

GEF-8 PROJECT IDENTIFICATION FORM (PIF)

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General Project Information

Project Title	
Excelling Protected Area Management Effectiveness for Biodiversity Conservation through Landscape Based Approach (ENABLE)	
Region	GEF Project ID
Indonesia	11861
Country(ies)	Type of Project
Indonesia	FSP
GEF Agency(ies):	GEF Agency ID
UNDP	10124
Executing Partner	Executing Partner Type
Ministry of Forestry (MoF)	Government
GEF Focal Area (s)	Submission Date
Biodiversity	2/18/2025
Project Sector (CCM Only)	
Taxonomy	
Transform policy and regulatory environments, Influencing models, Strengthen institutional capacity and decision-making, Convene multi-stakeholder alliances, Demonstrate innovative approach, Indigenous Peoples, Stakeholders, Private Sector, Individuals/Entrepreneurs, SMEs, Large corporations, Beneficiaries, Local Communities, Civil Society, Academia, Community Based Organization, Non-Governmental Organization, Type of Engagement, Consultation, Participation, Information Dissemination, Partnership, Communications, Awareness Raising, Education, Behavior change, Capacity, Knowledge and Research, Enabling Activities, Capacity Development, Targeted Research, Innovation, Learning, Adaptive management, Knowledge Exchange, Knowledge Generation, Gender Equality, Gender Mainstreaming, Gender results areas, Participation and leadership, Knowledge Generation and Exchange, Women groups, Sex-disaggregated indicators, Focal Areas, Biodiversity, Protected Areas and Landscapes, Coastal and Marine Protected Areas, Terrestrial Protected Areas, Species, Mainstreaming, Tourism, Forestry - Including HCVF and REDD+, Threatened Species	
Type of Trust Fund	Project Duration (Months)
GET	72
GEF Project Grant: (a)	GEF Project Non-Grant: (b)
6,649,315.00	0.00
Agency Fee(s) Grant: (c)	Agency Fee(s) Non-Grant (d)
631,685.00	0.00
Total GEF Financing: (a+b+c+d)	Total Co-financing
7,281,000.00	48,000,000.00
PPG Amount: (e)	PPG Agency Fee(s): (f)
200,000.00	19,000.00
PPG total amount: (e+f)	Total GEF Resources: (a+b+c+d+e+f)

219,000.00	7,500,000.00
Project Tags	
CBIT: No NGI: No SGP: No Innovation: 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)

Indonesia’s rich biodiversity, including critically endangered species such as the Sumatran tiger, Sumatran rhinoceros, and Bornean orangutan, faces significant threats due to habitat fragmentation, capacity limitations in protected area (PA) management, and unsustainable land use practices. To address these challenges, this project aims to enhance biodiversity conservation through the establishment of Landscape-Based Management (LBM) Centers of Excellence (CoEs) in key National Parks—Gunung Leuser, Sebangau, and Bogani Nani Wartabone—while scaling up best LBM practices to six additional PAs in Sumatra, Kalimantan and Sulawesi. The project tackles three primary barriers for LBM: (1) limited institutional capacity and governance for PA management, (2) limited integration of LBM models in PA management, and (3) limited knowledge-sharing and replication of best LBM practices across Indonesia’s PA network.

The project objective is to strengthen biodiversity conservation in Indonesia’s PAs by integrating innovative, integrated LBM models that fosters ecosystem resilience, sustainable resource use, and equitable benefit-sharing in surrounding landscapes. The strategies to achieve this include establishing and institutionalizing LBM CoEs at leading NPs, integrating participatory LBM models into PA and surrounding landscape management, and scaling best practices through a national Knowledge Management Platform and comprehensive training program targeting six other PAs. The project will improve the management effectiveness of 3,633,096 ha of terrestrial and 73,983 ha of marine PAs and enhance biodiversity conservation on 856,185 ha outside the PAs through inclusive LBM models. Additionally, it will directly benefit at least 2,000 local people (50% women) through sustainable livelihood initiatives and participatory conservation agreements.

Indicative Project Overview

Project Objective

To enhance biodiversity conservation in protected areas and surrounding landscapes in Indonesia by introducing and scaling up innovative landscape-based management (LBM) models

Project Components

1. Building institutional capacity and frameworks for Landscape-based Management via establishing PA Centers of Excellence

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
2,300,000.00	16,603,200.00

Outcome:

1. Enhanced institutional capacity and frameworks for protected area management through Landscape-based Management Centers of Excellence at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks, *as indicated by:*

- Set of criteria and operational guidelines for Landscape-based Management and CoEs approved by MoF and applied across Indonesia’s PAs;

-
- 3 established and operationalized Landscape-based Management CoEs to build management capacity of Indonesia's PAs ;
 - Advanced landscape-based protected area management effectiveness system tested out at the three COEs (approved by MoF and applied for other PAs)
-

Output:

- 1.1. Criteria and operational guidelines for Landscape-based Management and Centers of Excellence (CoEs) are developed and adopted by the Ministry of Forestry
 - 1.2. Landscape-based Management Centers of Excellence (CoEs) are established and operationalized at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks to scale up LBM in Indonesia's PAs
 - 1.3. Landscape-based management tools and training programs (e.g., Participatory Management Strategies, Social Capacity Building & Partnership Strategies, Resort-Based Management (RBM), Collaborative Ecosystem Restoration, Spatial Analysis and Spatial Planning Tools) for the Centers of Excellence are developed, tested, and adopted at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks
 - 1.4. An advanced, landscape-based protected area management effectiveness system is developed and adopted at the Centers of Excellence, enabling systematic assessment and continuous improvement of conservation outcomes in Indonesia's Protected Areas
-

2. Integration of LBM in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and surrounding landscapes

Component Type	Trust Fund
Investment	GET
GEF Project Financing (\$)	Co-financing (\$)
3,000,000.00	21,661,920.00

Outcome:

2. Established landscape-based management models^[11] integrating nature-based solutions, ecosystem based approach, climate resilience measures, and equitable benefit-sharing in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and their surrounding landscapes, as indicated by:

Improved conservation and management of 1,654,419 ha inside Gunung Leuser, Sebangau, and Bogani Nani Wartabone NPs denoted by;

-increased by 20% in average METT score for Gunung Leuser, Sebangau, and Bogani Nani Wartabone NPs;

-decreased number of reports of poaching, illegal logging, and encroachment within Gunung Leuser, Sebangau, and Bogani Nani Wartabone NPs; (SMART Patrol reports will be used as the evidence)

Improved biodiversity conservation outcomes in 856,185 ha HCV outside Gunung Leuser, Sebangau, and Bogani Nani Wartabone NPs measured by;

-Area of restored or improved HCVs/ habitat for globally endangered species

-Enhanced/improved human-wildlife conflict management in the landscape (reduced reports/ damage from HWC incident eg. livestock killed by tiger, retaliatory killing of tigers or other endangered species)

- at least 5 successful participatory landscape-based management mechanisms (Community-Led Conservation Agreements, Public-Private Partnerships, SMART Patrol System Expansion, Sustainable Livelihood Initiative, Ecosystem Restoration and Habitat Connectivity Programs) introduced in 3 NPs and surrounding area;

- stabilized populations of 3-5 globally endangered species in the 3 NPs and surrounding area;

>= 2,000 direct local community beneficiaries (50% women) of landscape-based management model in 3 NPs and surrounding area

[1] A **landscape-based management model** is a **holistic, adaptive, and multi-stakeholder approach** to biodiversity conservation and sustainable resource use that integrates protected areas (PAs) with their surrounding landscapes. It emphasizes **ecological connectivity, participatory governance, and equitable benefit-sharing**, ensuring that conservation efforts are embedded within broader land-use planning and sustainable development strategies.

Output:

2.1. Management Plans of the Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks are updated with landscape-based management frameworks integrating High Conservation Value (HCV) areas, wildlife corridors and climate-vulnerable ecosystems within and around the parks

2.2. Participatory landscape-based management mechanisms, such as community-led conservation agreements, Public-Private Partnerships, SMART patrol system, and sustainable livelihood initiatives are established to protect HBV areas, wildlife corridors and climate-vulnerable ecosystems within and around the park

3. Enhancing Knowledge Exchange and Scaling up Best LBM Practices Across Indonesia's PA Network

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
833,236.00	6,010,560.00

Outcome:

3. Lessons and best practices of the Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks are replicated in six other National Parks, as indicated by:

>=200 stakeholders (50% are women) actively contributing to and using the Knowledge Management Platform for Landscape-based Management;

>=100 officers (50% are women) of Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrisen Nature Reserve, Rawa Aopa Watumohai National Park, Bunaken National Park successfully completed landscape-based management trainings at 3 CoEs;

>= 3 project participatory landscape-based management practices replicated by the 6 PAs;

- 1,978,677 ha of terrestrial habitats of the 5 PAs under improved biodiversity management (decreased by 20% number of cases of poaching, illegal logging, and encroachment) ;

- 73,983 ha of marine habitat of the Bunaken NP under improved biodiversity management (decreased by 20% number of cases of illegal fishing and mangrove logging) ;

- increased by 10% in average METT score for the 6 PAs

Output:

3.1. Knowledge Management Platform is developed at three Landscape-based Management Centers of Excellence and made available to PA authorities, local communities, and stakeholders to learn and replicate best landscape-based conservation practices

3.2. Officers of the Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai National Park, Bunaken National Park are trained and mentored at three Landscape-based Management Centers of Excellence to replicate successful landscape-based conservation practices

3.3. Management Plans for Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai National Park, Bunaken National Park are updated to ensure integration of LBM models into the PA management

M&E

Component Type	Trust Fund
Technical Assistance	GET
GEF Project Financing (\$)	Co-financing (\$)
199,479.00	1,440,000.00

Outcome:

Effective project performance through inclusive, participatory, and gender-responsive Monitoring and Evaluation (M&E) systems, enabling Adaptive Management, *as indicated by:*

Output:

Participatory, inclusive, and gender-responsive M&E system is implemented to measure the project effectiveness, and support Adaptive Management

The project's Gender Action Plan and Environmental and Social Safeguards are implemented

Component Balances

Project Components	GEF Project Financing (\$)	Co-financing (\$)
1. Building institutional capacity and frameworks for Landscape-based Management via establishing PA Centers of Excellence	2,300,000.00	16,603,200.00
2. Integration of LBM in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and surrounding landscapes	3,000,000.00	21,661,920.00
3. Enhancing Knowledge Exchange and Scaling up Best LBM Practices Across Indonesia's PA Network	833,236.00	6,010,560.00
M&E	199,479.00	1,440,000.00
Subtotal	6,332,715.00	45,715,680.00
Project Management Cost	316,600.00	2,284,320.00
Total Project Cost (\$)	6,649,315.00	48,000,000.00

Please provide justification

N/A

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

Indonesia has unparalleled biodiversity and diverse ecosystems, ranging from lush rainforests and coral reefs to mangroves and volcanic landscapes, supporting an extraordinary array of endemic species and playing a crucial role in global ecological balance. As one of the world's 17 megadiverse countries, Indonesia harbors approximately 10% of the planet's flowering plant species, 12% of mammals, 16% of reptiles and amphibians, and 17% of birds^[1]². The archipelago's varied habitats support this rich array of flora and fauna. Notably, Indonesia is home to iconic species such as the orangutans (*Pongo pygmaeus*, *Pongo abelii*, *Pongo tapanuliensis*, CR), Komodo dragon (*Varanus komodoensis*, EN), Sumatran tiger (*Panthera tigris sumatrae*, CR), Sumatran Rhino (*Dicerorhinus sumatrensis*, CR), Sumatran Elephant (*Elephas maximus sumatranus*, CR), and diverse marine life within the Coral Triangle^[2]³. Protected Areas (PAs) serve as vital strongholds for conserving this rich biodiversity, safeguarding critical habitats, preserving genetic diversity, and ensuring the sustainability of ecosystem services that support both local communities and global environmental health.

Indonesia has designated 568 protected areas (PAs) covering over 27 million hectares, primarily aimed at conserving biodiversity. This includes more than 213 nature reserves, approximately 85 wildlife reserves, and 55 national parks. National parks are managed by dedicated authorities, while other PAs fall under the Office for the Conservation of Natural Resources (BKSDA). Oversight of PAs at the central government level is provided by the Directorate-General of Natural Resource and Ecosystem (KSDAE), a body within the Ministry of Environment and Forestry. These PAs, along with their surrounding landscapes, play a crucial role in providing essential ecosystem services, supporting millions of people's livelihoods, harboring endemic and critically endangered species, and storing significant carbon reserves.

Rapid economic development, population growth, agricultural expansion, and urbanization have placed increasing pressure on Indonesia's ecosystems and biodiversity, leading to habitat loss, fragmentation, and degradation. Over the past few decades, extensive land-use changes driven by deforestation, infrastructure development, and extractive industries have significantly impacted biodiversity. For example, the conversion of natural forests into oil palm, rubber, and acacia plantations, as well as farmland for crops such as rice and maize, has reduced habitat connectivity and threatened the survival of numerous endemic species. Thus, in 2000, Indonesia's forests^[3]⁴ covered approximately 103.3 million hectares, accounting for over 54% of the country's land area. From 2000 to 2022, Indonesia lost 10.06 Mha of forest cover, making up 10% of its total forest cover loss in the same time period^[4]⁵. In coastal and marine areas, the expansion of aquaculture, tourism, and industrial activities has led to the degradation of mangroves, seagrass beds, and coral reefs, which are crucial habitats for marine biodiversity. A 2018 survey by the Indonesian Institute of Sciences (LIPI) assessed 1,067 coral reef sites across Indonesia and found that approximately 36% were in poor condition, with only 6.5% classified as excellent. The degradation of these reefs is attributed to pressures such as destructive fishing practices, overfishing, and pollution^[5]⁶. These activities, driven by economic incentives, limited law enforcement, and lack

of awareness, have placed many species, including the Sumatran tiger (*Panthera tigris sumatrae*) and the Javan rhinoceros (*Rhinoceros sondaicus*), at risk of extinction[6]⁷.

Indonesia's PAs face significant challenges due to external threats and internal management limitations. Illegal activities such as poaching and logging, along with encroachment from human settlements and unregulated tourism, have been identified as primary threats to PAs. A study evaluating the effectiveness of PA management in Indonesia highlighted these issues, noting that poaching, illegal logging, human settlements, tourism, and non-timber cultivation are the five main threats to protected areas[7]⁸. Compounding these challenges is the insufficient capacity of PAs to effectively address these threats. Factors such as limited financial resources, inadequate staffing, and insufficient law enforcement hinder effective management and conservation efforts. The underlying drivers of biodiversity loss include insufficient governance, capacity requiring further support and insufficient resources, and limited incentives for biodiversity conservation and sustainable natural resources management[8]⁹. Consequently, many PAs have difficulties to fulfill their conservation objectives, leading to continued biodiversity decline even within protected boundaries. Additionally, many important biodiversity areas and critical habitats remain outside the formal protected area system, leaving them vulnerable to degradation and loss. Addressing these issues requires strengthening governance frameworks, enhancing management capacities, and securing sustainable funding to ensure the long-term preservation of Indonesia's unique ecosystems.

To effectively address these threats, the Ministry of Forestry (MoEF) is committed to strengthening the capacity of PAs by integrating **landscape-based management (LBM)** practices into PA management. This approach aims to enhance management effectiveness both inside and outside PAs by fostering collaboration with local governments, local communities, and the private sector. By adopting a landscape-based approach for PAs, MoF seeks to improve habitat connectivity, mitigate human-wildlife conflicts, and promote sustainable land use practices that balance conservation with economic development. This strategy includes engaging local communities in conservation initiatives, supporting community-based natural resource management, and encouraging the private sector to invest in sustainable business models that contribute to biodiversity protection. Additionally, strengthening coordination between PA authorities and local governments will improve law enforcement, reduce illegal activities, and ensure that conservation policies align with broader land-use planning frameworks. Through these efforts, MoF aims to build more resilient and effectively managed PAs that provide long-term ecological, social, and economic benefits under different future scenarios.

Future scenarios for Indonesia biodiversity, communities, and PAs

Based on the analysis of situation in Indonesia and key threats for ecosystems, PAs, and communities the following five simple future scenarios were considered for this GEF project[9]¹⁰:

Scenario 1. 'Biodiversity at a Crossroads' (Gradual Conservation Gains Amid Persistent Challenges): Probability ~25%[10]¹¹

Some critically endangered species (e.g., Sumatran tiger, Javan rhino, Sumatran elephant) survive through captive breeding and well-managed conservation zones, but habitat loss continues in non-protected areas. Eco-tourism, sustainable fisheries, and agroforestry provide alternative livelihoods, but rural poverty and land disputes remain challenges. PA coverage remains stable, but enforcement struggles against illegal logging, poaching, and encroachment. Some marine and forest PAs see biodiversity recovery, but others degrade due to weak governance. **Main Drivers:** Moderate enforcement, mixed success in conservation funding, economic pressures on land use. **Outcome:** Indonesia's biodiversity is partially protected, but the future of many species remains uncertain.

Scenario 2. 'Extraction Boom, Conservation Bust' (Limited Governance & Economic-Driven Biodiversity Collapse): Probability: ~40%

Rapid deforestation and habitat loss continue, leading to local extinctions of critically endangered species. Marine biodiversity declines due to industrial-scale fishing and coral reef degradation. Land grabs, palm oil expansion, and mining displace communities, increasing conflicts between rural populations, agribusiness, and conservation authorities. Local fishers struggle against declining

fish stocks. PAs remain underfunded, insufficiently enforced, and politically marginalized. Many PAs become isolated biodiversity islands, while unprotected critical habitats vanish. **Main Drivers:** Economic growth at biodiversity's expense, weak enforcement, high international demand for commodities. **Outcome:** Major biodiversity loss, severe PA degradation, and worsening conflicts over land and resources.

Scenario 3: 'Climate Chaos and Ecological Collapse' (Strong Climate Impacts & Unprepared Response): Probability: ~25%

Severe climate shocks (forest fires, droughts, rising sea levels) devastate forests, wetlands, and coral reefs, leading to population declines in key species. Some species shift ranges or disappear due to habitat shifts and extreme weather. Coastal villages face flooding, displacement, and food insecurity. Farmers struggle with crop failures, increasing rural-urban migration. Conflict over water resources and arable land escalates. Many PA ecosystems become unstable due to climate change (e.g., mangrove loss, coral bleaching, forest fires). PAs struggle to maintain their ecological function, with some transitioning into highly degraded ecosystems. **Main Drivers:** Climate change acceleration, ecosystem instability, weak adaptation planning. **Outcome:** PAs suffer ecosystem degradation, while communities and biodiversity struggle to cope with climate shocks.

Scenario 4. 'Community-Led Conservation Renaissance' (Bottom-Up Conservation Success, Weak Central Support): Probability: ~10%

Community-led conservation efforts slow biodiversity loss in some areas. Indigenous Peoples and local communities successfully manage forests, fisheries, and wildlife, but lack broader support for scaling up. Traditional knowledge and local governance play a larger role in conservation, but economic pressures and land rights disputes remain barriers. Some communities successfully implement nature-based solutions, while others struggle with government neglect. Some PAs benefit from community co-management, leading to pockets of successful conservation, while others decline due to lack of central government investment. **Main Drivers:** Stronger IPLC governance, alternative conservation financing, grassroots activism. **Outcome:** Localized conservation successes, but national biodiversity strategy remains fragmented.

Scenario 5. 'Biodiversity Revival and Resilient Communities' (Strong Policy Reform & Global Green Investment): Probability: ~15%

Deforestation rates decline sharply, and ecosystem restoration programs expand, leading to the recovery of key species (e.g., Sumatran tiger, orangutan, Javan rhino). Coral reefs and mangroves regenerate due to well-enforced marine protected areas (MPAs) and sustainable fisheries policies. Community livelihoods shift towards sustainable practices, with eco-tourism, carbon credits, and regenerative agriculture providing economic benefits. Communities become active stewards of conservation, reducing reliance on extractive industries. Expanded PA networks, supported by strong law enforcement, stable financing, and integrated conservation policies, lead to better ecosystem connectivity and resilient landscapes. Innovative governance structures (e.g., co-management with local communities) enhance conservation outcomes. **Main Drivers:** Strong governance reforms, green financing (carbon markets, biodiversity credits), global conservation partnerships. **Outcome:** Indonesia emerges as a global leader in biodiversity conservation, with PAs thriving, local communities benefiting, and ecosystem services restored.

PA landscape-based management (LBM) offers a holistic approach to conservation, making it a highly adaptable and sustainable strategy across all five future scenarios. By integrating PAs with surrounding landscapes, LBM enhances habitat connectivity, allowing species to migrate and adapt in response to climate change (Scenario 3) and land-use pressures (Scenario 2). It promotes multi-stakeholder engagement, including local communities, private sector actors, and government agencies, fostering economic incentives for conservation (Scenario 4 & 5) through eco-tourism, sustainable agriculture, and carbon finance. In Scenario 1 (Biodiversity at a Crossroads), LBM ensures that conservation gains are not isolated, mitigating fragmentation and supporting resilient ecosystems. By embedding conservation goals into broader land-use planning and governance, LBM also improves law enforcement and financial sustainability, helping PAs remain effective even under weaker governance structures (Scenario 2). Ultimately, LBM provides long-term resilience by balancing biodiversity protection, human well-being, and economic development, ensuring that PAs can function as anchors of ecological stability in the face of uncertain futures.

