

Environmental and Social Management Framework (ESMF)

The Indonesia Grid and Renewable Energy Financing Facility (GREFi)- P178788

**PT Perusahaan Listrik Negara
(PLN)**

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ABBREVIATIONS AND ACRONYMS

AMDAL	Environmental Impact Assessment
BESS	Battery Energy Storage Systems
BMP	Biodiversity Management Plan
BoQs	Bill of Quantities
C-MSIP	Contractor's Management Strategy and Implementation Plan
E&S	Environmental & Social
ECOP	Environmental Code of Practice
EHS	Environmental Health and Safety
EOI	Request for Expression of Interest Proposal
ESCP	Environmental and Social Commitment Plan
ESG	Environmental Social Government
ESIA	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plan
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standard
ESSs	Environmental and Social Standards
FI	Finance Institution
FS	Feasibility Study
GBV	Gender-based violence
GHGs	Greenhouse Gases
GIIP	Good International Industry Practice
GR	Government Regulation
GREFi	Grid and Renewable Energy Financing Facility
GRM	Grievance Redress Mechanisms
IA	Impact Assessment
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
IMS	Integrated Management System
IP	Indigenous Peoples
IPF	Investment Project Financing
IPP	Indigineous People
IUPTLU	Supply of Electricity for Own Interests
KBAs	Key Biodiversity Areas
KKO & KKF	Operational & Financial Work Assessments (<i>Kajian Kerja Operasional & Kajian Kerja Finansial</i>)
LARAP	Land Acquisition and Resettlement Action Plan
LARPF	Land Acquisition and Resettlement Policy Framework
LMF	Labor Management Framework
PCM	Private-Capital Mobilization
PLN	<i>PT Perusahaan Listrik Negara</i> or a state-owned utility company

POM	Project Operations Manual
RFP	Request for Proposal
RE	Renewable Energy
RKL-RPL	Environmental Management Plan and Environmental Monitoring Plan
RUPTL	Rencana Usaha Penyediaan Tenaga Listrik
SEA	Sexual Exploitation and Abuse
SEF	Stakeholder Engagement Framework
SPPL	Statement of Commitment to Implement Environmental Management and Monitoring
TA	Technical Assistance
TEK	<i>Transisi Energi dan Berkelanjutan</i> or Energy Transition Sustainability
TORs	Term of References
UIP	<i>Unit Induk Pembangunan</i>
UIW	<i>Unit Induk Wilayah</i>
UKL-UPL	Environmental Management and Monitoring
VRE	Variable Renewable Energy
WB	World Bank

1 INTRODUCTION

This document is a framework that describes how the environmental and social risks of investments supported under the Indonesia Grid and Renewable Energy Financing Facility Project, a commercial lenders' facility guaranteed by the World Bank, will be managed. Under this project, the World Bank will provide a guarantee to mobilize commercial financing up to US\$1.5 - 2 billion for certain types of renewable energy (RE)-enabling projects, with the main focus on energy transmission and storage infrastructure critical for the integration of renewable energies. Additionally, it aims to support PT Perusahaan Listrik Negara (PLN) in improving its Environmental, Social, and Governance (ESG) programs.

1.1 Purpose of Environmental and Social Management Framework (ESMF)

The Environmental and Social Management Framework (ESMF) is drafted as a living document outlining the principles, relevant policies, procedures, and institutional arrangements to screen, assess, plan, and implement the required measures. These measures ensure that the preparation and implementation of investments by PT Perusahaan Listrik Negara (PLN) – a state-owned utility company – under the Indonesia Grid and Renewable Energy Financing Facility Project (hereafter referred to as the Project or GREFi) activities avoid or mitigate potential adverse environmental and social risks and impacts. This ESMF document can also be applied to other funding with similar project characteristics.

The ESMF is intended to ensure that risks and impacts are managed in accordance with the World Bank's Environmental and Social Framework (ESF) and its applicable Environmental and Social Standards (ESSs). The ESMF builds on the relevant environmental and social legislative and regulatory framework of Indonesia, with supplemental measures being incorporated to fully meet relevant provisions under the World Bank's ESF.

The ESMF considers that it is necessary to identify potential environmental and social risks and impacts early to enable the proper design of project activities along with risk and impact mitigation measures. Hence, relevant measures and operational guidelines presented in the document seek to ensure adequate planning through participatory consultations and stakeholder engagement to identify risks during project implementation and build consensus with potentially affected stakeholders.

PLN has recently disclosed an Environmental and Social Management System (ESMS) including the 16 Management Guidelines, a high-level management framework designed to be adaptable to all (foreign funded) projects. Recognizing that PLN's ESMS is still maturing, it has been decided to develop an ESMF that is specific to GREFi project.

