Targeted Research		
	Learning		

		Theory of Change
		Adaptive Management
		Indicators to Measure Change
	Innovation	
	Knowledge and Learning	
		Knowledge Management
		Innovation
		Capacity Development
		Learning
	Stakeholder Engagement Plan	
Gender Equality		
	Gender Mainstreaming	
		Beneficiaries
		Women groups
		Sex-disaggregated indicators
		Gender-sensitive indicators
	Gender results areas	
		Access and control over natural resources
		Participation and leadership
		Access to benefits and services
		Capacity development
		Awareness raising
		Knowledge generation
Focal Areas/Theme		
	Integrated Programs	
		Commodity Supply Chains ([1]9Good Growth Partnership)
		Sustainable Commodities Production
		Deforestation-free Sourcing
		Financial Screening Tools
		High Conservation Value Forests
		High Carbon Stocks Forests
		Soybean Supply Chain
		Oil Palm Supply Chain
		Beef Supply Chain
		Smallholder Farmers
		Adaptive Management
		Food Security in Sub-Sahara Africa
		Resilience (climate and shocks)
		Sustainable Production Systems
		Agroecosystems
		Land and Soil Health
		Diversified Farming
		Integrated Land and Water Management
		Smallholder Farming
		Small and Medium Enterprises
		Crop Genetic Diversity
		Food Value Chains
		Gender Dimensions
		Multi-stakeholder Platforms
		Food Systems, Land Use and Restoration
		Sustainable Food Systems
		Landscape Restoration
		Sustainable Commodity Production
		Comprehensive Land Use Planning
		Integrated Landscapes
		Food Value Chains
		Deforestation-free Sourcing
		Smallholder Farmers
		Sustainable Cities
		Integrated urban planning
		Urban sustainability framework
		Transport and Mobility

		Buildings
		Municipal waste management
		Green space
		Urban Biodiversity
		Urban Food Systems
		Energy efficiency
		Municipal Financing
		Global Platform for Sustainable Cities
		Urban Resilience
Biodiversity		
	Protected Areas and Landscapes	
		Terrestrial Protected Areas
		Coastal and Marine Protected Areas
		Productive Landscapes
		Productive Seascapes
		Community Based Natural Resource Management
	Mainstreaming	
		Extractive Industries (oil, gas, mining)
		Forestry (Including HCVF and REDD+)
		Tourism
		Agriculture & agrobiodiversity
		Fisheries
		Infrastructure
		Certification (National Standards)
		Certification (International Standards)
	Species	
		Illegal Wildlife Trade
		Threatened Species
		Wildlife for Sustainable Development
		Crop Wild Relatives
		Plant Genetic Resources
		Animal Genetic Resources
		Livestock Wild Relatives
		Invasive Alien Species (IAS)
	Biomes	
		Mangroves
		Coral Reefs
		Sea Grasses
		Wetlands
		Rivers
		Lakes
		Tropical Rain Forests
		Tropical Dry Forests
		Temperate Forests
		Grasslands
		Paramo
		Desert
	Financial and Accounting	
		Payment for Ecosystem Services
		Natural Capital Assessment and Accounting
		Conservation Trust Funds
		Conservation Finance
	Supplementary Protocol to the CBD	
		Biosafety
		Access to Genetic Resources Benefit Sharing
Forests		
	Forest and Landscape Restoration	
		REDD/REDD+
	Forest	
		Amazon
		Congo
		Drylands
Land Degradation		

	Sustainable Land Management	
		Restoration and Rehabilitation of Degraded Lands
		Ecosystem Approach
		Integrated and Cross-sectoral approach
		Community-Based NRM
		Sustainable Livelihoods
		Income Generating Activities
		Sustainable Agriculture
		Sustainable Pasture Management
		Sustainable Forest/Woodland Management
		Improved Soil and Water Management Techniques
		Sustainable Fire Management
		Drought Mitigation/Early Warning
	Land Degradation Neutrality	
		Land Productivity
		Land Cover and Land cover change
		Carbon stocks above or below ground
	Food Security	
International Waters		
	Ship	
	Coastal	
	Freshwater	
		Aquifer
		River Basin
		Lake Basin
	Learning	
	Fisheries	
	Persistent toxic substances	
	SIDS : Small Island Dev States	
	Targeted Research	
	Pollution	
		Persistent toxic substances
		Plastics
		Nutrient pollution from all sectors except wastewater
		Nutrient pollution from Wastewater
	Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
	Strategic Action Plan Implementation	
	Areas Beyond National Jurisdiction	
	Large Marine Ecosystems	
	Private Sector	
	Aquaculture	
	Marine Protected Area	
	Biomes	
		Mangrove
		Coral Reefs
		Seagrasses
		Polar Ecosystems
		Constructed Wetlands
Chemicals and Waste		
	Mercury	
	Artisanal and Scale Gold Mining	
	Coal Fired Power Plants	
	Coal Fired Industrial Boilers	
	Cement	
	Non-Ferrous Metals Production	
	Ozone	
	Persistent Organic Pollutants	
	Unintentional Persistent Organic Pollutants	
	Sound Management of chemicals and Waste	
	Waste Management	
		Hazardous Waste Management
		Industrial Waste
		e-Waste
	Emissions	

	Disposal	
	New Persistent Organic Pollutants	
	Polychlorinated Biphenyls	
	Plastics	
	Eco-Efficiency	
	Pesticides	
	DDT - Vector Management	
	DDT - Other	
	Industrial Emissions	
	Open Burning	
	Best Available Technology / Best Environmental Practices	
	Green Chemistry	
Climate Change		
	Climate Change Adaptation	
		Climate Finance
		Least Developed Countries
		Small Island Developing States
		Disaster Risk Management
		Sea-level rise
		Climate Resilience
		Climate information
		Ecosystem-based Adaptation
		Adaptation Tech Transfer
		National Adaptation Programme of Action
		National Adaptation Plan
		Mainstreaming Adaptation
		Private Sector
		Innovation
		Complementarity
		Community-based Adaptation
		livelihoods
	Climate Change Mitigation	
		Agriculture, Forestry, and other Land Use
		Energy Efficiency
		Sustainable Urban Systems and Transport
		Technology Transfer
		Renewable Energy
		Financing
		Enabling Activities
	Technology Transfer	
		Poznan Strategic Programme on Technology Transfer
		Climate Technology Centre & Network (CTCN)
		Endogenous technology
		Technology Needs Assessment
		Adaptation Tech Transfer
	United Nations Framework on Climate Change	
		Nationally Determined Contribution
		Sustainable Development Goals
	Climate Finance (Rio Markers)	
		Climate Change Mitigation 1
		Climate Change Mitigation 2
		Climate Change Adaptation 1
		Climate Change Adaptation 2

[1]