Transformative Paradigm Shift: The integration of LBM approach in Indonesia promotes a transformative paradigm shift from isolated PA conservation to integrated, multi-stakeholder, and ecosystem-wide governance. This shift breaks down the traditional boundaries between PAs and surrounding landscapes, fostering holistic conservation strategies that enhance ecological connectivity, climate resilience, and sustainable livelihoods. By institutionalizing participatory governance models, such as community-led conservation agreements, Public-Private Partnerships (PPPs), Sustainable Community Livelihood, Community-led Ecosystem Restoration, and knowledge-sharing platforms, LBM empowers Indigenous Peoples and Local Communities (IPLCs) as active stewards of biodiversity. The approach also embeds nature-based solutions, sustainable land-use planning, and innovative financing mechanisms to harmonize conservation with economic development goals. Ultimately, LBM transforms Indonesia's biodiversity governance by shifting from reactive, site-specific management to a proactive, integrated, and scalable conservation framework that ensures long-term ecological and socio-economic resilience.

Baseline Programs in Indonesia to strengthen PA management and address key threats for biodiversity

To strengthen the network of PAs, the Ministry of Forestry (MoF) has established 74 national park and/or regional conservation agencies, staffed by nearly 10,000 personnel. Funding, infrastructure, and regulatory frameworks are provided to these agencies from the state budget. The Conservation Law of Indonesia (Law No. 5/1990) was strengthened in 2024 through the issuance of Law 32/2024, and it serves as a guiding framework for biodiversity conservation. A key aspect of building PA capacity is the rigorous assessment of management effectiveness, with 98% of Indonesia's 560 PAs evaluated using the Management Effectiveness Tracking Tool (METT) – which is one of the PAME (Protected Area Management Effectiveness) methods – aligned with the framework established by the International Union for Conservation of Nature (IUCN) World Commission on Protected Areas.

MoF is actively working to introduce the Spatial Monitoring and Reporting Tools (SMART) patrols into PA management: currently SMART is operational in 32 out of 74 PA Management Units, primarily national parks. SMART patrols monitor wildlife populations and safeguard the PAs, complemented by conservation partnerships addressing land tenure conflicts with local communities. 32 PA Management Units, again mostly national parks, facilitate sustainable natural resource use by local communities, with Resort-based Management (RBM) now covering 839 resorts across 568 PAs. RBM, internalized by the national authority since 2018, is further enhanced by the SMART patrol system, now a mandatory reporting component for PAs since 2022. Directorate General KSDAE has recently issued Ministerial Decree no. 16/2024, on Resort Based Management of Conservation Areas, harmonizing it with relevant regulations to address implementation challenges such as differing human resource capacities and budget allocations. The estimated budget requirement to support 839 resorts is 230 billion rupiahs, currently 70% fulfilled.

In March 2022, Indonesia's Directorate General of Natural Resources and Ecosystem Conservation (KSDAE) published a comprehensive book titled '100+ Inovasi Pengelolaan Kawasan Konservasi di Indonesia' ('100+ Innovations in Conservation Area Management in Indonesia'). This publication showcases over 100 innovative practices implemented across Indonesian PAs, reflecting the nation's commitment to advancing PA management. The book covers a wide range of topics, including community engagement, biodiversity conservation, sustainable tourism, and the application of technology in conservation efforts. Each innovation is detailed with case studies, providing insights into the challenges faced and solutions developed by PA managers and stakeholders. This resource serves as a valuable reference for conservation practitioners, policymakers, and researchers interested in effective PA management strategies^{[11][12]}. The publication includes references to some LBM models for Protected Areas (PAs). Specifically, it highlights:

- **Integrated Management Strategies:** some case studies showcase the integration of multiple stakeholders, including communities, private sector, and government, to manage landscapes holistically;
- **Social Capacity Building & Partnership Strategies:** initiatives like Sibandrek (Strategi Pengembangan Edukasi Rekreasi Kolaboratif) emphasize community involvement and collaborative governance, which align with landscape-based management principles;
- **Resort-Based Management (RBM):** this approach decentralizes PA management, improving coordination at the field level to enhance ecosystem resilience;
- **Collaborative Ecosystem Restoration (PAK EKO):** a model applied in Taman Nasional Bogani Nani Wartabone to restore degraded lands while engaging local communities.

The “100+ Innovations in Conservation Area Management” publication underscores the vital realization that PAs cannot exist in isolation from their surrounding landscapes. Nevertheless, in general these well documented LBM models have yet to be internalized or implemented equally in different PAs all over the country. Recently revised Strategic Plan of the Ministry of Forestry and Strategic Plan of Directorate General of Natural Resources and Ecosystem Conservation (KSDAE) underscore a shift towards LBM, emphasizing the importance of a comprehensive approach beyond individual protected areas.

In alignment with the revised Strategic Plans, a series of regulations has been enacted in Indonesia to strengthen biodiversity conservation and enhance the management of PAs. These measures reflect a comprehensive approach that acknowledges the interconnectedness of ecosystems and the need for integrated strategies. At the national level, the Ministry of Environment and Forestry has issued the Ministerial Instruction Number INS.1/MENLHK/SETJEN/KUM.1/6/2022 to combat the threats of trapping and illegal hunting of wild animals both inside and outside PAs. Complementing this, the Directorate General of KSDAE has introduced Standard Operating Procedure (SOP) Number SOP.1/KSDAE/SET.3/KSA.2/12/2022, outlining protective measures for

wildlife across different landscapes. In production forest areas, the Director General of Sustainable Forest Production (PHL) has established Guideline Number SE.7/PHL/PUPH/HK.1/10/2022, mandating permit holders to implement wildlife protection measures within their operational zones. Furthermore, Presidential Instruction No. 1/2023 on Mainstreaming Biodiversity Conservation in Sustainable Development integrates biodiversity into national strategic planning, fostering human well-being through circular economy principles and multi-stakeholder collaboration at the landscape level. At the provincial level, biodiversity and PAs are embedded in environmental planning through KLHS (Environmental Carrying Capacity) assessments, ensuring sustainability considerations in development initiatives. Addressing human-wildlife conflicts, provincial authorities, in accordance with Minister of Forestry Regulation No. 48/Menhut-II/2008, have established a Task Force and Coordinating Team dedicated to mitigating conflicts between humans and wild animals. Collectively, these regulatory efforts underscore Indonesia's commitment to a holistic and inclusive conservation approach, balancing ecological preservation with sustainable development objectives.

Additionally, Indonesia has attracted significant investments in LBM approaches, such as the World Bank's 'Sustainable Landscapes Management Program'[12]¹³ and the Global Green Growth Institute's initiatives[13]¹⁴. These projects aim to enhance coordination among stakeholders and demonstrate sustainable practices, like the Jambi Sustainable Landscape Management Project[14]¹⁵. Additionally, other projects such as GEF-7 CONSERVE and IN FLORES led by Ministry of Environment and Forestry, and NGOs like WCS and FFI, Forum Konservasi Leuser (FKL), Yayasan Ekosistem lestari (YEL), and Burung Indonesia have worked on LBM using various approaches.

Despite these significant efforts, the implementation of Landscape-Based Management (LBM) in PAs across Indonesia remains limited, primarily concentrated in localized initiatives that require further strengthening and scaling up. While several well-documented LBM models have been successfully piloted in certain PAs, these approaches have not yet been systematically internalized or equitably implemented nationwide. Challenges such as varying institutional capacities, uneven budget allocations, and differing levels of stakeholder engagement hinder the widespread adoption of LBM principles. Moreover, the integration of conservation efforts beyond PA boundaries remains inconsistent, often limited by fragmented land tenure policies and competing economic interests.

Barriers for effective development and implementation of LBM approaches for PAs

Despite some national progress to implement LBM concept in Indonesia there are a few barriers that impede the effective integration of LBM in the country's area-based conservation measures. The barriers are the following:

Barrier 1: Limited Institutional Capacity and Frameworks for LBM Implementation in Indonesia's Protected Areas.

Indonesia's PAs face significant challenges in implementing Landscape-Based Management (LBM) due to insufficient institutional capacity and the absence of standardized frameworks. The current management systems are predominantly site-specific, lacking integration into broader landscape approaches. This limitation is compounded by insufficient coordination among multi-sector stakeholders, hindering effective landscape management. For instance, the Indonesia Sustainable Landscape Management Program aims to improve integration and coordination across sectors, but the lack of on-the-ground institutional capacity remains a major constraint[15]¹⁶. Additionally, while tools like the Management Effectiveness Tracking Tool (METT) have been applied to assess PA management, the absence of standardized criteria and operational guidelines impedes consistent implementation of LBM across the nation's PAs[16]¹⁷. Furthermore, Indonesia does not yet have dedicated training centers focused on LBM for PA managers and

stakeholders, limiting capacity-building efforts and the widespread adoption of best practices in landscape-based conservation^{[17]¹⁸}. Addressing these institutional limitations is crucial for the effective adoption of LBM practices in Indonesia's conservation efforts.

Barrier 2: Limited Integration of LBM in Protected Area and Surrounding Landscape Management

Indonesia's current PA management frameworks do not have comprehensive integration of LBM approaches, such as the identification and preservation of High Conservation Value (HCV) areas, establishment of wildlife corridors, and implementation of climate resilience measures. This deficiency is evident in the limited incorporation of HCV areas within non-state forests, where the absence of a robust regulatory framework and inconsistencies in land use regulations pose significant challenges^{[18]¹⁹}. Moreover, participatory management mechanisms, including community-led conservation agreements and sustainable livelihood initiatives, remain underdeveloped. While Indonesia's social forestry program aims to empower local communities in forest management, its implementation has faced obstacles such as insufficient policy support and limited community engagement^{[19]²⁰}. Although some PAs have implemented separate elements of LBM—such as SMART patrols, community co-management models, and conservation partnerships—these efforts remain fragmented and lack an overarching, integrated LBM approach that can systematically guide PA and surrounding landscape management across the country. A more structured and unified LBM framework is necessary to ensure that conservation and sustainable use strategies are effectively scaled and institutionalized at the national level.

Barrier 3: Limited Knowledge Exchange and Scaling of Best LBM Practices Across Indonesia's PA Network

While Indonesia has implemented successful LBM models in certain PAs, the dissemination and replication of these best practices across the national PA network are limited. The absence of a dedicated national platform for consolidating and sharing LBM knowledge hinders effective capacity-building and cross-learning among PA managers and stakeholders. This gap results in isolated successes without broader application, impeding the scaling of effective LBM strategies nationwide. For instance, the Jambi Sustainable Landscape Management Project (J-SLMP) has demonstrated integrated approaches to sustainable landscape management in Jambi Province, but such models are not widely replicated in other regions^{[20]²¹}. Establishing a centralized knowledge-sharing mechanism is essential to facilitate the exchange of successful LBM practices and enhance conservation efforts across Indonesia's diverse PA network.

Failure to address the identified barriers to LBM in Indonesia's PAs will significantly increase the probability of negative future scenarios, particularly **Scenario 2: 'Extraction Boom, Conservation Bust'** and **Scenario 3: 'Climate Chaos and Ecological Collapse'**. Limited institutional capacity (Barrier 1) will continue to hinder the development of standardized LBM frameworks, leading to ineffective PA governance and enforcement, making PAs vulnerable to illegal logging, poaching, and unregulated development. Without adequate integration of LBM in PA and surrounding landscapes (Barrier 2), habitat fragmentation will intensify, reducing connectivity for key species such as the Sumatran tiger and Javan rhino, accelerating biodiversity loss, and increasing human-wildlife conflicts. Moreover, the insufficient knowledge exchange and scaling of best LBM practices (Barrier 3) will prevent successful conservation models from being replicated nationwide, resulting in isolated successes while broader conservation efforts stagnate. If these barriers persist, Indonesia's PAs will remain underfunded and insufficiently managed, contributing to ecosystem degradation, escalating land-use conflicts, and ultimately pushing the country towards an unsustainable path dominated by environmental collapse and biodiversity loss. Conversely, addressing these barriers would increase the probability of **Scenario 5: 'Biodiversity Revival and Resilient Communities'**, ensuring strong conservation outcomes, economic sustainability, and ecological resilience.

Key strategies to remove the Barriers for LBM integration in PAs

To effectively address the barriers to LBM in Indonesia's PAs and enhance biodiversity conservation, the following key strategies should be implemented:

- **Strengthening Institutional Capacity and Governance for LBM Implementation:** Establish a national framework for LBM as a multi-stakeholder and integrated approach to conservation with clear operational guidelines, criteria, and best practices approved by the Ministry of Forestry (MoF) to ensure systematic implementation across Indonesia's PA network. Strengthen collaboration between MoEF, local governments, private sector actors, and community stakeholders through landscape-based management committees at the national and regional levels. Develop and operationalize Landscape-Based Management Centers of Excellence (CoEs) at leading PAs to provide standardized training and capacity-building programs for PA managers and stakeholders. Expand the use of SMART patrol systems and improve METT monitoring to enhance compliance with conservation regulations and mitigate threats such as poaching and illegal land conversion;
- **Integrating LBM into PA and Surrounding Landscape Management:** Integrate HCV areas, wildlife corridors, and climate resilience measures into PA management plans, ensuring connectivity between PAs and surrounding landscapes. Implement community-led conservation agreements, Public-Private Partnerships (PPPs), and sustainable livelihood programs to engage Indigenous Peoples and Local Communities (IPLCs) in PA management. Develop landscape restoration programs, including agroforestry, reforestation, management for keystone species and habitat management, and ecosystem-based adaptation strategies, to improve ecological resilience. Support sustainable land use planning by resolving land tenure conflicts through community-based natural resource management (CBNRM) initiatives and conservation agreements;
- **Enhancing Knowledge Exchange and Scaling of Best LBM Practices Across Indonesia's PA Network:** Establish a centralized Knowledge Management Platform at the three CoEs to document, share, and scale best LBM practices nationwide. Provide training and mentorship programs for PA managers to replicate successful LBM approaches. Organize annual PA management forums, workshops, and exchange programs to enable knowledge sharing among PA authorities, local communities, conservation NGOs, and private sector stakeholders. Utilize GIS-based and AI-based monitoring systems, e-learning platforms, and data-driven decision-making tools to enhance accessibility to LBM information for policymakers and practitioners;
- **Securing Sustainable Financing for LBM Implementation:** Establish financial mechanisms to provide sustained funding for LBM initiatives. Incentivize businesses to support sustainable supply chains, eco-tourism ventures, and corporate social responsibility (CSR) initiatives that align with LBM objectives. Strengthen partnerships with GEF, World Bank, Green Climate Fund (GCF), and bilateral donors to support scaling-up of LBM models.

By implementing these strategic interventions, Indonesia can overcome the barriers to LBM adoption, improve PA management effectiveness, enhance biodiversity conservation, and build climate-resilient landscapes while ensuring sustainable benefits for local communities.

Key Stakeholders for Implementation of LBM Strategies

Successful implementation of LBM strategies in Indonesia requires multi-stakeholder collaboration between government institutions, PA authorities, Indigenous communities, private sector actors, NGOs, research institutions, and international donors. Each stakeholder plays a distinct yet interconnected role in advancing biodiversity conservation, climate resilience, and sustainable livelihoods in and around Indonesia's Protected Areas. By aligning these diverse actors under a coordinated LBM framework, Indonesia can effectively scale conservation efforts and ensure long-term ecological and socio-economic benefits. See details in the section B: Project Description.

[1] https://hlpf.un.org/sites/default/files/statements/2021-11/4488Nirvandar.pdf?utm_source

[2] https://indonesiaexpat.id/travel/ecotourism-in-indonesia-unlocking-sustainable-economic-growth/?utm_source

[3] Primary and secondary dryland, mangrove, and swamp forests

[4] <https://nfms.menlhk.go.id/statistic>

[5] https://phys.org/news/2018-11-indonesia-coral-reefs-bad-state.html?utm_source=chatgpt.com#google_vignette

- [6] https://www.iucnredlist.org/species/60344/152845178?utm_source=chatgpt.com
- [7] https://www.cambridge.org/core/journals/oryx/article/evaluating-the-effectiveness-of-protected-area-management-in-indonesia/B24771CCBFF4CA36E580C91915FB7242?utm_source=chatgpt.com
- [8] https://dicf.unepgrid.ch/indonesia/biodiversity?utm_source=chatgpt.com
- [9] Scientific and Technical Advisory Panel to the Global Environment Facility (2023). *Simple Future Narratives: Helping to Ensure the Durability of GEF Investments*. STAP Brief, June 2023. Available at: <https://stagef.org/resources/advisory-documents/simple-future-narratives-brief-and-primer>.
- [10] Probability of each scenario estimated by ChatGPT 4o model based on a qualitative assessment of key drivers influencing Indonesia's biodiversity, communities, and Protected Areas (PAs). The probabilities reflect relative likelihoods based on current trends, available data, and expert judgment rather than precise statistical models.
- [11] https://ksdae.menlhk.go.id/assets/publikasi/100%2B%20Inovasi%20KSDAE%20%281%29.pdf?utm_source=chatgpt.com
- [12] https://www.worldbank.org/en/programs/indonesia-sustainable-landscapes-management-program?utm_source=chatgpt.com
- [13] https://gggi.org/report/indonesia-sustainable-landscapes/?utm_source=chatgpt.com
- [14] https://www.biocarbonfund-isfl.org/programs/jambi-sustainable-landscape-management-project?utm_source=chatgpt.com
- [15] https://pubdocs.worldbank.org/en/202581623075963272/SLMP-Overview-April-2021.pdf?utm_source=chatgpt.com
- [16] https://www.cambridge.org/core/journals/oryx/article/evaluating-the-effectiveness-of-protected-area-management-in-indonesia/B24771CCBFF4CA36E580C91915FB7242?utm_source=chatgpt.com
- [17] <https://www.worldbank.org/en/programs/indonesia-sustainable-landscapes-management-program/practice>
- [18] https://eudl.eu/pdf/10.4108/eai.14-9-2020.2304492?utm_source=chatgpt.com
- [19] https://www.climateandforests-undp.org/news-and-stories/indonesias-social-forestry-programme-supports-livelihoods-and-climate-action?utm_source=chatgpt.com
- [20] https://www.worldbank.org/en/programs/indonesia-sustainable-landscapes-management-program/news-n-events?utm_source=chatgpt.com

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

Project Theory of Change

Based on the situation analysis and set of potential strategies provided in the Project Rationale section above, the following GEF project is being proposed to address the three Barriers for LBM integration in PAs in Indonesia (the project **Theory of Change** is depicted on the Fig. 1 and described below):

The **Project Objective** is: *To enhance biodiversity conservation in protected areas and surrounding landscapes in Indonesia by introducing and scaling up innovative **landscape-based management models**.*

Under an **innovative landscape-based management model** the project understands a holistic, adaptive, and multi-stakeholder approach to conserving biodiversity and sustaining ecosystem services across PAs and their broader landscapes. It emphasizes ecological connectivity, community empowerment, and knowledge-driven innovation, ensuring that conservation objectives and local development needs are integrated into a shared vision for sustainable land and sea use. The key elements of the landscape-based management model include:

- Maintaining or restoring ecological corridors, buffer zones, and critical habitats to support species movement, genetic flow, and long-term ecosystem resilience;
- Evidence-based conservation planning, incorporating tools such as spatial analysis (e.g., habitat suitability, corridor design) and adaptive management frameworks (e.g., METT or SMART-based assessments and tools);
- Involving Indigenous People and Local Communities (IPLC), marginalized groups in decision-making, benefit-sharing, and collaborative management;
- Ensuring gender equality and social inclusion are mainstreamed throughout planning, implementation, and monitoring;
- Strengthening local institutions and user groups, enabling community ownership of conservation processes and outcomes.
- Aligning local development objectives and private sector interests with long-term conservation goals to reduce landscape-level threats

The Project Objective is expected to be achieved through implementation of the **three** project Strategies (**Components**), designed to remove the **Barriers 1-3** and achieve the project **Outcomes** (systematic and transformative changes in LBM application across Indonesia's PAs). The strategies have been suggested based on the lessons learned from other GEF and non-GEF projects related LBM in Indonesia and other countries (see the section *Lessons Learned from Previous LBM Initiatives* below) to ensure their effectiveness. The suggested strategies (components) are based on the GEF8 Levers and will work in synergy with each other to establish functional LBM models in the project areas and replicate them in other PAs in Indonesia. Thus, the Components are the following:

- **Component 1.** Building institutional capacity and frameworks *for* Landscape-based Management via establishing PA Centers of Excellence. Component 1 focuses on strengthening institutional capacity and governance for Landscape-Based Management (LBM) by establishing PA Centers of Excellence in key national parks to serve as hubs for training, innovation, and best practice replication across Indonesia's protected area network.
- **Component 2.** Integration of LBM in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and surrounding landscapes. Component 2 focuses on developing and implementing LBM models in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and their surrounding landscapes by integrating nature-based solutions, climate resilience measures, equitable benefit-sharing, and participatory conservation mechanisms to enhance biodiversity protection and ecosystem connectivity;
- **Component 3.** Enhancing knowledge exchange and scaling up best LBM practices across Indonesia's PA Network. Component 3 focuses on scaling up best practices and lessons learned from Landscape-Based Management by establishing a Knowledge Management Platform, facilitating capacity-building programs, and integrating successful conservation models into the management plans of six additional PAs across Indonesia;

Thus, **Component 1. Building institutional capacity and frameworks for Landscape-based Management via establishing PA Centers of Excellence** is designed to remove **Barrier 1: Limited Institutional Capacity and Frameworks for LBM Implementation in Indonesia's Protected Areas** and achieve the **Outcome 1. Enhanced institutional capacity and frameworks for protected area management through Landscape-based Management Centers of Excellence at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks**. Outcome 1 is expected to be achieved through delivery of four project **Outputs** (direct project products and services):

- **Output 1.1.** Criteria and operational guidelines for establishing and operating Landscape-based Management and Centers of Excellence (CoEs) are developed and adopted by the Ministry of Forestry
- **Output 1.2.** Landscape-based Management Centers of Excellence (CoEs) are established and operationalized at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks to scale up LBM in Indonesia's PAs

- **Output 1.3.** Landscape-based management tools and training programs for the Centers of Excellence are developed, tested, and adopted at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks
- **Output 1.4.** An advanced, landscape-based protected area management effectiveness system is developed and adopted at the Centers of Excellence, enabling systematic assessment and continuous improvement of conservation outcomes in Indonesia's Protected Areas.