ESMF was prepared based on but apply independently of ESMS to address and account GREFi specific E&S risks. All appendices of the ESMF are adopted from the ESMS Management Guidelines such as Land Acquisition & Resettlement Policy Framework (LARPF), Indigenous Peoples Policy Framework (IPPF), Stakeholder Engagement Framework (SEF), Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) outlines, and Environmental Health, Safety and Security (EHSS). In the event that ESMS gets updated and if deemed relevant, ESMF may be updated too, subject to the Bank's clearance. The ESMF will apply throughout the project and will not be replaced by the ESMS, although ESMF may be updated in line with the updated ESMS, which requires clearance by the Bank. Besides tentative locations for the first tranche, specific details and locations of individual project investments will be confirmed during the project implementation. As such, a framework approach is established for the overall project design to guide the overall management of the environment and social aspects of individual investment activities. The ESMF was developed as part of the requirements under the ESF for the project appraisal. The ESMF and/or relevant sections in the Project Operations Manual (POM) shall be updated as needed during project implementation in the event that the project's scope changes and/or if there are emerging risks not fully and/or partially assessed during the project implementation.

1.2 Scope and Methodology of ESMF

All projects have the potential to cause adverse environmental and social impacts. Knowing this, it is therefore essential to put in place a process to avoid or minimize them as per Indonesian law and the World Bank's ESF.

The ESMF provides guidance on screening a range of investment typologies for eligibility under the Project, describing the potential environmental and social risks associated with the typology and the baseline conditions under which an investment could be developed, and outlining environmental and social instruments to mitigate the potential risks.

The ESMF also identifies the responsibilities of project stakeholders, outlines the personnel needs to carry out environmental and social management, explains capacity-building plans to implement the management framework, describes information disclosure, and defines an evaluation and grievance redress mechanism.

The ESMF preparation process began with the preparation of the contents of the ESMF. It was then followed by an assessment of the profile of the Indonesia Grid and Renewable Energy Financing Facility (GREFi) project components, stakeholder mapping, the current situation of environment and social regulations, and recommendations related to policies, institutions, and capacity building, which became the main reference for the preparation of the ESMF.

1.2.1 ESMF Consultation Result

Placeholder. This section is to be completed after ESMF public consultation.

1.3 Structure of ESMF

The structure of this ESMF is described as follows:

- **Chapter 1** sets out ESMF purposes, scope, and methodology.
- **Chapter 2** provides information on Indonesia Grid and Renewable Energy Financing Facility Project objectives, design, and components.
- **Chapter 3** describes the legal, policy, and regulatory framework that will apply to the Project and investments. The chapter outlines Indonesia's laws, legislation, and regulatory framework, PLN's environmental and social management program, and World Bank's ESF and ESSs.
- **Chapter 4** provides a high-level summary of potential environmental and social risks and impacts that may be generated from GREFi activities along with its mitigation measures that can be employed to avoid or minimize risks and impacts.
- **Chapter 5** summarizes steps that should be taken during environmental and social planning and preparation activities.
- **Chapter 6** outlines stakeholder engagement and information disclosure including how stakeholders can communicate or raise concerns through feedback and grievance redress mechanism.
- **Chapter 7** describes the Monitoring and Reporting that PLN will be required to undertake throughout investment development and implementation, including what must be monitored, when monitoring has to be conducted, where monitoring will take place, who will be responsible for monitoring, and who will review monitoring results.
- **Chapter 8** describes the institutional arrangement by listing the responsible parties and responsibilities of each party. The chapter also describes key basic training and technical training that will need to be established to increase PLN's staff skills and knowledge during ESMF implementation.
- **Chapter 9** summarizes the Financing that will be needed to implement ESMF and other ES instruments.

Annexes include in this ESMF such as Geographical E&S Characteristics, ESDD Outline, and ESIA and ESMP Outline, Forced Labor Declaration and Guideline for Study Determining

Transmission Line Corridor with Scoring System. Other documents such as Stakeholder Engagement Framework (SEF), Land Acquisition and Resettlement Policy Framework (LARPF), and Indigenous People Planning Framework (IPPF) are integrated with ESMF and will be used during ESMF implementation.

2 PROJECT DESCRIPTION

2.1 Project Objectives

PT PLN (Persero) as a State-Owned Enterprise, was given the mandate by the Indonesian government to support national growth by providing reliable electricity to all regions in Indonesia. PLN is tasked with developing a long-term electricity system to meet electricity capacity and energy needs, utilize new and renewable energy, and improve the efficiency and performance of the electricity system, especially by prioritizing the energy transition program to achieve Net Zero Emissions (NZE) by 2060.

In achieving this ambitious energy transition target and considering the enormous investment needs in the electricity sector, PLN realizes the importance of collaboration with various parties, including multilateral banks such as the World Bank. Through the Indonesian Grid and Renewable Energy Financing Facility (GREFi) (hereinafter referred to as the Project), the World Bank plans to provide funding programs to PLN to strengthen the electricity system, develop clean energy, and increase human resource capacity.