Achievement of the Outcome 1 is based on the following assumptions: (a) key institutions like the Ministry of Forestry will fully commit to adopting and integrating the landscape-based management and LBM CoE criteria and guidelines; (b) sufficient financial, technical, and human resources will be available to sustain the Centers of Excellence over long-term; (c) landscape-based management model, including its tools and training programs, will be scalable for replication in other PAs. Component 1 will leverage the **GEF Lever 1 – Governance and Policy** and aims to transform PA management by strengthening institutional frameworks, aligning operational guidelines with innovative landscape-based approaches, and establishing Centers of Excellence at key national parks as replicable models for sustainable conservation practices across Indonesia.

The proposed **Center of Excellence for Landscape-based Management** in Component 1 is a flagship PA that functions as a living laboratory and institutional hub for innovative, landscape-based biodiversity conservation. By leveraging its existing governance structures, biological assets, and community networks, the CoE demonstrates, refines, and disseminates best practices to improve management effectiveness both within its boundaries and across broader landscapes. The key functions of CoE are:

- Pilots and tests advanced landscape-based and participatory conservation and management tools directly on-site (e.g., SMART patrols, ecological monitoring methods, community co-management, integrated habitat management for PA and non-PA lands;
- Conducts applied research on species conservation, habitat restoration, and ecosystem dynamics in collaboration with universities, NGOs, and research institutions;
- Offers hands-on training programs for PA staff, local communities, and external stakeholders, using the PA's real-world experiences as practical case studies;
- Serves as a repository of field data, best practices, and lessons learned from day-to-day protected area management;
- Maintains digital platforms or portals for data sharing, enabling real-time access to monitoring results, management plans, and success stories among local, national, and international conservation networks.

Component 2. *Integration of LBM in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and surrounding landscapes* will be implemented in strong synergy with the Component 1 and is expected to remove the **Barrier 2: Limited Integration of LBM in Protected Area and Surrounding Landscape Management** and achieve the **Outcome 2. Established landscape-based management models integrating nature-based solutions, ecosystem based approach, climate resilience measures, and equitable benefit-sharing in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and their surrounding landscapes.** The Outcome 2 will be achieved through delivery of two Outputs:

- **Output 2.1.** Management Plans of the Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks are updated with landscape-based management frameworks integrating High Conservation Value (HCV) areas, wildlife corridors and climate-vulnerable ecosystems within and around the parks;
- **Output 2.2.** Participatory landscape-based management mechanisms, such as community-led conservation agreements, Public-Private Partnerships, SMART patrol system, and sustainable livelihood initiatives are established to protect HBV areas, wildlife corridors and climate-vulnerable ecosystems within and around the parks.

Achievement of the Outcome 2 relies on the following assumptions: (a) National and local authorities, including (MoF) and national park management authorities, actively endorse and integrate the landscape-based management models into formal planning and decision-making at the local level; (b) there is continuous commitment from IPLCs, private sector actors, and civil society

organizations to participate in co-management structures, conservation agreements, and sustainable livelihood programs; (c) adequate financial resources are secured for long-term implementation to sustain LBM activities beyond the project lifespan. Component 2 is based on the **GEF Lever 3 – Multi-Stakeholder Dialogs** and **GEF Lever 4 – Innovation and Learning**.

Component 3. *Enhancing knowledge exchange and scaling up best LBM practices across Indonesia's PA Network* will use inputs from Components 1 and 2, address the **Barrier 3: Limited Knowledge Exchange and Scaling of Best LBM Practices Across Indonesia's PA Network**, and achieve the **Outcome 3: Lessons and best practices of the Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks are replicated in six other National Parks**. Outcome 3 is expected to materialize via delivery of three **Outputs**:

- **Output 3.1.** Knowledge Management Platform is developed at three Landscape-based Management Centers of Excellence and made available to PA authorities, local communities, and stakeholders to learn and replicate best landscape-based conservation practices;
- **Output 3.2.** Officers of the Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai National Park, Bunaken National Park are trained and mentored at three Landscape-based Management Centers of Excellence to replicate successful landscape-based conservation practices;
- **Output 3.3.** Management Plans for Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai National Park, Bunaken National Park are updated to ensure integration of LBM models into the PA management

Achievement of the Outcome 3 has the following assumptions: (a) park authorities and local stakeholders in the six target PAs are willing and able to adopt and adapt the best practices learned from Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks; (b) stakeholders, including park authorities, local communities, and conservation practitioners, actively engage with the Knowledge Management platform and use the information for capacity building and decision-making; (c) trained officers of six target PAs receive institutional support to implement learned practices in their respective national parks reserves, and mechanisms are in place to monitor and evaluate the replication process. The Component 3 is based on the **GEF Lever 4 – Innovation and Learning**.

Monitoring and Evaluation: *Participatory and gender- responsive Monitoring and Evaluation* is designed to support Components 1-3 in effective delivery of the Outputs and achievement of the Outcomes 1-3.

The **achievement of the Project Objective**—enhancing biodiversity conservation in PAs and surrounding landscapes in Indonesia through an innovative landscape-based management model—is driven by the successful achievement of the four project Outcomes described above. Together, **Components 1-3** remove the key barriers to LBM integration—institutional limitations, lack of LBM integration, and limited knowledge exchange—resulting in systemic and transformative change in protected area management across Indonesia.

The GEF project is strategically designed to **increase the probability of the 'optimistic' Scenario 5—Biodiversity Revival and Resilient Communities**—by implementing innovative landscape-based management (LBM) models that integrate biodiversity conservation, sustainable resource use, and equitable benefit-sharing. At the same time, the project is designed to be resilient to negative scenarios by embedding adaptive management and risk mitigation strategies into its implementation framework. Under the Future Scenario 2 (*Extraction Boom, Conservation Bust*), the project strengthens governance structures and multi-stakeholder engagement to counter weak enforcement, ensuring that PA authorities, IPLCs, and local governments actively participate in conservation efforts. In Scenario 3 (*Climate Chaos and Ecological Collapse*), the integration of climate resilience measures, such as habitat restoration, mangrove protection, and sustainable land-use planning, safeguards ecosystems against climate shocks. If Scenario 4 (*Community-Led Conservation Renaissance*) materializes, the project amplifies bottom-up conservation efforts by enhancing IPLC engagement, co-management frameworks, and alternative financing, ensuring that successful local initiatives can be scaled up and institutionalized. These built-in resilience measures ensure that, even under less favorable future conditions, the

project strengthens Indonesia's ability to protect biodiversity, support sustainable livelihoods, and adapt to environmental and socio-economic changes.

Key lessons applied for this project

This project integrates several critical lessons learned from innovative conservation practices across Indonesian PAs, particularly focusing on landscape-based management within and beyond PA boundaries. These insights emphasize integrated conservation strategies, participatory governance, and sustainable economic models^{[1]²²}:

- **Multi-Stakeholder Collaboration Enhances PA Management:** Engaging local communities, Indigenous Peoples, private sector, and local governments leads to more effective conservation outcomes. Partnership models, such as Kemitraan Konservasi (Conservation Partnerships), facilitate community involvement in ecosystem restoration and sustainable livelihoods. Cross-sector coordination between conservation authorities, economic sectors (e.g., agriculture, fisheries, tourism), and traditional leaders fosters long-term biodiversity protection beyond PA boundaries;
- **Integrated Conservation-Development Models are Key:** Landscape-based management approaches, such as Resort-Based Management (RBM), emphasize integrated governance within broader ecological landscapes. Several successful initiatives blend biodiversity conservation with community-based sustainable enterprises, such as eco-tourism, sustainable fisheries, plantations and agroforestry. Nature-based solutions (NbS) are crucial for restoring degraded ecosystems, such as mangroves, forests, and coral reefs, while also providing sustainable economic benefits;
- **Adaptive Management Strengthens PA Resilience:** Data-driven decision-making through technologies like SMART, GIS, drone monitoring, and community-based biodiversity tracking improves conservation efficiency. Adaptive management practices allow real-time responses to climate threats, illegal activities, and land-use changes. Pilot models of conservation, such as restoration of degraded buffer zones, showcase replicable successes for scaling up interventions;
- **Financial Sustainability is Essential:** Innovative funding models, such as biodiversity credits, carbon financing, and ecosystem service payments, provide long-term financial stability for PAs. Community-managed conservation initiatives can generate direct economic benefits from sustainable natural resource use, reducing dependency on government or donor-driven conservation.
- **Strengthening Local Institutions is Key to Success:** Community-based conservation governance (e.g., ICCAs – Indigenous and Community Conserved Areas) enhances social and ecological resilience. Capacity-building programs empower local stakeholders to co-manage resources effectively. Strong law enforcement and local regulations are critical to reducing illegal activities, such as logging, poaching, and unregulated tourism.
- **Ecosystem Connectivity & Restoration Improve PA Effectiveness:** Corridor restoration projects reconnect fragmented habitats, ensuring species mobility and genetic diversity. Integrating PAs with surrounding landscapes (e.g., buffer zones, watersheds, and migratory routes) increases long-term conservation success. Traditional knowledge and Indigenous management practices play a vital role in landscape restoration and biodiversity protection.

Additionally, establishing **Landscape-Based Management Centers of Excellence (CoEs)** in Indonesia can be informed by successful models from other countries that integrate conservation with sustainable development and community engagement. One notable example is the Greater Kruger National Park (GKNP) in South Africa, which exemplifies a landscape approach to conservation. The GKNP is a network of protected areas encompassing the Kruger National Park, several provincial reserves, private nature reserves, and adjacent rural communities. This collaborative model balances conservation efforts with sustainable land use, involving both public and private sectors in managing a contiguous conservation landscape. Private sector partners contribute through eco-tourism and sustainable resource management, creating value chains that benefit local communities and support conservation objectives^{[2]²³}.

Suggested project areas (Fig. 2)

The project **Components 1 and 2** will be implemented in **three National Parks**: Gunung Leuser (Sumatra), Sebangau (Kalimantan), and Bogani Nani Wartabone (Sulawesi) with a total area of 1,654,419 ha and 856,185 ha of adjacent area outside the NPs. The three NPs are proposed as **Landscape-Based Management Centers of Excellence** based on the following considerations: (1) their primary designated function of biodiversity conservation; (2) demonstrated proficiency in systematic data management and utilization of data for informed decision-making on long-term management plans; (3) consistent contribution of wildlife data to the central government; (4) PA Management Effectiveness Tracking Tool (METT) score exceeding 72 with a trend of improvements; (5) a track record of reducing deforestation and maintaining largely intact original forest cover; (6) stable key biodiversity indicators over time; and (7) implementation of LBM innovations, including the integration of science and technology into management activities and collaboration with external stakeholders, including IPLC. Brief description of the NPs is provided below:

Gunung Leuser National Park (830,269 ha; plus 489,799 ha of adjacent area outside the NP). Designated as a national park in 1980, is a globally significant biodiversity hotspot in Indonesia, spanning Aceh and North Sumatra. As part of the Tropical Rainforest Heritage of Sumatra (TRHS) World Heritage Site, Biosphere Reserve, and ASEAN Heritage Parks, it harbors over 10,000 species, including critically endangered Sumatran orangutans, Sumatran tigers, Sumatran rhinos, Sumatran elephants, and sun bears. The park plays a crucial role in ecosystem services such as watershed protection and carbon sequestration. Despite its strong METT score of 79, NP faces threats from poaching, habitat loss, and forest fires, exacerbated by agricultural expansion and climate change (e.g., El Niño-related wildfires). Conservation efforts include SMART patrols, wildlife monitoring, habitat restoration, and law enforcement, supported by collaboration between the Indonesian government, NGOs, universities, and local communities. The park also embraces innovation, using drones for wildlife monitoring and promoting sustainable livelihoods to balance conservation with local development. Ongoing efforts under the Desired State of Conservation for Removal (DSOCR) 2023 framework aim to enhance species recovery, illegal activity control, and boundary protection, ensuring the long-term sustainability of this critical ecosystem.

Sebangau National Park (542,141 ha; plus 212,401 ha of adjacent area outside the NP). Sebangau National Park, located in Central Kalimantan, Indonesia, is a vital peat swamp forest ecosystem that plays a critical role in biodiversity conservation and global climate regulation. Established in 2004, the park protects a vast peat dome that stores immense carbon reserves while providing habitat for endangered species, including orangutans, gibbons, sun bears, and clouded leopards. This acidic, nutrient-poor ecosystem supports specialized flora and fauna, such as carnivorous plants and blackwater fish species, adapted to its unique conditions. However, Sebangau faces severe threats from illegal logging, mining, forest fires, and encroachment driven by deforestation and land conversion. These challenges endanger the park's biodiversity and its critical role in local climate and hydrological regulation. Conservation efforts are essential to protect its fragile ecosystem, mitigate habitat destruction, and maintain its function as a natural carbon sink in the fight against climate change.

Bogani Nani Wartabone National Park (282,009 ha; plus 153,985 ha of adjacent area outside the NP). Bogani Nani Wartabone National Park (TNBNW), the largest land conservation area in Sulawesi, spans across Gorontalo and North Sulawesi Provinces and lies within the Wallacea bioregion, a critical transition zone between Asian and Australian fauna. This unique position makes it an important site for evolutionary and biogeographical studies, supporting diverse ecosystems such as moss forests, lowland rainforests, and secondary forests. The park harbors over 500 plant species, including Ficus and orchids, and is home to endemic wildlife, such as the Highland and Lowland Anoa, Babirusa, Tarsier, Sulawesi black monkey, and 200 bird species (45 of which are endemic). However, illegal gold mining, poaching, forest encroachment, and limited conservation awareness among local communities threaten its biodiversity. Park authorities are addressing these challenges through SMART patrols, strengthened law enforcement, sustainable livelihood programs, and community education initiatives to enhance local support for conservation. These ongoing efforts are crucial to ensuring the long-term protection of TNBNW's unique ecosystems and wildlife.

Component 3 will target **six additional PAs** in Indonesia, namely Kerinci Seblat National Park and Bukit Barisan Selatan National Park (Sumatra), Lamandau Wildlife Reserve and Nyiut Penrissen Nature Reserve (Kalimantan), Rawa Aopa Watumohai National Park and Bunaken National Park (Sulawesi) with total terrestrial area of 1,978,677 ha and marine area of 73,983 ha (Bunaken NP). These PAs are proposed for the project based on the following considerations: (1) their primary designation is for biodiversity conservation; (2) they show a trajectory of improvement in METT scores, although there is still significant potential for further enhancement; and

(3) the six selected beneficiary protected areas are strategically located and accessible to each of the three PAs designated as LBM Centers of Excellence. Brief description of each PA is provided below:

Kerinci Seblat National Park (1,389,510 ha). The National Park is the largest national park in Sumatra, stretching across four provinces (West Sumatra, Jambi, Bengkulu, and South Sumatra). It is part of the Tropical Rainforest Heritage of Sumatra (TRHS) UNESCO World Heritage Site and is home to diverse ecosystems, including montane forests, wetlands, and lowland rainforests, supporting endangered species such as the Sumatran tiger, Sumatran rhinoceros, and Malayan tapir. The park plays a crucial role in watershed protection, carbon sequestration, and biodiversity conservation, but faces threats from illegal logging, poaching, and encroachment, prompting conservation efforts through SMART patrols, community engagement, and habitat restoration initiatives.

Bukit Barisan Selatan National Park (330,852 ha). The Park is part of the Tropical Rainforest Heritage of Sumatra (TRHS) UNESCO World Heritage Site. The park is a critical habitat for endangered species, including the Sumatran tiger, Sumatran elephant, and Sumatran rhinoceros, while also protecting diverse ecosystems ranging from coastal forests to montane rainforests. Despite its ecological importance, illegal logging, poaching, and agricultural encroachment pose significant threats, leading to conservation efforts such as SMART patrols, community-based forest management, and wildlife protection programs.

Lamandau Wildlife Reserve (61,425 ha). The Reserve protects lowland peat swamp and tropical forests and serves as a crucial habitat for endangered Bornean orangutans (*Pongo pygmaeus*). The reserve functions as a rehabilitation and release site for rescued and rehabilitated orangutans while also supporting other key wildlife, including proboscis monkeys, sun bears, and hornbills. Conservation efforts focus on anti-poaching patrols, habitat restoration, and community engagement, but threats such as illegal logging, land conversion, and forest fires remain significant challenges.

Nyiut Penrisen Nature Reserve (91,696 ha). The Reserve is a biodiversity-rich protected area that forms part of the cross-border conservation landscape between Indonesia and Malaysia. The reserve is home to diverse ecosystems, including tropical rainforests, montane forests, and riverine habitats, supporting endangered species such as Bornean orangutans, hornbills, clouded leopards, and sun bears. While the reserve plays a crucial role in watershed protection and transboundary conservation, it faces threats from illegal logging, encroachment, and habitat degradation, necessitating stronger enforcement, ecological monitoring, and sustainable community-based conservation initiatives.

Rawa Aopa Watumohai National Park (105,194 ha). The Park protects a diverse range of ecosystems, including peat swamps, savannas, lowland rainforests, and mangrove forests. The park is a key habitat for endangered species, such as the Anoa (*Bubalus spp.*), Sulawesi hornbill, and Maleo bird, while also playing a crucial role in carbon sequestration and hydrological regulation. However, illegal logging, land conversion, and forest fires threaten its biodiversity, prompting conservation efforts through patrols, habitat restoration, and community-based sustainable resource management.

Bunaken National Park (73,983 ha). The Park is renowned for its rich marine biodiversity, crystal-clear waters, and vibrant coral reef ecosystems. The park is home to over 390 species of coral, diverse marine life including sea turtles, reef sharks, and over 90 species of fish, making it a world-class destination for diving and marine conservation. While it plays a vital role in marine biodiversity protection and sustainable tourism, threats such as coral bleaching, overfishing, and pollution require ongoing marine patrols, sustainable fisheries management, and ecotourism-based conservation initiatives.

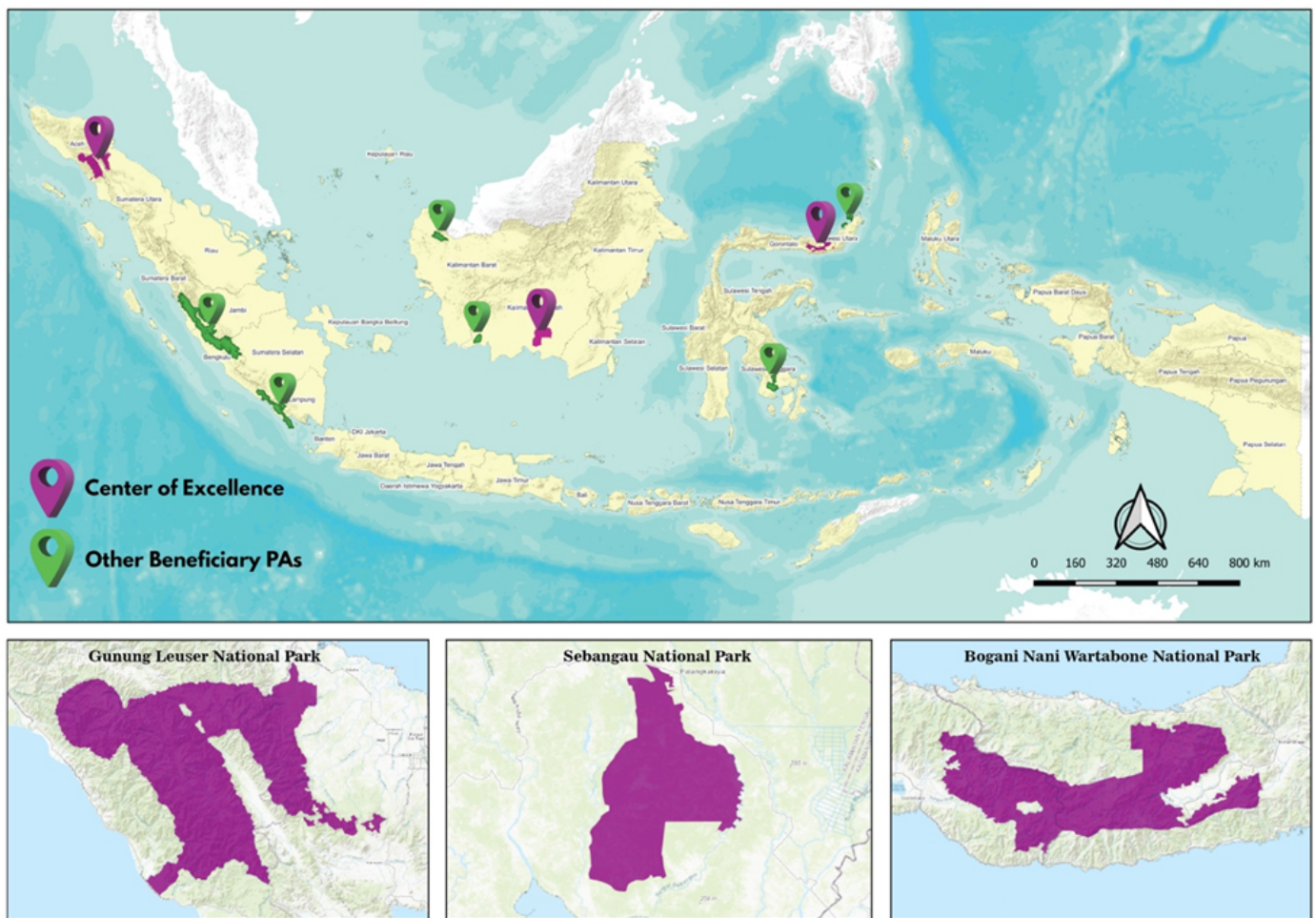


Figure 2. Project areas

Incremental Cost Reasoning

Business-as-Usual Scenario: Without the GEF intervention, current shortcomings in Indonesia’s PA management would persist. Without incremental GEF support, the institutional capacity to integrate LBM remains insufficient, and ongoing efforts—such as conventional PA management and sporadic community-based initiatives—would continue to yield suboptimal gains in conservation. In this scenario, the absence of enhanced LBM governance frameworks, standardized LBM tools and models, and coordinated capacity-building would likely result in: (a) continued biodiversity loss and habitat fragmentation due to insufficient enforcement and outdated management practices; (b) limited adaptation to climate change impacts in sensitive ecosystems and communities; and (c) minimal improvement in the effectiveness of PA management despite existing national efforts.

Incremental GEF Contribution: The GEF project is designed to deliver measurable global environmental benefits (GEBs) by transforming PA management across key Indonesian landscapes. While the project leverages substantial co-financing commitments from national sources (e.g., the Ministry of Forestry’s investment) and UNDP, these funds alone are insufficient to meet the full incremental costs required to achieve the global environmental benefits, because they provide parallel funding that addresses baseline PA management and routine operational needs, but not a transformative and innovative shift in PA management. By establishing LBM Centers of Excellence and integrating participatory, adaptive management frameworks for LBM the project contributes directly to improved biodiversity conservation and GEBs in PAs and surrounding landscapes. The project aligns with GEF Biodiversity Focal Area strategies by addressing long-term biodiversity conservation, environmental sustainability, and resilience in Indonesia’s PAs and around them. The strategic fit is reinforced by linking local conservation actions to broader global benefits—such as enhanced ecosystem connectivity, climate change adaptation, and sustainable livelihoods. Thus, the additional funding provided by GEF is essential to bridge the gap between the current “business-as-usual” scenario and the envisioned transformative

outcomes. GEF funds will cover the incremental costs required to: (a) develop and implement standardized LBM criteria and operational guidelines across the selected national parks; (b) establish and operationalize the LBM Centers of Excellence that will pilot innovative conservation and capacity-building approaches for PAs; (c) develop and integrate advanced LBM models into three PA and surrounding landscape management; and (d) share the best LBM practices among other six PAs in Indonesia. In this context, the role of the GEF is not simply to finance routine activities but to catalyze a paradigm shift in PA management—where the incremental investment leads to disproportionate improvements in global environmental outcomes. The GEF incremental input is expected to lead to the GEBS described in the section below.

Expected Global Environmental Benefits of the project

The project will lead to the following **Global Environmental Benefits (GEBS)** as the result, demonstrating high incremental value of this initiative:

- **Improved Management of Terrestrial Protected Areas** (GEF Core Indicator 1.2): 3,633,096 ha via integration of LBM practices in the management of eight PAs: Gunung Leuser NP, Sebangau NP, Bogani Nani Wartabone NP, Kerinci Seblat NP, Bukit Barisan Selatan NP, Lamandau WR, Nyiut Penrissen NR, and Rawa Aopa Watumohai NP. The expected management improvement is 20% increase in average METT score for Gunung Leuser, Sebangau, and Bogani Nani Wartabone NPs on the total area of 1,654,419 ha (Components 1 and 2) and 10% increase in average METT score for Kerinci Seblat NP, Bukit Barisan Selatan NP, Lamandau WR, Nyiut Penrissen NR, and Rawa Aopa Watumohai NP on the total area of 1,978,677 ha (Component 3 and Government co-financing);
- **Improved Management of Marine Protected Areas** (GEF Core Indicator 2.2): 73,983 ha via integration of LBM practices in the management of Bunaken NP with expected management improvement of 10% increase in METT score (Component 3 and Government co-financing);
- **Improved Management of Landscapes for Biodiversity and Sustainable Production outside PAs** (GEF Core Indicator 4.1): 856,185 ha adjacent to Gunung Leuser NP, Sebangau NP, and Bogani Nani Wartabone NP through establishment of participatory biodiversity management with IPLCs, local government, and private sector with focus on HCV areas, wildlife corridors, and ecosystems of high climate adaptation value;
- **Improving populations of the globally endangered species:** stabilizing and increasing populations of the following species in the Gunung Leuser NP, Sebangau NP, and Bogani Nani Wartabone NP: Sumatran Tiger (*Panthera tigris sumatrae*, CR), Sumatran Rhinoceros (*Dicerorhinus sumatrensis*, CR), Sumatran Elephant (*Elephas maximus sumatranus*, CR), Bornean Orangutan (*Pongo pygmaeus*, CR), and Highland Anoa (*Bubalus quarlesi*, EN) (Components 1 and 2);
- **Total number of direct project beneficiaries** (GEF Core Indicator 11): ~2,000 local people and NP staff, including 50% females, who will be directly involved in the project activities as well as members of their families benefiting from integration of LBM in Gunung Leuser NP, Sebangau NP, and Bogani Nani Wartabone NP (Components 1 and 2).

Expected Co-Benefits of the project

Based on the *STAP Information Brief on Refining the Tracking of Co-Benefits in Future GEF Investments*^{[3]²⁴}, the co-benefits of this project in Indonesia can be classified into **prerequisite co-benefits** (those essential for achieving the project's global environmental benefits) and **incidental co-benefits** (additional benefits that enhance the value of GEF investments but are not required for achieving the project's core environmental objectives). Below is a structured assessment of the project's co-benefits:

Prerequisite Co-Benefits:

Socioeconomic Resilience and Livelihood Improvement: At least 2,000 local community members (50% women) will directly benefit from landscape-based conservation efforts, fostering economic resilience and reducing incentives for illegal activities such as poaching or deforestation. Sustainable nature-based enterprises (e.g., eco-tourism, agroforestry, and sustainable fisheries) will provide alternative income sources for local communities, ensuring long-term economic benefits that align with conservation goals.

Strengthened Governance and Institutional Capacity for Protected Area (PA) Management: Establishment of Landscape-Based Management Centers of Excellence (CoEs) in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks will enhance governance and capacity-building for PA managers across Indonesia. Participatory landscape-based management mechanisms, such as community-led conservation agreements and Public-Private Partnerships (PPPs), will improve biodiversity protection by increasing local stakeholder engagement and co-management of natural resources. Institutional frameworks and operational guidelines for landscape-based PA management will provide a systematic and scalable approach for conservation across Indonesia's PA network;

Strengthened Climate Resilience and Adaptation: The project integrates climate resilience measures, such as protection and restoration of wildlife corridors and climate-vulnerable ecosystems within and around national parks; peatland restoration in Sebangau National Park, which serves as a critical carbon sink, reducing greenhouse gas emissions and mitigating climate change effects; and mangrove and coastal habitat conservation in Bunaken NP, supporting natural coastal defense systems against storm surges and sea-level rise;

Enhanced Law Enforcement and Protected Area Security: The SMART patrol system and community-based monitoring programs will strengthen biodiversity law enforcement, reducing illegal activities such as poaching, logging, and land encroachment. Strengthening cross-sector collaboration between PA authorities, law enforcement agencies, and community stakeholders will improve PA governance and monitoring effectiveness.

Incidental Co-Benefits

Improved Public Health and Well-being: By decreasing deforestation and habitat destruction, the project lowers human-wildlife interactions that can lead to direct injury and death, and the spread of zoonotic diseases. Reforestation and reduced land degradation will enhance local air quality (less smoke from forest fires) and water security through better watershed management.

Knowledge Generation and Scientific Research: Establishment of a Knowledge Management Platform for Landscape-Based PA Management will improve data-sharing, learning exchanges, and knowledge dissemination across Indonesia's PA network. Training programs for PA staff and IPLCs will increase knowledge on biodiversity monitoring, conservation techniques, and climate adaptation strategies.

Strengthened Gender Equality and Social Inclusion: Women's participation in eco-tourism, agroforestry, and conservation initiatives will enhance economic empowerment and decision-making roles in PA management. The project will ensure gender-responsive conservation policies, providing equal access to training, employment, and benefit-sharing for women, youth, and marginalized groups.

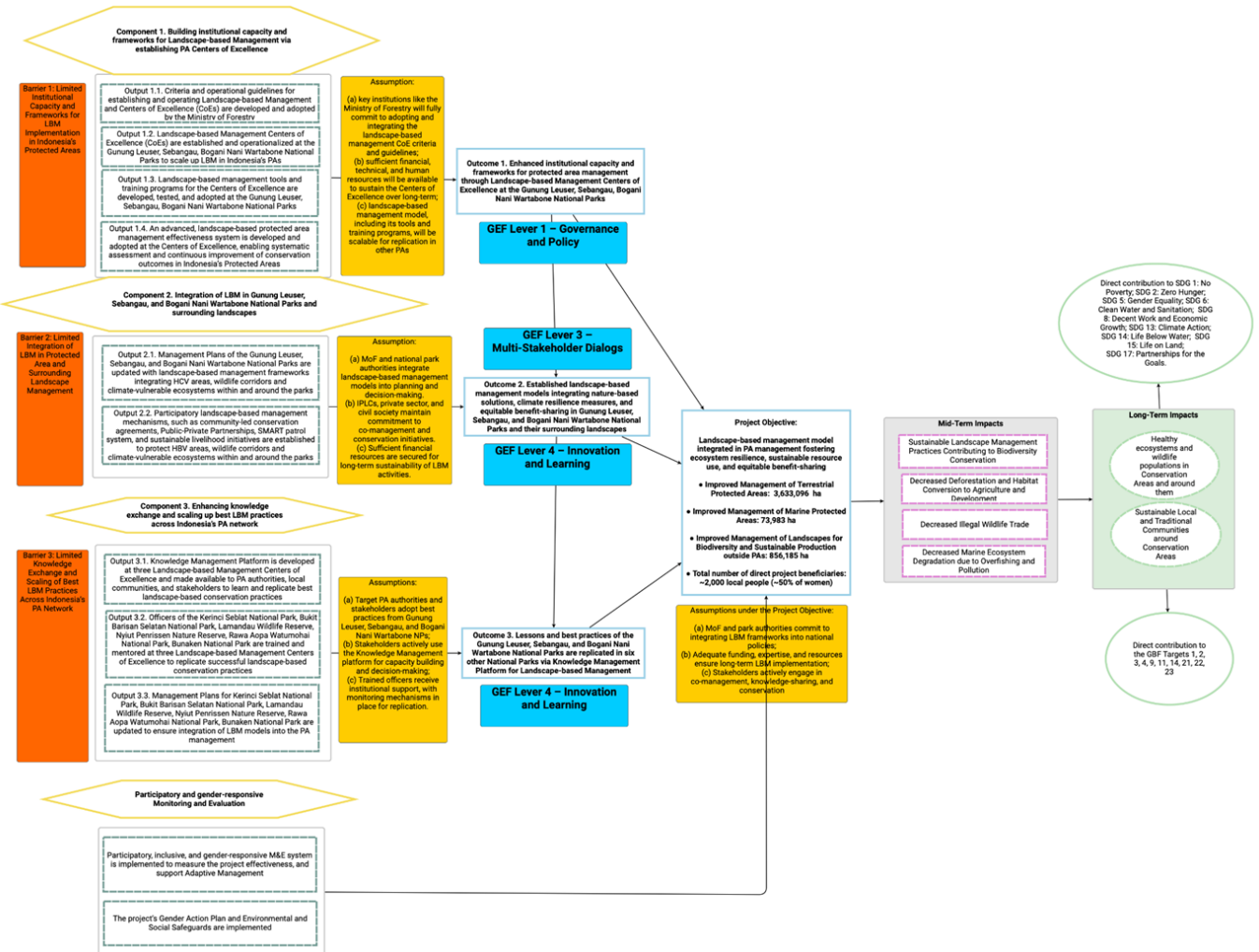


Figure 1. Theory of Change of the Project
Project Outputs (direct project products and services)

Brief description of the project Outputs is provided below:

Component 1. Building institutional capacity and frameworks for Landscape-based Management via establishing PA Centers of Excellence

Outcome 1. Enhanced institutional capacity and frameworks for protected area management through Landscape-based Management Centers of Excellence at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks

Output 1.1. Criteria and operational guidelines for establishing and operating Landscape-based Management and Centers of Excellence (CoEs) are developed and adopted by the Ministry of Forestry

The development and adoption of criteria and operational guidelines for establishing and operating Landscape-based Management (LBM) in PAs and relevant LBM Centers of Excellence (CoEs) on the base of leading PAs aim to enhance sustainable landscape management across the nation's PAs. The criteria developed under the Output will clarify the specific requirements for Protected Areas (PAs) to implement LBM and establish LBM Centers of Excellence (CoEs) in Indonesia. These criteria will ensure that only well-managed, high-performing PAs with strong biodiversity conservation outcomes, institutional capacity, and multi-stakeholder engagement and developed LBM conservation models can qualify as CoEs. Additionally, the guidelines will provide clear procedures for LBM in PAs and CoE establishment and management, outlining the steps for designation, operationalization, and long-term

sustainability of these LBM models and CoEs. They will detail roles and responsibilities of PA authorities, mechanisms for multi-stakeholder collaboration, and protocols for adaptive management, ensuring that CoEs function effectively as hubs for landscape-based conservation and capacity building. Gender mainstreaming will be integrated into these criteria and guidelines to ensure equitable participation and benefits for women and men in landscape-based conservation initiatives. The framework, adopted by the Ministry of Forestry (MoF), will set clear eligibility conditions, operational standards, and best practices to guide the establishment and functioning of effective LBM models at PAs and LBM CoEs in Indonesia.

Output 1.2. Landscape-based Management Centers of Excellence (CoEs) are established and operationalized at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks to scale up LBM in Indonesia's PAs

Under the Output Landscape-Based Management Centers of Excellence (CoEs) will be established (via MoF executive decrees) and operationalized in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks, transforming these PAs into hubs for innovation, training, and best practices in landscape-based conservation. The CoEs will serve as national models for landscape-based PA management, incorporating cutting-edge conservation techniques, adaptive management strategies, and multi-stakeholder collaboration to strengthen biodiversity protection and ecosystem resilience. The project will provide the CoEs with the necessary infrastructure and equipment, including training facilities, field research stations, biodiversity monitoring tools, and digital platforms to enhance conservation effectiveness. Each CoE will be equipped with advanced conservation tools, such as SMART, GIS-based habitat monitoring, and real-time biodiversity tracking systems, ensuring effective law enforcement, ecological monitoring, and sustainable resource management. Beyond their role as training centers, the CoEs will also function as field laboratories for the development and testing of landscape-based management (LBM) practices for PAs. These centers will serve as experimental grounds where new conservation approaches, habitat restoration techniques, and sustainable land-use strategies can be piloted, refined, and scaled up. The CoEs will facilitate research collaborations with universities, conservation NGOs, and technology partners, enabling the application of science-based decision-making in PA management. The CoEs will be supported by MoF through the limited government budget. Also, each CoEs will have a **Financial Sustainability Strategy** with financial mechanisms to ensure its sustainable functioning in the mid-term and long-term perspective (financial mechanisms for PA funding will be developed by the ECOTOURISM project). Gender considerations will be mainstreamed throughout CoE establishment process and operations, ensuring inclusive participation, capacity-building opportunities, and equitable access to resources for both women and men.

Output 1.3. Landscape-based management tools and training programs for the Centers of Excellence are developed, tested, and adopted at the Gunung Leuser, Sebangau, Bogani Nani Wartabone National Parks

To ensure the effectiveness of the Landscape-Based Management CoEs, the project will develop, test, and adopt a suite of landscape-based management (LBM) tools and training programs. These tools and programs will support protected area (PA) managers, conservation practitioners, local communities, and policymakers in implementing best practices in landscape-scale conservation, ecosystem restoration, and climate resilience. The CoEs will integrate innovative landscape-management tools successfully applied in Indonesia and beyond, including Participatory Management Strategies, Social Capacity Building & Partnership Strategies, Resort-Based Management (RBM), Collaborative Ecosystem Restoration (PAK EKO), Spatial Analysis and Spatial Planning Tools (such as GIS, SMART, participatory mapping tools to integrate IPLCs in PA management), Ecosystem and Biodiversity Monitoring Systems (analysis of satellite imagery, drone surveillance, AI-assisted camera trap monitoring, etc.), Adaptive Management and Decision-Support Tools (Results-Based Management, data-driven dashboards, risk assessment and management techniques). The project will establish structured training curricula to equip PA managers, local rangers, IPLCs, and conservation professionals with the skills and knowledge needed to implement landscape-based management effectively. Training programs will be developed and tested in the three CoEs before being institutionalized for nationwide replication. Additionally, each CoE will have a dedicated team of instructors composed of experienced PA managers, conservation scientists, local experts, and NGO representatives who will deliver structured training programs tailored to different target groups, including government officials, rangers, IPLCs, and private sector stakeholders. Gender equality and women's empowerment will be integrated into the development and delivery of training curricula and tools, ensuring equitable participation and capacity-building opportunities for women and men.

Output 1.4. An advanced, landscape-based protected area management effectiveness system is developed and adopted at the Centers of Excellence, enabling systematic assessment and continuous improvement of conservation outcomes in Indonesia's Protected Areas.

Indonesia currently assesses PA management effectiveness using the METT framework, which evaluates key management aspects, including governance, biodiversity conservation outcomes, law enforcement, and community engagement. However, METT in Indonesia has primarily focused on site-level assessments, with limited integration of landscape-scale management and ecological connectivity considerations. Based on the Landscape-Based Management CoEs in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks, the project will develop and adopt an advanced, landscape-based Protected Area (PA) Management Effectiveness (PAME) system. This system will enhance existing assessment frameworks used in Indonesia, integrating landscape-scale conservation principles, real-time biodiversity monitoring, and adaptive management approaches. It will be based on the following set of indicators: Landscape Connectivity Metrics, Socioeconomic and Livelihood Indicators, Real-Time Biodiversity and Ecological Monitoring Parameters, and Adaptive Management and Decision-Making Criteria. The landscape-based protected area management effectiveness system will be tested at three CoEs and endorsed by MoF for nation-wide application. The project will establish a National PA Performance Database at MoF consolidating assessment results for all national PAs. Gender-sensitive indicators will be included in the system to monitor equitable participation and benefits distribution, ensuring that gender considerations are systematically addressed in PA management effectiveness evaluations.

Component 2. Integration of LBM in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and surrounding landscapes

Outcome 2. Established landscape-based management models integrating nature-based solutions, ecosystem-based approach, climate resilience measures, and equitable benefit-sharing in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks and their surrounding landscapes

Output 2.1. Management Plans of the Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks are updated with landscape-based management frameworks integrating High Conservation Value (HCV) areas, wildlife corridors and climate-vulnerable ecosystems within and around the parks

Under the Output, the Management Plans of three National Parks will be updated to incorporate LBM frameworks, ensuring a more holistic and integrated approach to conservation. The revised management plans will go beyond conventional site-level PA management by integrating High Conservation Value (HCV) areas, wildlife corridors, and climate-vulnerable ecosystems, both within and around the national parks. This will enhance ecological connectivity, safeguard critical habitats, and ensure that conservation efforts align with broader landscape-scale sustainability goals. The LBM frameworks will be developed in close collaboration with PA authorities, IPLCs, conservation organizations, and scientific experts, ensuring that the plans reflect scientific best practices and local knowledge. Key updates will include the identification and mapping of critical biodiversity areas, implementation of adaptive management strategies, and integration of ecosystem-based climate resilience measures to address emerging threats such as habitat fragmentation, poaching, and climate change impacts. The new management plans will also promote multi-stakeholder collaboration and sustainable resource management, fostering co-management models where local communities play an active role in conservation efforts. Women will be actively involved in the delivery of this Output through participation in planning workshops, stakeholder consultations, and decision-making processes, ensuring their perspectives and needs are effectively represented. Gender mainstreaming will be integrated into the management plan revisions, ensuring equitable participation of women and men and addressing gender-specific impacts of conservation actions. Importantly, the updated MPs will include a **Financial Sustainability Plan** (in synergy with Output 1.2) to ensure the long-term implementation of landscape-based management (LBM) approaches. This plan will outline strategies to secure diversified and sustainable funding sources, including conservation finance mechanisms such as biodiversity credits, carbon markets, and eco-tourism revenue-sharing models. These updated MPs will provide Gunung Leuser, Sebangau, and Bogani Nani Wartabone with a planning framework for the development of effective landscape-based management models under Output 2.2.

Output 2.2. Participatory landscape-based management mechanisms, such as community-led conservation agreements, Public-Private Partnerships, SMART patrol system, and sustainable livelihood initiatives are established to protect HBV areas, wildlife corridors and climate-vulnerable ecosystems within and around the parks

Under this Output, participatory landscape-based management mechanisms will be established to enhance the protection and sustainable management of High Biodiversity Value (HBV) areas, wildlife corridors, and climate-vulnerable ecosystems within and around Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks. These mechanisms will integrate community-led conservation agreements, Public-Private Partnerships (PPPs), ecosystem restoration programs, the SMART patrol system, and sustainable livelihood initiatives, ensuring that conservation efforts are inclusive, effective, and economically viable for local communities. By actively engaging IPLCs in conservation planning and management, the project will strengthen local stewardship, enhance ecological connectivity, and reduce pressures on natural resources. Community-led conservation agreements will define roles, responsibilities, and benefit-sharing arrangements between PA authorities and IPLCs, ensuring that local communities have a stake in the protection and restoration of critical habitats.

To further strengthen conservation enforcement, the project will expand and enhance SMART patrol systems, which will be implemented in partnership with local rangers, community-based monitoring groups, and PA enforcement teams. This will improve real-time tracking of illegal activities, wildlife movements, and habitat conditions, allowing for adaptive management responses. Additionally, ecosystem restoration initiatives will be launched to rehabilitate degraded forest areas, peatlands, and riparian zones, ensuring long-term ecosystem resilience and climate adaptation. These restoration efforts will include native tree planting, peatland hydrology restoration, and agroforestry-based reforestation, generating carbon sequestration benefits while supporting local livelihoods. Public-Private Partnerships (PPPs) will also be promoted to facilitate investments in eco-tourism, sustainable agriculture, and biodiversity-friendly enterprises, creating economic incentives for conservation. Gender mainstreaming will ensure equitable involvement and benefit distribution for women, enabling their active participation in community-led conservation agreements, livelihood activities, and decision-making processes. By integrating these participatory management approaches, the project will establish a scalable model for landscape-based conservation, ensuring that biodiversity protection, ecosystem restoration, and community well-being are mutually reinforcing in and around Indonesia's protected areas.

Component 3. Enhancing knowledge exchange and scaling up best LBM practices across Indonesia's PA network

Outcome 3. Lessons and best practices of the Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks are replicated in six other National Parks

Output 3.1. Knowledge Management Platform is developed at three Landscape-based Management Centers of Excellence and made available to PA authorities, local communities, and stakeholders to learn and replicate best landscape-based conservation practices

A Knowledge Management Platform (KMP) will be developed at the three Landscape-Based Management CoEs to facilitate knowledge sharing, capacity-building, and the replication of best landscape-based conservation practices. This platform will serve as a centralized digital and physical repository for conservation data, management tools, training materials, and case studies, making them accessible to PA authorities, local communities, and key stakeholders. To enhance accessibility and participation, the KMP will feature an online portal with e-learning modules, interactive GIS mapping tools, and virtual training resources, enabling PA managers and conservation practitioners to engage in self-paced learning and collaborative problem-solving. A key innovation of the KMP will be its role in promoting a new system for Continuing Professional Development (CPD) for PA staff nationwide, ensuring that PA managers and practitioners receive ongoing training, certification opportunities, and career advancement pathways in landscape-based management. Gender considerations will be integrated into the KMP, ensuring equitable access and representation of women's experiences and perspectives in knowledge resources and training materials. This CPD system will be designed in collaboration with the Ministry of Environment and Forestry Training Center (PUSDIKLAT), which will serve as one of the hubs for national capacity-building and knowledge dissemination. PUSDIKLAT will integrate the best practices and tools developed at the CoEs into its standard training curricula, ensuring that all PA staff, including rangers, conservation planners, and enforcement officers (including 50% of women), have access to cutting-edge knowledge and skills.

Output 3.2. Officers of the Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai National Park, Bunaken National Park are trained and mentored at three Landscape-based Management Centers of Excellence to replicate successful landscape-based conservation practices

Under the Output, officers and other stakeholders from Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai National Park, and Bunaken National Park will undergo specialized training and mentorship programs at the three Landscape-Based Management CoEs. These capacity-building programs will equip PA officers, rangers, and conservation practitioners with the technical skills, policy frameworks, and management tools needed to implement landscape-based conservation strategies in their respective protected areas. Gender mainstreaming will ensure equitable participation of women in these training programs and mentorship opportunities, fostering inclusive capacity-building and leadership roles. The training will cover biodiversity monitoring, ecosystem restoration, law enforcement using SMART patrols, community engagement, climate resilience planning, and sustainable resource management, ensuring that PA officers can adapt and scale best practices from CoEs to their own landscapes. Through structured mentorship, peer learning, and field-based training, participants will gain hands-on experience in managing wildlife corridors, integrating HCV areas, and developing participatory governance mechanisms with local communities and stakeholders. The program will also foster long-term knowledge exchange and collaboration among Indonesia's PA network, enabling officers to apply adaptive management approaches, innovate conservation interventions, and continuously improve PA governance based on real-world lessons from the CoEs.

Output 3.3. Management Plans for Kerinci Seblat National Park, Bukit Barisan Selatan National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai National Park, Bunaken National Park are updated to ensure integration of LBM models into the PA management

Under this Output, the Management Plans of six additional Protected Areas (PAs) will be updated to incorporate LBM approaches developed and tested in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks (Outputs 2.1 and 2.2). These updated management plans will ensure that biodiversity conservation, climate resilience, and equitable benefit-sharing are embedded within a broader landscape-scale planning framework, integrating HCV areas, wildlife corridors, and climate-vulnerable ecosystems into PA governance and operational strategies. Gender mainstreaming will be embedded into the management plans development, ensuring women's active participation, equitable benefits, and inclusion in decision-making processes related to landscape-based management. Learning from Outputs 2.1 and 2.2, the updates will focus on ensuring ecological connectivity, enhancing participatory management, and strengthening multi-stakeholder conservation agreements, including partnerships with IPLCs, the private sector, and local governments. This process will help scale up best practices in PA management and adaptive conservation planning, ensuring that the LBM models developed under Component 2 are effectively replicated in these six additional PAs. The updated Management Plans will integrate strategies for sustainable resource management, biodiversity monitoring, and climate adaptation, aligning with national policies and global conservation targets. Special attention will be given to **financial sustainability**, with each plan incorporating funding strategies to support long-term implementation of LBM models. By ensuring that LBM frameworks are mainstreamed into the PA management of these six sites, the project will contribute to strengthening Indonesia's overall PA network, creating a replicable model for nationwide conservation effectiveness.

Monitoring and Evaluation

Effective and adaptive project implementation will be supported through inclusive, participatory, and gender-responsive Monitoring and Evaluation (M&E) systems, enabling Adaptive Management which includes two main components.

Participatory, inclusive, and gender-responsive M&E system is implemented to measure the project effectiveness, and support Adaptive Management:

The project will develop and implement a participatory and gender- and youth-responsive M&E framework in accordance with the Results-Based Management (RBM) approach practiced by UNDP and GEF. For the M&E, the project will use Output, Outcome, and Impact (GEB) Indicators monitored at quarterly and annual basis through the PIR (Project Implementation Review) and field visits.

M&E system will be applied to monitor the project effectiveness, check the project assumptions, and practice adaptive project management. It will actively ensure the participation of women, youth, and other vulnerable groups in the monitoring processes, ensuring their perspectives and feedback are integrated into adaptive management decisions. The M&E system will be a key tool for adaptive project management, enabling project teams to monitor project effectiveness, validate key assumptions, and adjust strategies based on real-time feedback. The findings from this continuous learning process will directly inform Outputs under Components 1-3, ensuring that the establishment of CoEs, the development of landscape-based management models, and the knowledge-sharing mechanisms are refined and scaled based on evidence and lessons learned.

The project's Gender Action Plan and Environmental and Social Safeguards are implemented.

The project will regularly update and implement a Gender Action Plan (GAP) and Social and Environmental Safeguards (ESS) to ensure that all project activities promote gender equity, social inclusion, and environmental sustainability. The GAP will mainstream gender-responsive approaches across the project's interventions, ensuring that women, youth, and marginalized groups have equal access to decision-making, capacity-building programs, and benefit-sharing mechanisms within the landscape-based management framework. Meanwhile, the SES framework will establish clear guidelines for mitigating environmental and social risks, ensuring that conservation actions align with international best practices in biodiversity protection, land tenure security, Indigenous rights, and sustainable resource management. The project will adopt free, prior, and informed consent (FPIC) principles when engaging IPLCs and will ensure that all activities comply with UNDP's Social and Environmental Standards and GEF Safeguards Policies. Additionally, the project will establish a Grievance Redress Mechanism (GRM) to provide a transparent, accessible, and responsive system for addressing concerns and conflicts arising from project activities, ensuring that affected stakeholders have a formal channel to voice complaints and seek resolutions. At the PPG stage UNDP and IP will ensure that:

- inclusion of relevant gender-specific indicators within the Results Framework. These indicators will enable clear tracking and assessment of gender-related impacts and achievements throughout project implementation;
- in developing the GAP, specific budget lines will be included, where appropriate, to adequately resource planned gender activities. Additionally, the GAP will include clear mechanisms for systematic monitoring and periodic reporting on progress;
- project's M&E arrangements for the Mid-Term Review (MTR) and Terminal Evaluation (TE) reports include detailed gender-specific results and assess progress in the implementation of the GAP.

Key Stakeholders

The project Outputs will be delivered with the support of active stakeholder involvement, ensuring a collaborative and participatory approach to landscape-based conservation in Indonesia. The project concept was developed using a transparent, inclusive, and fully participatory process, engaging key stakeholders at national, provincial, and local levels, including the Ministry of Forestry (MoF), PA authorities, local governments, IPLCs, NGOs, research institutions, private sector actors, and development partners (see Annex F). Initial consultations were conducted during the Project Identification Form (PIF) development phase to: (1) inform all stakeholder groups about the project's objectives, scope, and expected impacts, and provide an opportunity for meaningful participation; (2) identify key risks related to project implementation, long-term sustainability, and stakeholder coordination, and develop preliminary risk mitigation measures; (3) determine potential project partners and clarify stakeholder roles and responsibilities; and (4) obtain initial co-financing commitments and explore potential investment opportunities for scaling up project interventions. As a result of the stakeholder consultations, the key groups of project stakeholders were identified for the project development and implementation (see Annex G for details). The key stakeholders that were involved in the PIF discussion and will be involved in full project development and implementation are the following:

- **Ministry of Forestry (MoF):** is responsible for overall project development and execution, policy guidance, and coordination among PAs. Consulted extensively to align with national biodiversity strategies and policy frameworks;
- **National Park Authorities (Gunung Leuser, Sebangau, Bogani Nani Wartabone, Kerinci Seblat, Bukit Barisan Selatan, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve, Rawa Aopa Watumohai, and Bunaken):** direct implementers of

landscape-based management (LBM) activities; participated actively in formulation discussions to define roles and responsibilities;

- **Local Governments of Aceh, North Sumatra, Central Kalimantan, Gorontalo, and North Sulawesi Provinces:** engaged to integrate project interventions with regional development plans and to ensure institutional support; will be involved in the project development and implementation;
- **Local Communities,** represented through local organizations (e.g., Lembaga Adat, community forums): engaged through preliminary consultations to identify livelihood opportunities and community-managed conservation agreements; key beneficiaries of the project;
- **NGOs and CSOs** including Wildlife Conservation Society (WCS), Forum Konservasi Leuser (FKL), Yayasan Ekosistem Lestari (YEL), and Burung Indonesia: consulted to leverage expertise, field experiences, and ensure alignment with ongoing conservation initiatives; will be involved in the project development and implementation;
- **Research Institutions and Universities** (e.g., IPB University, University of Indonesia, Universitas Syiah Kuala, Universitas Palangka Raya, Universitas Negeri Gorontalo): Identified to support applied research, training, knowledge management, and capacity-building programs;
- **Private Sector Partners** (e.g., eco-tourism businesses, sustainable agroforestry enterprises): Engaged to explore potential partnerships for sustainable financing, livelihood diversification, and market access

At the PPG Stage the project will produce a comprehensive Stakeholder Engagement Plan for the entire project lifetime to coordinate and manage stakeholders involvement in the project activities as well as empower them. Project stakeholders and their roles in the project development and implementation will be explicitly described in the Plan. Stakeholder empowerment in the project framework will focus on the following aspects:

- **Active Participation in Decision-Making:** The project will engage local communities, government agencies, and the private sector in LBM and conservation planning. Communities will co-develop National Park MPs that balance conservation, resource use, and climate resilience. Strengthening LBM Centers of Excellence will equip stakeholders with knowledge and decision-making authority. Capacity-building initiatives will train PA managers and communities in best practices for conservation and sustainable land use;
- **Capacity Development and Awareness Raising:** The project strengthens institutional capacity through training for PA staff, local governments, and IPLCs on biodiversity monitoring, restoration, and nature-based solutions. A Knowledge Management Platform will scale lessons from key national parks. Public awareness campaigns will promote conservation and sustainable livelihoods.;
- **Economic Empowerment:** The project supports sustainable livelihoods to reduce environmental impact and provide alternative incomes. Initiatives include ecotourism for jobs, sustainable fisheries and agroforestry for resource management, and potential PES schemes to incentivize conservation. These efforts reduce reliance on unsustainable industries and enhance economic resilience.;
- **Engagement in Conservation Efforts and Landscape Co-management:** The project will build partnerships among PAs, communities, businesses, and conservation agencies to support biodiversity. It will promote sustainable production in key sectors and encourage CSR initiatives that align with conservation goals.

Knowledge

Generating knowledge and ensuring effective learning is a critical part of the project. The project includes Output 3.1 and 3.2 under Component 3, designed to establish a Knowledge Management Platform for Landscape-Based Management (LBM), provide comprehensive training programs, and ensure widespread dissemination of best practices among PAs. These activities will support the exchange of conservation knowledge across project nine National Parks. The following knowledge products will be produced: a national LBM knowledge management strategy, technical manuals on landscape-based conservation, policy and guidelines briefs, training curricula, case studies on LBM implementation, and digital learning materials.

The project will enhance knowledge-sharing and project visibility through various tools: **Local Workshops and Trainings:** Interactive, hands-on sessions in target landscapes to engage local communities, discuss LBM best practices, and refine adaptive conservation strategies. **National Webinars and Learning Exchanges:** Online platforms to train PA authorities, government officials, NGOs, and private sector representatives on integrating LBM principles into conservation management. **Regional Collaboration Forums:** Engaging with ASEAN platforms and conservation networks to share Indonesia's experiences in scaling up LBM approaches and contribute to regional biodiversity strategies. **International Conferences and Peer-Learning Sessions:** Presenting project findings at CBD meetings, IUCN forums, and World Business Council for Sustainable Development (WBCSD) events to showcase Indonesia's leadership in PA and LBM innovation. **Digital Knowledge Repository:** A centralized platform hosted by the Centers of Excellence to provide open access to conservation case studies, monitoring reports, and policy guidance for wider replication across Indonesia's PA network.

Project contribution to the policy coherence

The proposed project aims to enhance environmental policy coherence in Indonesia by integrating LBM principles into national standards for PA management and guidelines for LBM Centers of Excellence. This integration supports the country's commitments under the Kunming-Montreal Global Biodiversity Framework and aligns with GEF-8 priorities. The project contributes to policy coherence in the following ways:

- **Integration of LBM principles into National and Sectoral Policies:** Under Component 1, the project will support the Ministry of Forestry (MoF) in updating regulatory frameworks for PA management by incorporating LBM principles and criteria for Centers of Excellence. The Centers of Excellence (CoEs) established in Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks will serve as LBM policy innovation hubs, providing models for integrating conservation objectives into forestry, agriculture, fisheries, and tourism policies;
- **Strengthening Multi-Sectoral Coordination and Land-Use Planning:** The project will enhance cross-sectoral governance mechanisms to improve policy coherence between conservation, economic development, and climate adaptation. Through participatory PA management plans and LBM models, the project will ensure land-use policies align with biodiversity protection efforts, preventing conflicting mandates between PAs, local governments, IPLC, and private sector initiatives;
- **Improving Policy Implementation through Knowledge and Capacity Building:** Under Component 3, the project will create a Knowledge Management Platform to document and disseminate best practices in LBM, ecosystem restoration, and biodiversity-friendly livelihoods. The project will also contribute to Indonesia's long-term conservation strategy by developing LBM criteria briefs, technical guidelines, and training curricula for government agencies and decision-makers;
- **Aligning Conservation with Climate and Sustainable Development Goals:** The project's nature-based solutions, including wildlife corridor protection, climate-resilient land-use planning, and PES schemes, will support Indonesia's Nationally Determined Contributions (NDCs) under the Paris Agreement. By ensuring policy synergies between biodiversity conservation and climate adaptation, the project will reduce environmental trade-offs and promote sustainable economic growth.

Innovativeness, Potential for Transformation and Scaling Up

The project introduces several **innovative and transformative approaches** to biodiversity conservation in Indonesia through the LBM approach. Key aspects of its innovativeness include:

- **Establishment of Landscape-Based Management Centers of Excellence (CoEs):** Indonesia's PA management will be enhanced through the creation of three LBM Centers of Excellence at Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks. These CoEs will serve as national hubs for piloting, testing, and scaling up LBM practices, integrating conservation with sustainable resource management;
- **Integration of LBM models in PA management:** The project will introduce innovative LBM approach in PA management, including spatial planning tools to improve ecological connectivity between PAs and surrounding landscapes. This includes the identification and preservation of HCV areas and critical wildlife corridors, ensuring that conservation goals extend beyond national park boundaries;
- **Participatory and Multi-Sectoral Landscape Governance:** The project emphasizes inclusive LBM governance models, integrating local communities, Indigenous Peoples, the private sector, and government agencies into conservation decision-making. This approach ensures sustainable land use planning while fostering biodiversity-friendly economic activities such as sustainable agroforestry, ecotourism, and fisheries.

The project has significant potential for replication and scaling up within Indonesia and across Southeast Asia:

- **Expansion Across Indonesia's PA Network:** The best practices developed at the three Centers of Excellence will be replicated in six additional protected areas, covering 1.97 million hectares of terrestrial and 73,983 hectares of marine habitats. The project will provide technical assistance, training, and policy support to ensure the widespread adoption of LBM across the national PA system;
- **National and Regional Knowledge Dissemination:** Through the Knowledge Management Platform, the project will share lessons learned across Indonesia and with regional conservation initiatives in Malaysia, the Philippines, and Vietnam. The ASEAN collaboration component will ensure that successful LBM models contribute to the broader regional conservation agenda;
- **Alignment with Indonesia's National Policy Goals and International Commitments:** The project supports Indonesia's Nationally Determined Contributions (NDCs), Kunming-Montreal Global Biodiversity Framework, and the UNDP-led biodiversity conservation strategy. By embedding nature-based solutions (NbS) into national policies and financing mechanisms, the project fosters long-term transformation in Indonesia's conservation governance.

Gender Equality and Empowerment

Gender equality is essential for achieving sustainable biodiversity conservation and equitable socio-economic development in Indonesia. The project recognizes that women play a crucial role in natural resource management, climate adaptation, and community-led conservation initiatives. To ensure gender inclusivity, the project integrates gender-sensitive approaches in all its activities and tracks progress through the **Monitoring and Evaluation (M&E) system**. The project targets at least 50% women's participation in consultations, decision-making processes, and capacity-building initiatives. Special efforts will be made to engage Indigenous women and local women leaders in the planning and governance of LBM models for Protected Areas (Component 2). A multi-stakeholder gender analysis will be conducted at the project's PPG phase to identify barriers to women's participation in conservation efforts and to develop a Gender Action Plan (GAP). This plan will guide stakeholders in empowering women as conservation leaders rather than viewing them solely as vulnerable groups affected by environmental degradation. The project will train women in conservation techniques, ecosystem restoration, monitoring of ecosystem health and resilience, sustainable livelihoods (e.g., agroforestry, ecotourism, and fisheries management), and entrepreneurship to enhance their economic independence. It will also promote gender-sensitive climate adaptation strategies by ensuring that women have access to technical resources, financial opportunities, and leadership training in conservation governance. The project will also establish gender-responsive indicators to monitor progress, ensuring women's inclusion in PA governance, benefit-sharing mechanisms, and biodiversity conservation efforts.

Private Sector Role

The private sector will play a crucial role in the project by providing financial resources, technical expertise, and innovative solutions to strengthen biodiversity conservation and sustainable land and resource management in and around PAs. Private sector actors, particularly those in agriculture, fisheries, tourism, forestry, and infrastructure development, will be encouraged to adopt sustainable business models that align with Indonesia's conservation and climate resilience goals. The project will promote private-sector-led conservation initiatives, including the establishment of biodiversity-friendly production landscapes and support for sustainable commodity value chains in critical ecosystems. Through Corporate Social Responsibility (CSR) programs, businesses can invest in community-based conservation projects that enhance eco-tourism, agroforestry, sustainable aquaculture, and nature-based solutions (Component 2). These investments will contribute to the restoration of critical ecosystems, support alternative livelihoods for local communities, and create new market opportunities for sustainably sourced products. By engaging in biodiversity offsets and green financing mechanisms, the private sector can scale up conservation impact while improving its environmental, social, and governance (ESG) performance. Moreover, private companies can leverage their resources and expertise to support capacity-building and training programs for local communities, government agencies, and protected area managers. Public-private partnerships (PPPs) will be fostered to ensure collaborative land-use planning, the development of integrated management plans (IMPs), and the implementation of sustainable fisheries and forestry management systems. The project will also promote technological innovation, such as precision agriculture, carbon sequestration solutions, and eco-friendly tourism infrastructure, to reduce environmental impact while increasing economic viability. UNDP Policy on Due Diligence and Partnerships with the Private Sector guidelines will be followed to build collaboration with the private sector.

[1] https://ksdae.menlhk.go.id/assets/publikasi/100%2B%20Inovasi%20KSDAE%20%281%29.pdf?utm_source=chatgpt.com

[2] https://www.proparco.fr/en/article/protected-area-management-how-can-private-sector-play-part?utm_source=chatgpt.com

[3] Stafford Smith, M., & Metternicht, G. (2022). *Refining the tracking of co-benefits in future GEF investments: A STAP Information Brief*. Scientific and Technical Advisory Panel (STAP) to the Global Environment Facility (GEF), Washington, DC. Available at: <https://stapgef.org>

Coordination and Cooperation with Ongoing Initiatives and Project.

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

No

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

The project will be executed by the Ministry of Forestry (MoF), specifically through its Directorate General of Natural Resources and Ecosystem Conservation (KSDAE), as the Implementing Partner under supervision/oversight by UNDP.

The project will be implemented in strong coordination and collaboration with other relevant programs and projects in the country and South-East Asia Region to ensure (1) Resource Optimization, including funding, expertise, and manpower, to avoid duplication of efforts and obtain co-financing; (2) Knowledge and Experience Sharing to enhance the effectiveness of each project, leading to more innovative and well-rounded solutions; and (3) Synergy in objectives to amplify their impact, making it easier to achieve these shared objectives on a larger scale. Specifically, the project will directly collaborate with the following initiatives:

Other initiatives	Main partner(s)	Areas of collaboration with ENABLE project
UNDP-GBFF Project “Enhancing Co-Benefits of Conservation/Protected Area Management through an Inclusive Wildlife-Based Ecotourism Strategy” (ECOTOURISM), 2026-2031	Ministry of Forestry	This initiative aims to develop and implement sustainable, wildlife and nature-friendly ecotourism products and services within Indonesia's conservation and protected areas. The project focuses on enhancing biodiversity conservation while promoting local community involvement and equitable benefit-sharing. The project will also emphasize financial mechanisms to reinvest ecotourism revenue into protected areas, ensuring long-term sustainability while supporting biodiversity conservation and local community involvement. The projects will collaborate on development of landscape-based conservation models including ecotourism and financial mechanisms for PA funding
UNDP/GEF Project “Integration of Biodiversity Profiling and Natural Capital Accounting (ATLAS) into Land Use and Development Decisions through One Map Policy Enforcement in Indonesia”, 2026-2031	Ministry of Forestry	ATLAS project and the ENABLE project can collaborate by integrating biodiversity profiling (BP) and natural capital accounting (NCA) data from the ATLAS system into Landscape-Based Management (LBM) models to enhance evidence-based conservation planning, improve protected area (PA) management, and support sustainable land use decisions within and around Indonesia's national parks
UNDP/GEF Project “Spatial-based Natural Forest Planning and Governance for Resilient Ecosystems (SPARE)”, 2026-2031	Ministry of Forestry	The SPARE project will collaborate with the ENABLE project by integrating harmonized spatial forestry plans, natural capital assessments, and improved forest governance mechanisms into the PA Landscape-Based Management (LBM) models, ensuring that biodiversity conservation strategies within and around protected areas (PAs) align with broader forest governance, restoration, and sustainable land-use planning efforts across Indonesia's landscapes.
UNDP-GEF 7 'Catalyzing Optimum Management of Nature Heritage for Sustainability of Ecosystem and Resources' (CONSERVE) Project (GEF ID 10236), 2021-2027	Ministry of Environment and Forestry	GEF7 CONSERVE Project strengthens multi purposes landscape management to enhance biodiversity conservation efforts by implementing land management best practices, which intersect with component II of this project output to develop and implement landscape-based interventions and activities for sustainable use and habitat protection.
UNDP-GEF 7 'Investing in the Komodo Dragon and other globally threatened species in Flores' (IN FLORES) Project (GEF ID 10728), 2023-2028	Ministry of Environment and Forestry	GEF7 IN FLORES project strengthens integrated landscape management to support Komodo Dragon and other flagship species which is intersect with component II of this project that aims to develop landscape-based protected area management.
UNDP-GEF 7 'Strengthened Systems for Community-based Conservation of Forests and Peatland Landscapes in Indonesia' (COPLI) Project, 2023 - 2028	Ministry of Agriculture	GEF7 COPLI aims to conserve globally important biodiversity and enhance livelihoods through a strengthened institutional framework and community-based conservation of peatland landscape ecosystems. This project intervention targeting community-based and sustainable diversified livelihood models to support conservation of forest and biodiversity in peatland landscape. This intersects with ENABLE project that also targets peatland landscape in protected area for conservation biodiversity and community sustainable livelihood.
'Effectiveness of Community-Based Collaborative Forest Management in Central Sulawesi' (Forest Programme III, 2017 - June 2025)	Ministry of Environment and Forestry	FP III project contributes to forest conservation and rehabilitation in order to reduce climate-relevant emissions and improve livelihoods of the rural poor in Lore Lindu landscape, which is intersect with the project Component 2 that aim to develop integrated landscape model for protecting forest, improving smallholder farmer livelihood and strengthening PA border.
ASEAN Centre for Biodiversity (ACB) – UNDP Regional ASEAN GEF-7 'Effectively Managing Networks of Marine Protected Areas in Large Marine Ecosystems in the ASEAN Region' (ASEAN ENMAPS) Project, 2024-2029	ASEAN Centre for Biodiversity (ACB)	The ASEAN ENMAPS addresses the issues on how the Marine Protected Area interconnectedness to the Large Marine Ecosystem (LME) in terms of biodiversity protection. This project promotes the regional (Southeast Asia) efforts in terms of protecting the marine ecosystem and biodiversity through scientific approaches, community empowerment, capacity building and intervention on the reducing pollution from marine debris. This project intersects with the area of intervention in Sulu-Celebes Sea where the Bunaken National Park is situated.

The ENABLE project will significantly collaborate with the ECOTOURISM, ATLAS, and SPARE projects above to strengthen landscape-based conservation models, integrating biodiversity conservation with sustainable land use and community-based approaches. The ECOTOURISM project will contribute by developing wildlife-friendly ecotourism strategies and financial mechanisms for PAs that enhance protected area (PA) management and equitable benefit-sharing, ensuring that conservation efforts generate socio-economic benefits for local communities. The ATLAS project will provide biodiversity profiling (BP) and natural capital accounting (NCA) data, supporting evidence-based landscape planning and decision-making to enhance PA management and sustainable land use integration. The SPARE project will contribute harmonized spatial forestry planning, forest governance mechanisms, and restoration strategies, ensuring that landscape-based biodiversity conservation efforts align with national and provincial land-use frameworks. Together, these projects will create a cohesive, data-driven, and community-inclusive approach to conservation and sustainable development in Indonesia's protected and surrounding landscapes.

Core Indicators

Project Core Indicators		Expected at PIF
1	Terrestrial protected areas created or under improved management for conservation and sustainable use	3,633,096 ha
	<i>Indicator 1.2 Terrestrial protected areas under improved management effectiveness</i>	3,633,096 ha
2	Marine protected areas created or under improved management for conservation and sustainable use	73,983 ha
	<i>Indicator 2.2 Marine protected areas under improved management effectiveness</i>	73,983 ha
4	Area of landscapes under improved practices (excluding protected area)	856,185 ha
	<i>Indicator 4.1 Area of landscapes under improved management to benefit biodiversity</i>	856,185 ha
11	People benefiting from GEF-financed investments disaggregated by sex (count)	2,000 direct beneficiaries, of which 50% are women

Indicator 1.2. Terrestrial protected areas under improved management effectiveness: 3,633,096 ha via integration of LBM practices in the management of eight PAs: Gunung Leuser NP, Sebangau NP, Bogani Nani Wartabone NP, Kerinci Seblat NP, Bukit Barisan Selatan NP, Lamandau WR, Nyiut Penrissen NR, and Rawa Aopa Watumohai NP. The expected management improvement is 20% increase in average METT score for Gunung Leuser, Sebangau, and Bogani Nani Wartabone NPs on the total area of 1,654,419 ha (Components 1 and 2) and 10% increase in average METT score for Kerinci Seblat NP, Bukit Barisan Selatan NP, Lamandau WR, Nyiut Penrissen NR, and Rawa Aopa Watumohai NP on the total area of 1,978,677 ha (Component 3);

Indicator 2.2 Marine protected areas under improved management effectiveness: 73,983 ha via integration of LBM practices in the management of Bunaken NP with expected management improvement of 10% increase in METT score (Component 3);

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity: 856,185 ha adjacent to Gunung Leuser NP, Sebangau NP, and Bogani Nani Wartabone NP through establishment of participatory biodiversity management with IPLCs, local government, and private sector with focus on HCV areas, wildlife corridors, and ecosystems of high climate adaptation value (Component 2);

Indicator 11. People benefiting from GEF-financed investments disaggregated by sex (count): ~2,000 local people and NP staff, including 50% females, who will be directly involved in the project activities as well as members of their families benefiting from integration of LBM in Gunung Leuser NP, Sebangau NP, and Bogani Nani Wartabone NP (Components 1 and 2).

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)
3633096	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)
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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)
3633096	0	0	0

Name of the Protected Area	WDP A 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)
Bogani Nani Wartabone National Park	62621	National Park	282,009.00						
Bukit Barisan Selatan National Park	1252	National Park	330,852.00						
Gunung Leuser National Park	3030	National Park	830,269.00						
Kerinci Seblat National Park	4994	National Park	1,389,510.00						

Lamanda u Wildlife Reserve	3172 60	Habitat/Spec ies Managemen t Area	61,425.00						
Nyiut Penrissen Nature Reserve	6249 5	Habitat/Spec ies Managemen t Area	91,696.00						
Rawa Aopa Watumo hai National Park	3001 3	National Park	105,194.0 0						
Sebanga u National Park	3172 62	National Park	542,141.0 0						

Indicator 2 Marine protected areas created or under improved management

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
73983	0	0	0

Indicator 2.1 Marine Protected Areas Newly created

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total 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)
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Indicator 2.2 Marine Protected Areas Under improved management effectiveness

Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
73983	0	0	0

Name of the Protected Area	WDP A ID	IUCN Category	Total Ha (Expected at PIF)	Total 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)
Bunaken National Park	30012	National Park	73,983.00						

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)
856185	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)
856,185.00			

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 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	1,000			
Male	1,000			
Total	2,000	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)

Indicator 1.2. Terrestrial protected areas under improved management effectiveness: 3,633,096 ha via integration of LBM practices in the management of eight PAs: Gunung Leuser NP, Sebangau NP, Bogani Nani Wartabone NP, Kerinci Seblat NP, Bukit Barisan Selatan NP, Lamandau WR, Nyiut Penrissen NR, and Rawa Aopa Watumohai NP. The expected management improvement is 20% increase in average METT score for Gunung Leuser, Sebangau, and Bogani Nani Wartabone NPs on the total area of

1,654,419 ha (Components 1 and 2) and 10% increase in average METT score for Kerinci Seblat NP, Bukit Barisan Selatan NP, Lamandau WR, Nyiut Penrissen NR, and Rawa Aopa Watumohai NP on the total area of 1,978,677 ha (Component 3);

Indicator 2.2 Marine protected areas under improved management effectiveness: 73,983 ha via integration of LBM practices in the management of Bunaken NP with expected management improvement of 10% increase in METT score (Component 3);

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity: 856,185 ha adjacent to Gunung Leuser NP, Sebangau NP, and Bogani Nani Wartabone NP through establishment of participatory biodiversity management with IPLCs, local government, and private sector with focus on HCV areas, wildlife corridors, and ecosystems of high climate adaptation value (Component 2);

Indicator 11. People benefiting from GEF-financed investments disaggregated by sex (count): ~2,000 local people and NP staff, including 50% females, who will be directly involved in the project activities as well as members of their families benefiting from integration of LBM in Gunung Leuser NP, Sebangau NP, and Bogani Nani Wartabone NP (Components 1 and 2).

Key Risks

	Rating	Explanation of risk and mitigation measures
CONTEXT		
Climate	Substantial	The project is exposed to several climate risks including increased frequency and severity of extreme weather events, shifting precipitation patterns, rising temperatures, and sea-level rise, which could adversely affect biodiversity, ecosystems, and local livelihoods. To mitigate these risks, the project integrates climate-resilient practices into its landscape-based management models. Key mitigation measures include enhancing habitat connectivity to support species migration and adaptation, restoring degraded ecosystems to enhance resilience, and promoting diversified and climate-smart livelihood opportunities for local communities. Additionally, the project employs adaptive management strategies based on continuous climate risk assessments and stakeholder engagement, ensuring that interventions remain effective under changing climatic conditions. Capacity-building efforts focused on climate awareness and adaptation techniques will further empower local communities and stakeholders to proactively manage climate-related challenges.
Environmental and Social	High	The project has identified substantial social and environmental risks, including inadequate stakeholder capacity potentially affecting protected area management effectiveness, exclusion of marginalized groups, exacerbation of land use conflicts, insufficient gender integration potentially leading to gender discrimination or gender-based violence, inequitable distribution of project benefits risking elite capture, and potential adverse impacts on Customary Peoples' rights and lands. To address these risks, the project will undertake comprehensive stakeholder analyses, scoped Environmental and Social Impact Assessments (ESIA) and Strategic Environmental and Social Assessments (SESA), capacity assessments, conflict sensitivity assessments, gender analyses, and customary peoples' screenings. Mitigation measures include developing robust Environmental and Social Management

		Frameworks (ESMF), Stakeholder Engagement Plans (SEP), Gender Action Plans (GAP), Livelihood Action Frameworks, Customary Peoples Planning Frameworks, Capacity Development Plans, and Grievance Redress Mechanisms (GRM), ensuring active participation and benefit sharing for all stakeholders, especially vulnerable groups, women, and Customary Peoples.
Political and Governance	Substantial	Limited enforcement of conservation laws and fragmented institutional responsibilities may lead to insufficient governance, inconsistent policy implementation, and increased threats to biodiversity in PAs. There is a risk that one or more Protected Area might be reduced or the landscapes might be administratively restructured during project implementation, which will hinder achievement of the GEB targets. To mitigate these risks, the project should establish clear institutional roles for LBM through Ministerial Decrees, expedite approval of the revised Conservation Law to support PA governance, promote interagency coordination via PA Management Units, and secure legal protection by integrating PAs into land-use plans and formal agreements.

INNOVATION

Institutional and Policy	Moderate	The lack of formal integration of Landscape-Based Management (LBM) into national PA strategies and inconsistencies in conservation and development policies may lead to limited adoption of best practices and fragmented PA management. To mitigate these risks, the project will scale up proven LBM approaches by integrating them into national conservation policies, support adoption of LBM through capacity-building in PA agencies, and ensure policy coherence between biodiversity conservation and national land-use plans.
Technological	Moderate	Limited adoption of SMART patrols (only in 32 out of 74 PA Management Units) and insufficient use of ecological monitoring tools may lead to insufficient enforcement, limited biodiversity tracking, and increased illegal activities in remote PAs. To mitigate this risk, the project will expand SMART patrol coverage to all selected PAs, integrate drone surveillance for remote monitoring, develop digital biodiversity databases for real-time decision-making, and provide training in conservation technology for PA staff.
Financial and Business Model	High	Dependence on government funding, which currently covers only 70% of required conservation budgets, and limited private sector investment may lead to financial shortfalls, unsustainable PA management, and delays in implementing conservation programs. To mitigate the risks, each CoE will have a Financial Sustainability Strategy including financial mechanisms ensuring sustainable operations in the mid-term and long-term; Management Plans of Gunung Leuser, Sebangau, and Bogani Nani Wartabone National Parks will explicitly include a Financial Sustainability Plan with strategies to secure diversified and sustainable funding source; the project will work on establishment of Public-Private Partnerships (PPPs) to facilitate investments in ecotourism, sustainable agriculture, and biodiversity-friendly enterprises,

		creating economic incentives and private sector engagement for conservation; updated management plans for six additional national parks/reserves will explicitly integrate financial sustainability strategies for long-term implementation of landscape-based management models.
EXECUTION		
Capacity	Substantial	Limited technical skills, staff shortages, and knowledge gaps among PA authorities may lead to insufficient implementation of LBM approaches, inefficient PA management, and reduced conservation effectiveness. To address these capacity gaps, the project will establish three Landscape-Based Management Centers of Excellence (Gunung Leuser, Sebangau, Bogani Nani Wartabone NPs) to serve as training hubs for PA staff and community members, ensure funding for skill development programs, and promote south-south knowledge exchange.
Fiduciary	Moderate	There is a risk that the MoF might face challenges in managing the funding and making procurement for the project. This is due to their official regular ministerial tasks they need to complete with limited number of staff. This might post delays in the implementation of project activities. To mitigate these risks, the project will strengthen financial oversight mechanisms, enforce transparent budget reporting, integrate fiduciary risk assessments into project audits, and establish anti-corruption training for PA financial managers.
Stakeholder	Substantial	Inadequate engagement of IPLC in conservation governance may lead to conflicts over land use, lack of community support, and reduced effectiveness of conservation efforts. To mitigate this risk, the project will strengthen participatory landscape-based management mechanisms (e.g., community-led conservation agreements), support IPLC land rights recognition in PA-adjacent landscapes, mainstream gender considerations in PA management, and promote multi-stakeholder conservation forums.
Other	Moderate	The expansion of human settlements and agriculture into PA buffer zones may lead to increased human-wildlife conflicts, retaliatory killings of wildlife (e.g., Sumatran tigers, elephants), and damage to crops and livestock. To mitigate this risk, the project will implement early warning systems (e.g., community alert networks for elephant movement), promote buffer crops that deter wildlife (e.g., chili, lemongrass), establish compensation schemes for affected communities, and improve conflict response strategies through community ranger training.
Overall Risk Rating	Substantial	This rating reflects the cumulative impact of various risk categories, including climate, environmental and social, political and governance, institutional and policy, technological, financial and business model, capacity for implementation, fiduciary, and stakeholder risks. While each risk category presents specific challenges, the substantial rating indicates that

there are significant risks requiring careful management to ensure the successful implementation and sustainability of the project. This underscores the need for proactive monitoring by the PMU, UNDP, and relevant Indonesian ministries. Regular quarterly reviews will be conducted during implementation to assess risks and adapt strategies as necessary. Corrective actions will be taken promptly if any risks escalate into tangible threats to the project's development and execution.

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)

The project's comprehensive approach is well-aligned with the Objective 1 of GEF BD FA, GBF Targets, SDGs, country priorities.

Project alignment with the GEF-8 Biodiversity Objective 1

Focal Area	Focal Area Objective	Contribution to the Objective
Biodiversity	Objective 1. To improve conservation, sustainable use, and restoration of natural ecosystems	The project strengthens effective management of Indonesia's protected areas (BD-1-1) by establishing Landscape-Based Management Centers of Excellence, enhancing governance, and integrating adaptive management tools. It promotes sustainable biodiversity use (BD-1-2) through participatory conservation agreements, community-led initiatives, and eco-friendly livelihoods, while supporting ecosystem restoration (BD-1-3) via habitat connectivity, peatland rehabilitation, and species recovery programs. Additionally, it mainstreams biodiversity into national policies and land-use planning (BD-1-4) by integrating High Conservation Value (HCV) areas, wildlife corridors, and climate resilience measures into PA management frameworks and plans.

Project contribution to GBF Targets

Target	Contribution to the target
Target 1 – Biodiversity-inclusive Spatial Planning	The project promotes participatory, biodiversity-inclusive spatial planning and effective management by integrating landscape-based management models into PA governance to reduce biodiversity loss in Indonesia's PAs and surrounding landscapes
Target 2 – Ecosystem Restoration	It ensures that at least 30% of degraded ecosystems in Indonesia are restored by implementing habitat restoration, peatland rehabilitation, and connectivity enhancement across national parks and surrounding areas
Target 3 – Protected Areas Conservation & Management	The project strengthens conservation efforts by establishing Landscape-Based Management Centers of Excellence to improve the effectiveness and governance of Indonesia's PA network, contributing to the 30x30 target
Target 4 – Threatened Species Recovery	It directly supports the recovery and conservation of globally threatened species such as the Sumatran tiger, Sumatran rhino, and Bornean orangutan through improved habitat connectivity and conservation measures

Target 9 – Sustainable Biodiversity-based Livelihoods	The project fosters sustainable biodiversity-based livelihoods for IPLCs by integrating eco-tourism, agroforestry, and conservation agreements into protected area management.
Target 11 – Enhancing Ecosystem Services	Through ecosystem-based management, the project enhances ecosystem services such as carbon sequestration, water regulation, and climate adaptation in peatland and forest ecosystems.
Target 14 – Biodiversity Mainstreaming in Policy & Planning	It mainstreams biodiversity into policy and planning by incorporating High Conservation Value (HCV) areas, climate resilience measures, and multi-stakeholder governance into national park management frameworks.
Target 21 – Knowledge Sharing & Data Accessibility	The establishment of a Knowledge Management Platform ensures accessible biodiversity data and knowledge-sharing among protected areas, fostering evidence-based decision-making.
Target 22 – Inclusive & Equitable Biodiversity Governance	It promotes equitable, inclusive, and gender-responsive governance of protected areas by ensuring IPLCs, women, and marginalized groups actively participate in landscape-based conservation decision-making.
Target 23 - Gender Equality and a Gender-Responsive Approach for Biodiversity Action	The project contributes to the target by systematically integrating gender considerations, equitable participation, capacity-building, and benefit-sharing for women and men across all outputs, ensuring gender-responsive biodiversity management and conservation practices in Indonesia's protected areas.

Project contribution to SDGs

SDG	Direct contribution
SDG 1 (No Poverty)	By promoting sustainable livelihoods through eco-tourism, agroforestry, and conservation-based enterprises, the project supports income generation for local communities.
SDG 2 (Zero Hunger)	It enhances food security by integrating sustainable agriculture and agroforestry practices into protected area management and adjacent landscapes.
SDG 5 (Gender Equality)	The project ensures gender-responsive conservation governance, empowering women in decision-making and benefit-sharing in biodiversity management
SDG 6 (Clean Water and Sanitation)	By protecting watersheds and restoring forested landscapes, the project improves water quality and availability for local communities
SDG 8 (Decent Work and Economic Growth)	It promotes sustainable economic opportunities through biodiversity-friendly enterprises, eco-tourism, and nature-based livelihoods
SDG 13 (Climate Action)	The project strengthens climate resilience by restoring peatlands, reducing deforestation, and implementing nature-based solutions to mitigate climate impacts
SDG 14 (Life Below Water)	It improves marine biodiversity conservation through enhanced management of Bunaken National Park, protecting coral reefs and marine ecosystems
SDG 15 (Life on Land)	By integrating landscape-based management models, the project conserves biodiversity, restores degraded ecosystems, and enhances habitat connectivity
SDG 17 (Partnerships for the Goals)	The project fosters multi-stakeholder collaboration, engaging governments, IPLCs, NGOs, and the private sector in biodiversity conservation and sustainable development.

Project contribution to the national environmental and development priorities

Priorities	Contribution
IBSAP 2025-2045	Project contributes to IBSAP by enhancing protected area management effectiveness, restoring critical ecosystems, mainstreaming biodiversity into national policies, and fostering multi-stakeholder collaboration to ensure sustainable conservation, climate resilience, and equitable benefit-sharing in Indonesia's landscapes and seascapes.
RPJMN 2025-2029	The project contributes to RPJMN 2025-2029 by strengthening biodiversity conservation, enhancing climate resilience, promoting sustainable livelihoods, and integrating nature-based solutions into national and regional development planning to support economic growth and environmental sustainability.
Strategic Plan of DG KSDAE 2024-2029	The project contributes to the SP DG KSDAE 2024-2029 by improving protected area management effectiveness, enhancing biodiversity conservation through landscape-based approaches, strengthening institutional capacity, and integrating community-based conservation and sustainable financing mechanisms to ensure long-term ecosystem resilience and equitable benefit-sharing.

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: Yes

Civil Society Organizations: Yes

Private Sector: Yes

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

(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
High or Substantial			

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 (\$)
UNDP	GET	Indonesia	Biodiversity	BD STAR Allocation: BD-1	Grant	6,649,315.00	631,685.00	7,281,000.00
Total GEF Resources (\$)						6,649,315.00	631,685.00	7,281,000.00

Project Preparation Grant (PPG)

Is Project Preparation Grant requested?

true

PPG Amount (\$)

200000

PPG Agency Fee (\$)

19000

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	Grant / Non- Grant	PPG(\$)	Agency Fee(\$)	Total PPG Funding(\$)
UNDP	GET	Indonesia	Biodiversity	BD STAR Allocation: BD-1	Grant	200,000.00	19,000.00	219,000.00
Total PPG Amount (\$)						200,000.00	19,000.00	219,000.00

Please provide justification

Sources of Funds for Country Star Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Sources of Funds	Total(\$)
UNDP	GET	Indonesia	Biodiversity	BD STAR Allocation	7,500,000.00
Total GEF Resources					7,500,000.00

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing(\$)	Co-financing(\$)
BD-1-1	GET	6,649,315.00	48000000
Total Project Cost		6,649,315.00	48,000,000.00

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Ministry of Forestry	Public Investment	Investment mobilized	46400000
GEF Agency	UNDP	Grant	Investment mobilized	1600000
Total Co-financing				48,000,000.00

Describe how any "Investment Mobilized" was identified

- Ministry of Forestry of Indonesia: US\$ 46,400,000. This contribution represents government funding aimed at strengthening biodiversity conservation, sustainable forest management, and ecosystem restoration in Indonesia's protected areas and surrounding landscapes. The Ministry of Forestry will support the project through institutional investments in protected

area management, community-based conservation programs, and landscape-based governance initiatives. This funding will cover activities related to habitat management, operational costs, biodiversity monitoring and enforcement activities, capacity-building programs, and implementation of nature-based solutions, ensuring long-term sustainability and alignment with Indonesia's national biodiversity strategies and development goals for 2025-2030

- UNDP: US\$ 1,600,000. This contribution represents funding for parallel programs focused on promoting landscape-based conservation strategies, responsible agricultural expansion, and regulatory improvements to safeguard Indonesia's biodiversity and ecosystem resilience. While they do not directly implement conservation enforcement, they strengthen governance, policy frameworks, and market incentives to ensure long-term sustainability in commodity production landscapes.
- Other co-financing from private sector and CSO will be explored during the PPG stage.

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Nancy Bennet	2/18/2025	Tharuka Dissanaike		nancy.bennet@undp.org
Project Coordinator	Tharuka Dissanaike	2/18/2025	Tharuka Dissanaike		tharuka.dissanaike@undp.org

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

Name	Position	Ministry	Date (MM/DD/YYYY)
Laksmi Dhawanthi	Director General of Climate Change Control/ GEF Operational Focal Point for Indonesia	Ministry of Forestry	3/27/2025

ANNEX C: PROJECT LOCATION

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

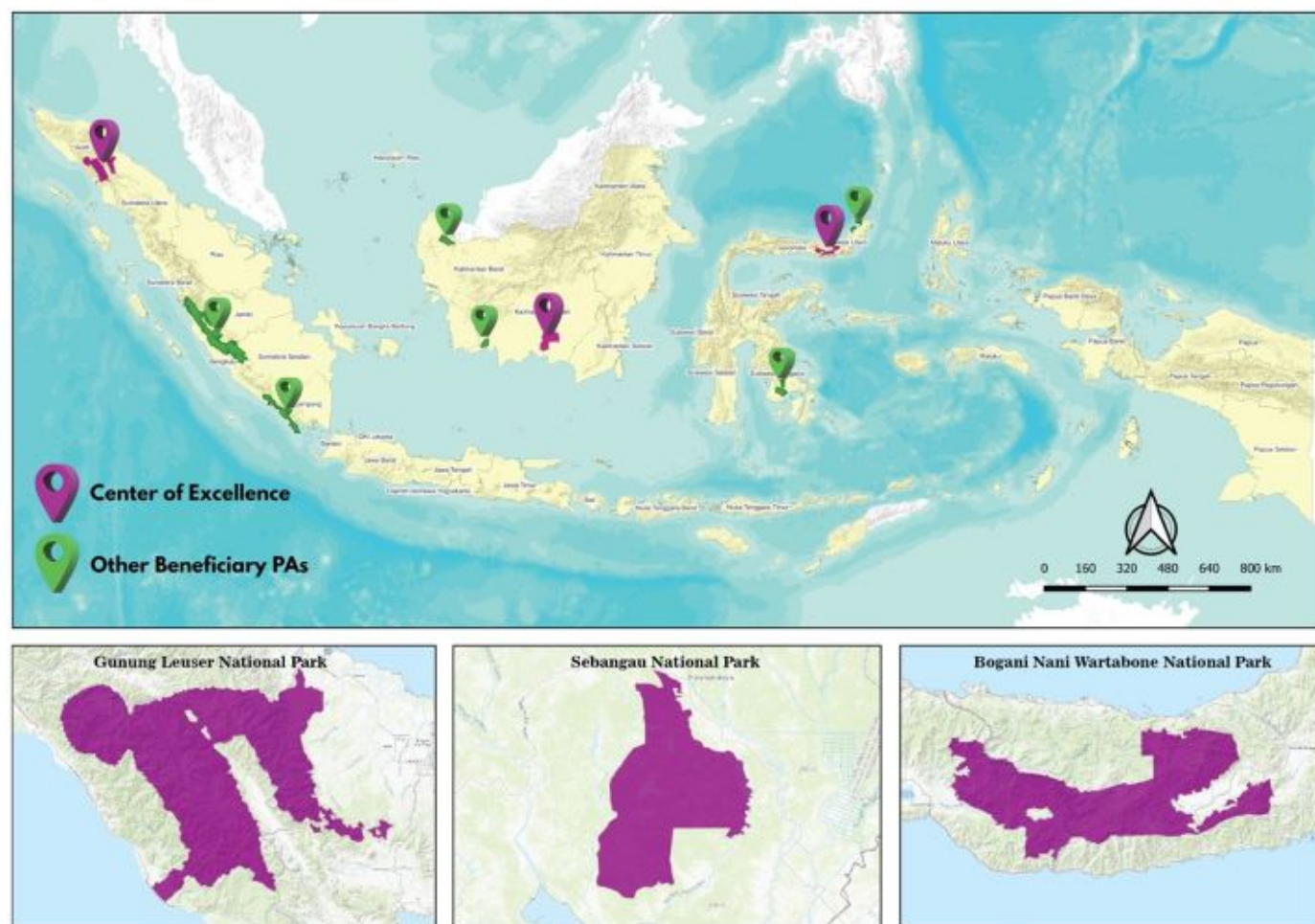


Figure 1. Suggested Project areas: Gunung Leuser National Park, Kerinci Seblat National Park, Bukit Barisan Selatan National Park (Sumatra); Bogani Nani Wartabone National Park, Rawa Aopa Watomohai National Park, Bunaken National Park (Sulawesi); Sebangau National Park, Lamandau Wildlife Reserve, Nyiut Penrissen Nature Reserve (Kalimantan).

Table 1. Information about Protected Areas and surrounding landscapes for Intervention

No	Island / Ecoregion*	Terrestrial Protected Area (ha)	Marine Protected Area (ha)	Area outside Protected Area (ha)	Total Area of intervention (ha)	Latitude of Center	Longitude of Center
		(A)	(B)	(C)	-	-	-
1	Gunung Leuser National Park (Sumatera Region)	830,269		489,799	1,320,068	3.6958° N	97.7045° E
2	Kerinci Seblat National Park (Sumatera Region)	1,389,510			1,389,510	-2.1633° S	101.5717° E
3	Bukit Barisan Selatan National Park (Sumatera Region)	330,852			330,852	-5.2150° S	104.1814° E
4	Bogani Nani Wartabone National Park (Sulawesi Region)	282,009		153,985	435,994	0.5522° N	123.9917° E

5	Rawa Aopa Watumohai National Park (Sulawesi Region)	105,194			105,194	-4.3742° S	121.7261° E
6	Bunaken National Park (Sulawesi Region)		73,983		73,983	1.6833° N	124.7500° E
7	Sebangau National Park (Kalimantan Region)	542,141		212,401	754,542	-2.6167° S	113.6167° E
8	Lamandau Wildlife Reserve (Kalimantan Region)	61,425			61,425	-2.3125° S	111.5264° E
9	Nyiut Penrissen Nature Reserve (Kalimantan Region)	91,696			91,696	0.7833° N	110.1667° E
	TOTAL	3,633,096	73,983	856,185	4,563,264	-	-

Brief descriptions of the project areas

Gunung Leuser National Park and the Surrounding Landscape

Extent : 96.921949, 2.938089 E
98.505665 4.046804 N

The Gunung Leuser National Park (TNGL) was designated as a national park in 1980 in order to protect its diverse range of flora and fauna. The park has a Management Effectiveness Tracking Tool (METT) score of 79 as of data in 2024, which indicates that it is well-managed overall. The park is of great importance for biodiversity conservation. It is home to over 10,000 species of plants and animals, many of which are found nowhere else in the world. The park also provides important ecosystem services, such as watershed protection and carbon sequestration. Gunung Leuser National Park, spanning the provinces of Aceh and North Sumatra in Indonesia, exhibits a remarkable ecological and geographical profile. The park encompasses a spectrum of ecosystems, ranging from lowland rainforests and montane forests to alpine meadows and volcanic peaks. Gunung Leuser National Park together with Kerinci Seblat National Park and Bukit Barisan Selatan National Park are part of World Heritage Site named Tropical Rainforest Heritage of Sumatera (TRHS) with Outstanding Universal Value Sumatran Orangutan (*Pongo abelli*), Sumatran Tiger (*Panthera tigris*), Sumatran Rhinoceros (*Dicerorhinus sumatrensis*), Sumatran Elephant (*Elephas maximus*), Sun bear (*Helarctos malayanus*), and Sumatran serow (*Capricornis sumatraensis*). Geologically, the park is situated within the active volcanic belt along Sumatra's western edge, contributing to its rugged terrain.

The surrounding landscape features a mixture of protected forests, agricultural areas, and human settlements. This highlights the challenge of balancing conservation efforts with the needs of local communities and sustainable development practices in the region. The park's topography and soils have a significant impact on its vegetation. The mountains and hills are covered in rainforest, while the lowlands are covered in a mix of rainforest and grasslands. The park's rivers and streams are also important habitats for a variety of plants and animals.

The park is also committed to innovation. In recent years, the park has implemented a number of innovative programs, such as using



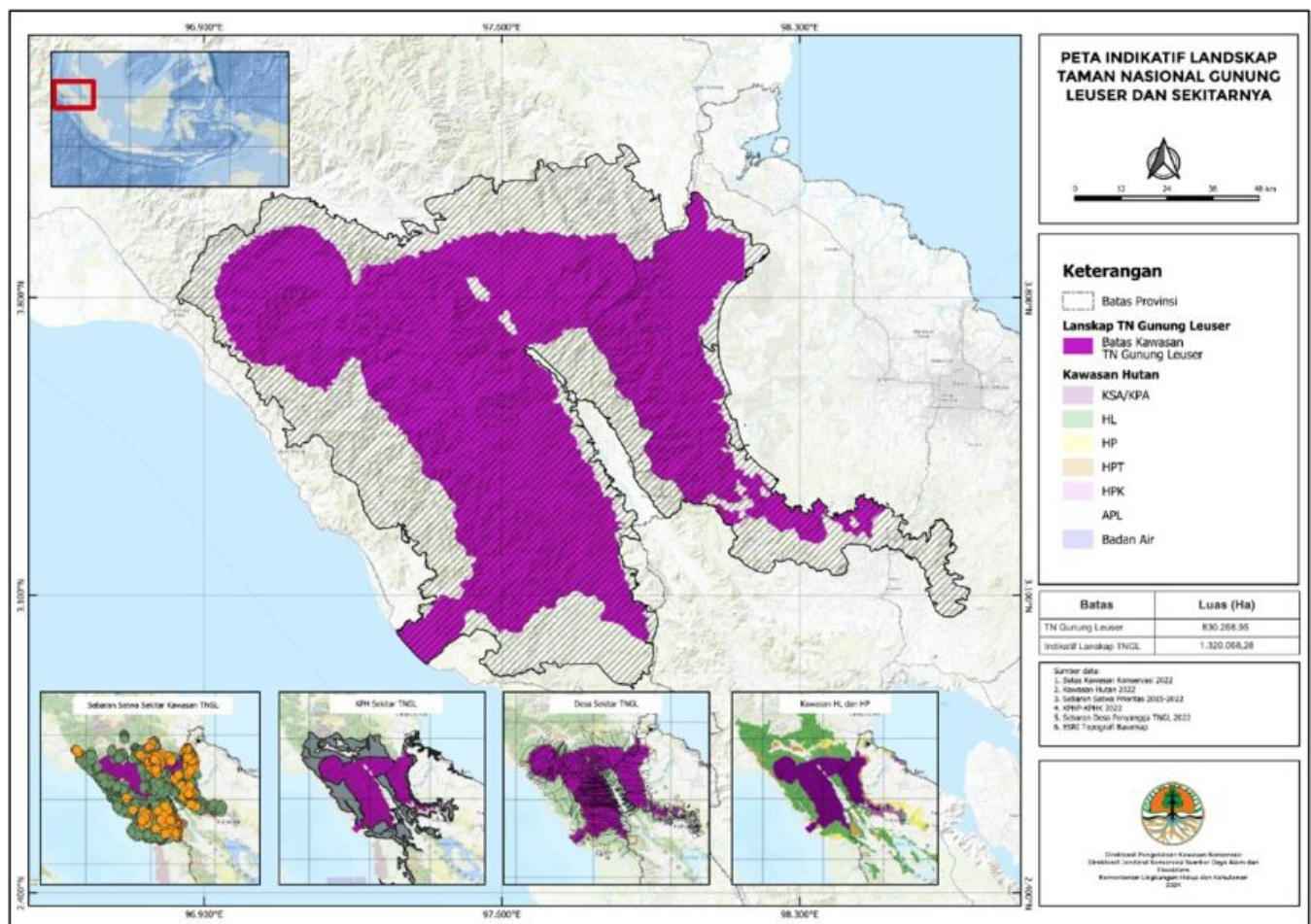


Fig 3. Indicative Landscape of intervention at Gunung Leuser National Park

Bogani Nani Wartabone National Park and the Surrounding Landscape

Extent : 123.122831, 0.355293 E
 124.230157, 0.806769 N

Bogani Nani Wartabone National Park (TNBNW) is the largest land conservation area located in the central part of the Sulawesi peninsula, Indonesia. It spans an area of 282,008.757 hectares and covers four districts: Bone Bolango Regency (Gorontalo Province), Bolaang Mongondow Regency, Bolaang Mongondow Utara Regency, and Bolaang Mongondow Selatan Regency (North Sulawesi Province). Geographically, the park is situated within the Wallacea bioregion, a transitional zone between Asian and Australian fauna. This position contributes to the park's rich biodiversity and makes it a scientifically important area for the study of evolution and biogeography. The surrounding landscape is characterized by a mix of natural forests, agricultural lands, and human settlements, highlighting the need for conservation strategies that balance ecological integrity with sustainable land use practices.

The biodiversity and ecosystems of Bogani Nani Wartabone National Park include moss forests, lowland mountain rainforests, lowland forests, and secondary forests. The park has a potential of more than 500 species of plants, dominated by *Ficus* species and around 80 species of orchids. The diversity of fauna consists of 200 species of birds, 45 of which are endemic to Sulawesi. Several

endemic mammals also live in the park, including the Highland Anoa (*Bubalus quarlesi*), Lowland Anoa (*Bubalus depressicornis*), Babirusa (*Babyrousa celebensis*), Tarsier (*Tarsius tarsier*), Cuscus (*Ailurops ursinus*), Sulawesi black monkey (*Macaca nigra*), and several species of amphibians, reptiles, and invertebrates.

Bogani Nani Wartabone National Park faces a number of challenges, including illegal gold mining, poaching, and forest encroachment. There are also lack of awareness from local people, they are not aware of the importance of biodiversity conservation, and so they do not support the park's efforts to protect it. Another challenges is limited resources. The park authorities have limited resources to manage the park and enforce the law.

These challenges are being addressed through a variety of initiatives. The park authorities are working to strengthen law enforcement, increase the patrol activity using SMART Patrol tools, increase community engagement, and develop sustainable livelihoods for local communities, education programs, outreach initiatives, and community engagement.. These efforts are essential to ensuring the long-term protection of BNWNP and its unique biodiversity.

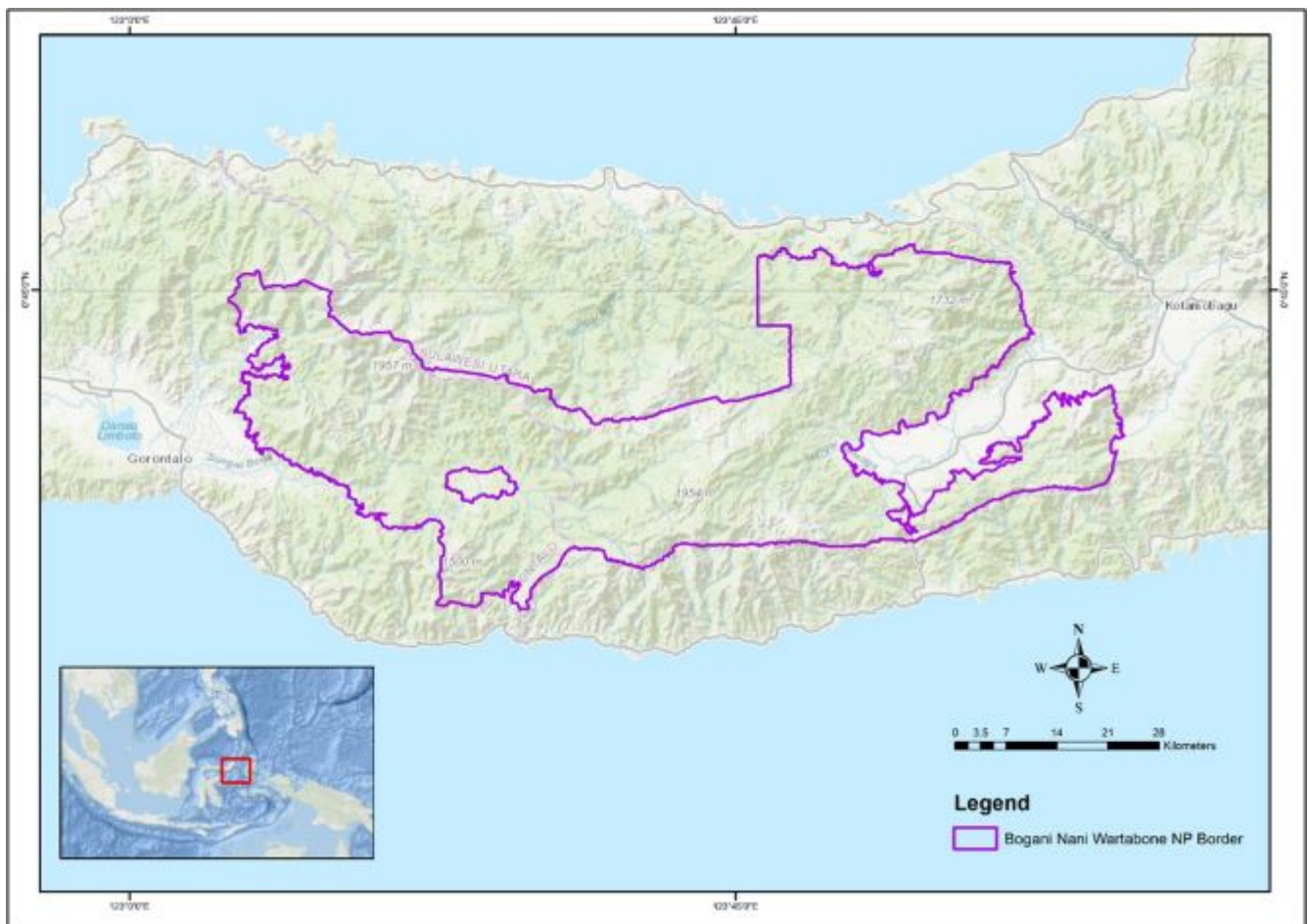


Figure 4. Bogani Nani Warabone National Park

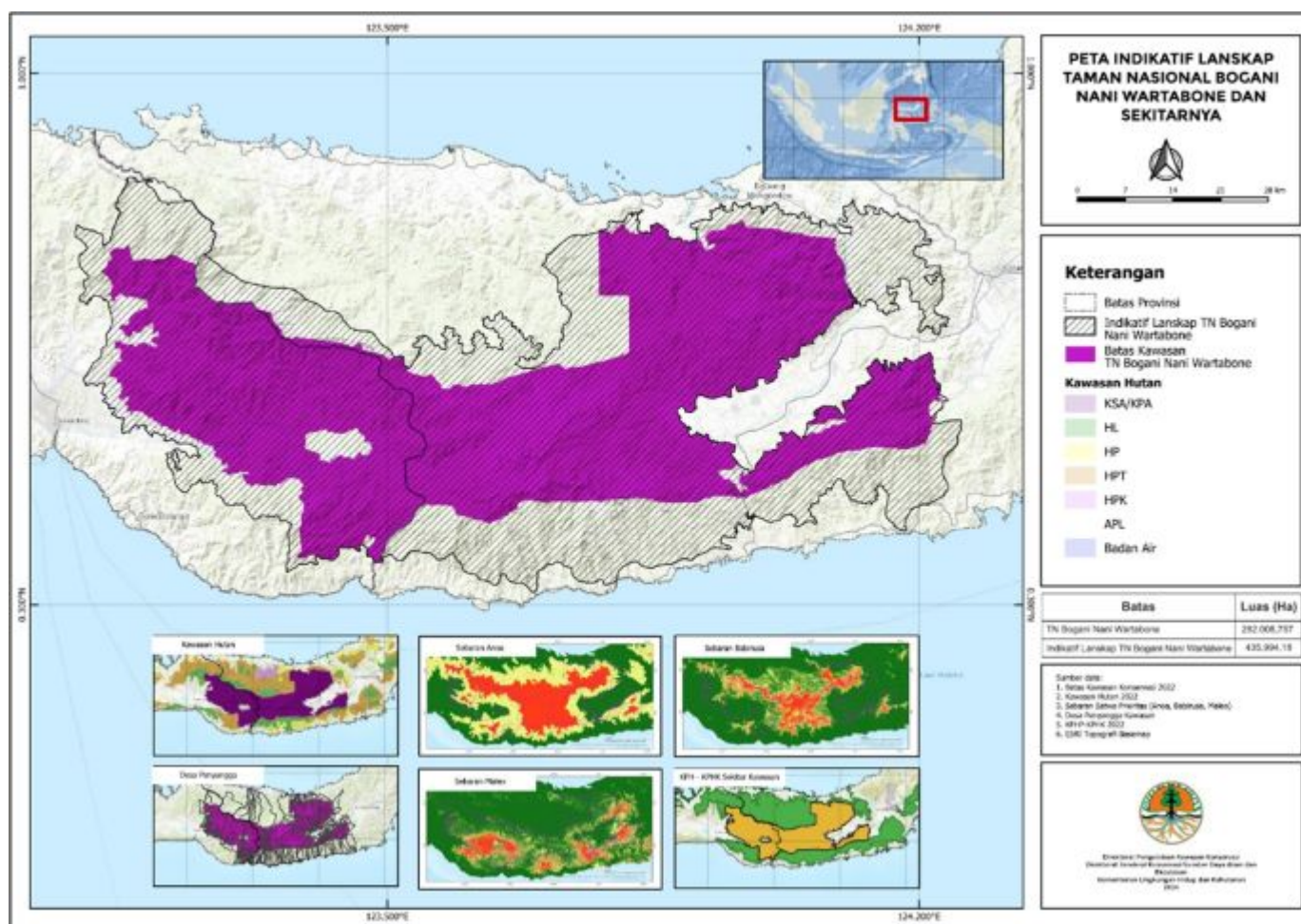


Figure 5. Indicative Landscape of intervention at Bogani Nani Wartabone National Park

Sebangau National Park and the Surrounding

Extent : 113.306307, -3.042418 E

114.076828, -1.920779 S

Sebangau National Park, located in Central Kalimantan, Indonesia, is renowned for its distinctive ecology and geographical features. The park is dominated by peat swamp forests, a unique ecosystem characterized by deep layers of waterlogged, decaying organic matter. This acidic and nutrient-poor environment harbors specialized flora and fauna, including the iconic orangutan, as well as numerous carnivorous plants and blackwater fish species adapted to the harsh conditions. Geographically, Sebangau sits on a vast peat dome that stores immense quantities of carbon, making it a vital component of global climate regulation. The surrounding landscape is a mosaic of peatlands, river systems, and areas affected by deforestation and land conversion. This underscores the importance of Sebangau National Park as a crucial refuge for peatland biodiversity and a frontline in the battle against further habitat loss and climate change.

Sebangau National Park (TNS) was established in 2004 with the mandate to protect and conserve the unique peat swamp forest ecosystem and its biodiversity. TNS is a highly important area for conservation. It is home to a wide variety of plant and animal

species, including many rare and endangered species. Within the Sebangau area, 35 species of mammals can be found, 13 of which have been identified as animals with an endangered category, including:

Gibbon (*Hylobates agilis*), Orangutan (*Pongo pygmaeus*), Maroon leaf monkey (*Presbytis rubicunda*), Sun bear (*Helarctos malayanus*), Clouded leopard (*Neofelis nebulosa*), Leopard cat (*Felis bengalensis*), Marbled cat (*Felis marmorata*), Flat-headed cat (*Felis planiceps*), Binturong (*Arctitis binturong*). The park also plays an important role in regulating the local climate and hydrology.

TN Sebangau faces a number of challenges, including: Illegal logging and mining: These activities are damaging the park's habitat and threatening the wildlife. Forest fires: Fires are a regular occurrence in the park, and they can cause extensive damage to the habitat. Encroachment by local communities: As the human population in Central Kalimantan grows, there is increasing pressure on the park's resources.

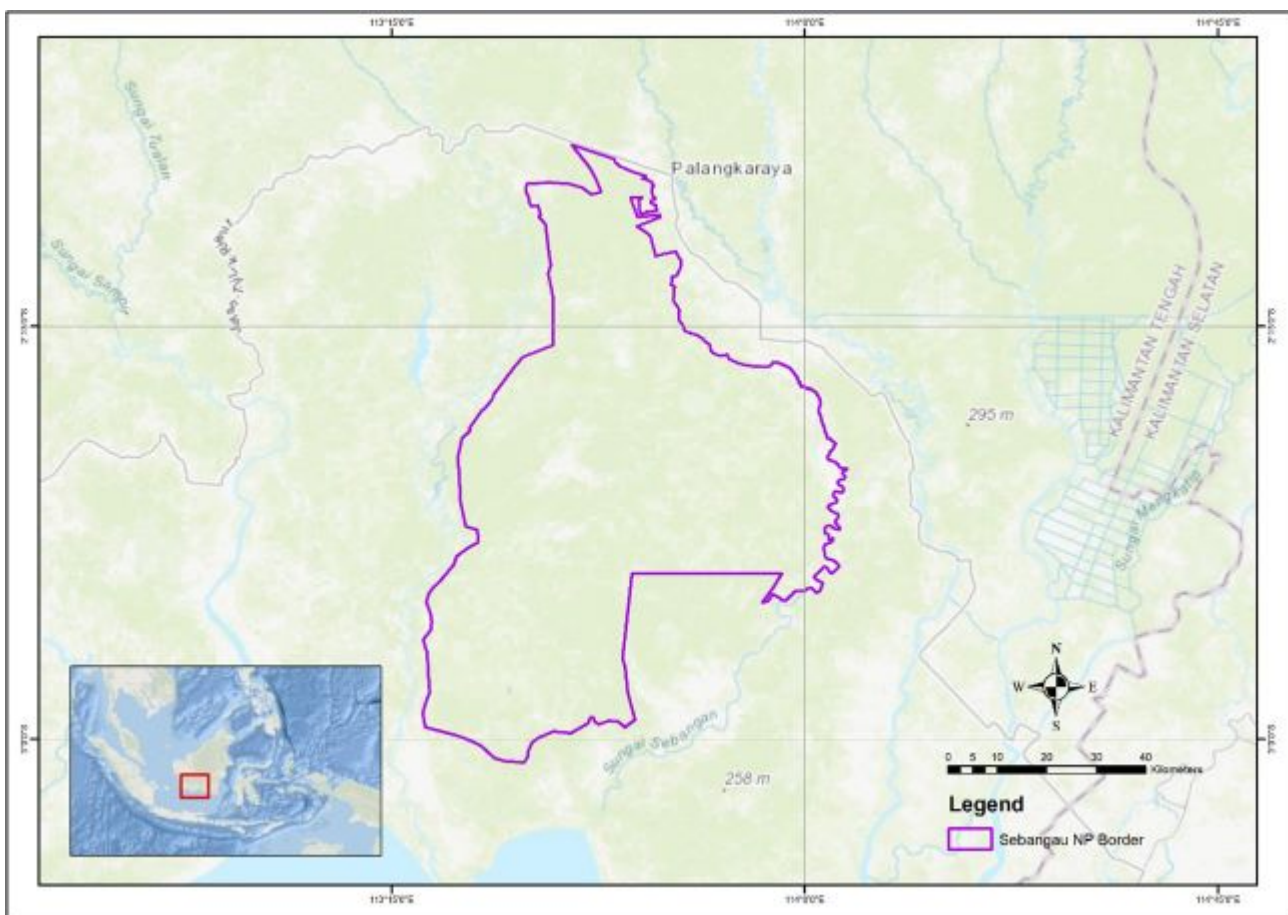


Figure 6. Sebangau National Park

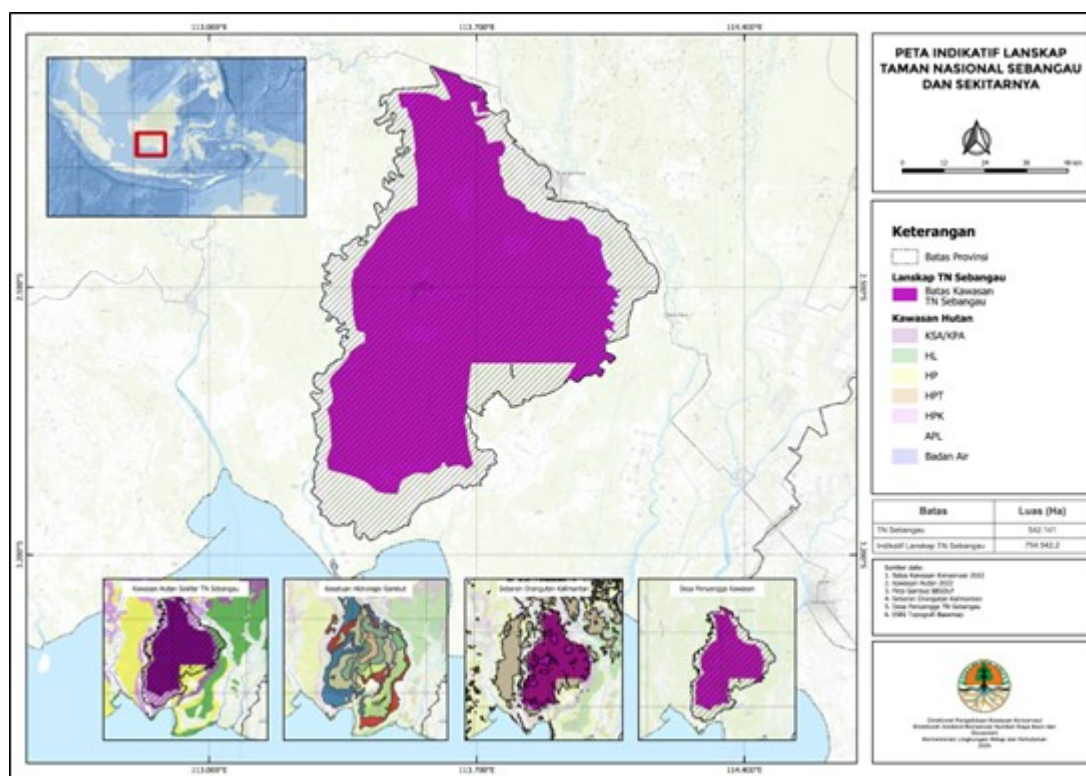


Fig 7. Indicative Landscape of intervention at Sebangau National Park

Kerinci Seblat National Park (1,389,510 ha). The National Park is the largest national park in Sumatra, stretching across four provinces (West Sumatra, Jambi, Bengkulu, and South Sumatra). It is part of the Tropical Rainforest Heritage of Sumatra (TRHS) UNESCO World Heritage Site and is home to diverse ecosystems, including montane forests, wetlands, and lowland rainforests, supporting endangered species such as the Sumatran tiger, Sumatran rhinoceros, and Malayan tapir. The park plays a crucial role in watershed protection, carbon sequestration, and biodiversity conservation, but faces threats from illegal logging, poaching, and encroachment, prompting conservation efforts through SMART patrols, community engagement, and habitat restoration initiatives.

Bukit Barisan Selatan National Park (330,852 ha). The Park is part of the Tropical Rainforest Heritage of Sumatra (TRHS) UNESCO World Heritage Site. The park is a critical habitat for endangered species, including the Sumatran tiger, Sumatran elephant, and Sumatran rhinoceros, while also protecting diverse ecosystems ranging from coastal forests to montane rainforests. Despite its ecological importance, illegal logging, poaching, and agricultural encroachment pose significant threats, leading to conservation efforts such as SMART patrols, community-based forest management, and wildlife protection programs.

Lamandau Wildlife Reserve (61,425 ha). The Reserve protects lowland peat swamp and tropical forests and serves as a crucial habitat for endangered Bornean orangutans (*Pongo pygmaeus*). The reserve functions as a rehabilitation and release site for rescued and rehabilitated orangutans while also supporting other key wildlife, including proboscis monkeys, sun bears, and hornbills. Conservation efforts focus on anti-poaching patrols, habitat restoration, and community engagement, but threats such as illegal logging, land conversion, and forest fires remain significant challenges.

Nyiut Penrisen Nature Reserve (91,696 ha). The Reserve is a biodiversity-rich protected area that forms part of the cross-border conservation landscape between Indonesia and Malaysia. The reserve is home to diverse ecosystems, including tropical rainforests, montane forests, and riverine habitats, supporting endangered species such as Bornean orangutans, hornbills, clouded leopards, and sun bears. While the reserve plays a crucial role in watershed protection and transboundary conservation, it faces threats

from illegal logging, encroachment, and habitat degradation, necessitating stronger enforcement, ecological monitoring, and sustainable community-based conservation initiatives.

Rawa Aopa Watumohai National Park (105,194 ha). The Park protects a diverse range of ecosystems, including peat swamps, savannas, lowland rainforests, and mangrove forests. The park is a key habitat for endangered species, such as the Anoa (*Bubalus spp.*), Sulawesi hornbill, and Maleo bird, while also playing a crucial role in carbon sequestration and hydrological regulation. However, illegal logging, land conversion, and forest fires threaten its biodiversity, prompting conservation efforts through patrols, habitat restoration, and community-based sustainable resource management.

Bunaken National Park (73,983 ha). The Park is renowned for its rich marine biodiversity, crystal-clear waters, and vibrant coral reef ecosystems. The park is home to over 390 species of coral, diverse marine life including sea turtles, reef sharks, and over 90 species of fish, making it a world-class destination for diving and marine conservation. While it plays a vital role in marine biodiversity protection and sustainable tourism, threats such as coral bleaching, overfishing, and pollution require ongoing marine patrols, sustainable fisheries management, and ecotourism-based conservation initiatives.

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

Pre-SESP_PIMS10124_ENABLE_14Feb25

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Land Degradation
No Contribution 0	Significant Objective 1	Principal Objective 2	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

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

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

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

<input type="checkbox"/> Forests	<input type="checkbox"/> Forest and Landscape Restoration	
		<input type="checkbox"/> REDD/REDD+
	<input type="checkbox"/> Forest	
		<input type="checkbox"/> Amazon
		<input type="checkbox"/> Congo
		<input type="checkbox"/> Other Critical Forest Biomes
		<input type="checkbox"/> Drylands
<input type="checkbox"/> Land Degradation	<input type="checkbox"/> Sustainable Land Management	
		<input type="checkbox"/> Restoration and Rehabilitation of Degraded Lands
		<input type="checkbox"/> Ecosystem Approach
		<input type="checkbox"/> Integrated and Cross-sectoral approach
		<input type="checkbox"/> Community-Based NRM
		<input type="checkbox"/> Sustainable Livelihoods
		<input type="checkbox"/> Income Generating Activities
		<input type="checkbox"/> Sustainable Agriculture
		<input type="checkbox"/> Sustainable Pasture Management
		<input type="checkbox"/> Sustainable Forest/Woodland Management
		<input type="checkbox"/> Improved Soil and Water Management Techniques
		<input type="checkbox"/> Sustainable Fire Management
		<input type="checkbox"/> Drought Mitigation/Early Warning
	<input type="checkbox"/> Land Degradation Neutrality	
		<input type="checkbox"/> Land Productivity
		<input type="checkbox"/> Land Cover and Land cover change
		<input type="checkbox"/> Carbon stocks above or below ground
	<input type="checkbox"/> Food Security	
<input type="checkbox"/> International Waters	<input type="checkbox"/> Ship	
	<input type="checkbox"/> Coastal	
	<input type="checkbox"/> Freshwater	
		<input type="checkbox"/> Aquifer
		<input type="checkbox"/> River Basin
		<input type="checkbox"/> Lake Basin
	<input type="checkbox"/> Learning	
	<input type="checkbox"/> Fisheries	
	<input type="checkbox"/> Persistent toxic substances	
	<input type="checkbox"/> SIDS: Small Island Dev States	
	<input type="checkbox"/> Targeted Research	
	<input type="checkbox"/> Pollution	
		<input type="checkbox"/> Persistent toxic substances
		<input type="checkbox"/> Plastics
		<input type="checkbox"/> Nutrient pollution from all sectors except wastewater
		<input type="checkbox"/> Nutrient pollution from Wastewater
	<input type="checkbox"/> Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
	<input type="checkbox"/> Strategic Action Plan Implementation	
	<input type="checkbox"/> Areas Beyond National Jurisdiction	
	<input type="checkbox"/> Large Marine Ecosystems	
	<input type="checkbox"/> Private Sector	
	<input type="checkbox"/> Aquaculture	
	<input type="checkbox"/> Marine Protected Area	
	<input type="checkbox"/> Biomes	

		<input type="checkbox"/> Mangrove
		<input type="checkbox"/> Coral Reefs
		<input type="checkbox"/> Seagrasses
		<input type="checkbox"/> Polar Ecosystems
		<input type="checkbox"/> Constructed Wetlands
	<input type="checkbox"/> Chemicals and Waste	
	<input type="checkbox"/> Mercury	
	<input type="checkbox"/> Artisanal and Scale Gold Mining	
	<input type="checkbox"/> Coal Fired Power Plants	
	<input type="checkbox"/> Coal Fired Industrial Boilers	
	<input type="checkbox"/> Cement	
	<input type="checkbox"/> Non-Ferrous Metals Production	
	<input type="checkbox"/> Ozone	
	<input type="checkbox"/> Persistent Organic Pollutants	
	<input type="checkbox"/> Unintentional Persistent Organic Pollutants	
	<input type="checkbox"/> Sound Management of chemicals and Waste	
	<input type="checkbox"/> Waste Management	
		<input type="checkbox"/> Hazardous Waste Management
		<input type="checkbox"/> Industrial Waste
		<input type="checkbox"/> e-Waste
	<input type="checkbox"/> Emissions	
	<input type="checkbox"/> Disposal	
	<input type="checkbox"/> New Persistent Organic Pollutants	
	<input type="checkbox"/> Polychlorinated Biphenyls	
	<input type="checkbox"/> Plastics	
	<input type="checkbox"/> Eco-Efficiency	
	<input type="checkbox"/> Pesticides	
	<input type="checkbox"/> DDT - Vector Management	
	<input type="checkbox"/> DDT - Other	
	<input type="checkbox"/> Industrial Emissions	
	<input type="checkbox"/> Open Burning	
	<input type="checkbox"/> Best Available Technology / Best Environmental Practices	
	<input type="checkbox"/> Green Chemistry	
	<input type="checkbox"/> Climate Change	
	<input type="checkbox"/> Climate Change Adaptation	
		<input type="checkbox"/> Climate Finance
		<input type="checkbox"/> Least Developed Countries
		<input type="checkbox"/> Small Island Developing States
		<input type="checkbox"/> Disaster Risk Management
		<input type="checkbox"/> Sea-level rise
		<input type="checkbox"/> Climate Resilience
		<input type="checkbox"/> Climate information
		<input type="checkbox"/> Ecosystem-based Adaptation
		<input type="checkbox"/> Adaptation Tech Transfer
		<input type="checkbox"/> National Adaptation Programme of Action
		<input type="checkbox"/> National Adaptation Plan
		<input type="checkbox"/> Mainstreaming Adaptation
		<input type="checkbox"/> Private Sector
		<input type="checkbox"/> Innovation
		<input type="checkbox"/> Complementarity
		<input type="checkbox"/> Community-based Adaptation
		<input type="checkbox"/> Livelihoods
	<input type="checkbox"/> Climate Change Mitigation	
		<input type="checkbox"/> Agriculture, Forestry, and other Land Use
		<input type="checkbox"/> Energy Efficiency
		<input type="checkbox"/> Sustainable Urban Systems and Transport
		<input type="checkbox"/> Technology Transfer

			<input type="checkbox"/> Renewable Energy
			<input type="checkbox"/> Financing
			<input type="checkbox"/> Enabling Activities
		<input type="checkbox"/> Technology Transfer	
			<input type="checkbox"/> Poznan Strategic Programme on Technology Transfer
			<input type="checkbox"/> Climate Technology Centre & Network (CTCN)
			<input type="checkbox"/> Endogenous technology
			<input type="checkbox"/> Technology Needs Assessment
			<input type="checkbox"/> Adaptation Tech Transfer
		<input type="checkbox"/> United Nations Framework on Climate Change	
			<input type="checkbox"/> Nationally Determined Contribution