Commercial lenders and investors are becoming more and more sensitive about ESG risks generally and about the ESG direction that their borrowers are taking. These concerns apply increasingly to an entity such as PLN which has a large coal-fired generation asset base. Under the GREFi Project, PLN is expected to test in the markets its newly developed ESG frameworks through a series of transactions supported by a World Bank Guarantee. Combined, the market-tested track record and the corporate systems' capacity improvements aim to improve and maintain PLN's access to market-based sustainable financing, as a key financing source for Indonesia's long-term energy transition, thereby helping Indonesia increase the integration of RE in its power systems and reduce greenhouse-gas emissions as the intended long-term outcome of this Project.

The main objective of the project is to enable the deployment and integration of renewable energy (RE) in Indonesia's power sector through the mobilization of private capital. The increasing emphasis of investors on Environmental, Social, and Governance (ESG) risks is putting pressure on entities like PLN, which have a large coal-fired power asset base. Combined with corporate ESG capacity improvements supported under a separate technical assistance program, this project aims to pilot and secure PLN's continued access to market-based sustainable financing instruments as a key source of financing for Indonesia's long-term energy transition.

2.2 Project structure

The GREFi program is planned to be implemented through the IBRD Guarantee scheme worth up to USD 1 billion. This scheme will provide partial credit enhancement to mobilize PLN loans ranging from USD 1.5 to 2 billion from participating commercial lenders and investors through a series of transactions. The objective is to create a blended financing vehicle that enables PLN to access the Sustainable Finance market on a large scale.

The IBRD Guarantee is expected to facilitate PLN's access to sustainable finance markets on improved terms and conditions due to the expected reduction in financing costs or increase in tenor. For each GREFi transaction backstopped by the IBRD Guarantee, PLN will have the flexibility to use the best fit-for-purpose sustainable finance instrument among the ones established in the market. The financing vehicle put in place under the proposed Project would provide incentives to PLN to meet pre-established ESG performance indicators compatible with its corporate commitments and low-carbon development pathway.

Given the large size of the financing and the current challenging market environment, the borrowing will be executed in several transactions or tranches. The individual transactions/tranches will be sized and timed based on PLN's investment needs during the Project implementation period. The use of proceeds of the guaranteed financing will be ring-fenced for specific permitted uses, and it will be monitored for appropriate use of funds for eligible RE-enabling related investments, using escrow accounts as necessary. PLN and WB have agreed on the following three eligibility criteria:

- a) Contribution to the energy transition: The proposed expenditures must be related to the addition of renewable energy (RE) capacity and grid enhancements for the integration of RE or other subprojects contributing to greenhouse gas (GHG) reduction;
- b) E&S adequacy: Subprojects need to pass WB E&S Due Diligence (ESDD), which will screen E&S risks and identify mitigation and remediation measures to be applied prior to and during Project implementation;
- c) Readiness and financing needs: The proposed investments must be planned to be implemented by PLN during the work implementation period (2024-28)

A robust process underpinned the identification of the investments supported by the first transaction, based on the above eligibility criteria. Based on this, the first tranche will support critical 500 kV and 270 kV backbone transmission lines in Sumatra, for which comprehensive economic, financial, social and environmental due diligence was completed.

ESDD for Tranche 1 Financing has been completed and has been disclosed by PLN through the project link <https://web.pln.co.id/grefi>. The preparation and implementation of the GREFi transactions will be complemented by comprehensive Technical Assistance – funded through separate projects outside GREFi, to support PLN in strengthening its ESG frameworks and developing the required sustainable finance frameworks underlying the transactions. As part of such technical assistance, the World Bank is expected to support also the preparation of ES studies and instruments for the subsequent transactions, and/or support the implementation of corrective actions and mitigation measures during project implementation, as per ESDD recommendations.

3 LEGAL, POLICY AND REGULATORY FRAMEWORK

3.1 World Bank Environmental and Social Framework (ess1-10)

All Projects guaranteed by GREFi will be subjected to the World Bank's Environmental and Social Framework which includes 10 E&S Standards (ESSs). ESSs are described in Table 3-1 below.

Table 3.1 Environment and Social Standards (ESSs) that Apply to the Activities Being Considered

Environmental and Social Standard (ESS) Relevancy	ESSs Requirements	Applicability
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts Sets out the Borrower's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing (IPF), in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).	1. Develop the Environmental and Social framework that will be used during the projects. 2. Carry out an environmental and social assessment of the project to assess the environmental and social risks and impacts of the project throughout the project life cycle. 3. Develop and implement an Environmental and Social Commitment Plan (ESCP), which will set out measures and actions required for the project to achieve compliance with the ESSs over a specified timeframe. 4. Monitor the environmental and social performance of the project in accordance with the legal agreement including the ESCP. 5. Stakeholder engagement and information disclosure should be done throughout the life cycle of the project.	Yes
ESS 2: Labour and Working Conditions Recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Borrowers can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.	1. Develop and implement the written labor management procedures which is applicable to the project. 2. Protecting the workforce by ensuring there is no child under the minimum age (18 years old) who will be employed or engaged in connection with the project. 3. Providing a grievance mechanism for all direct workers and contracted workers. 4. Measures relating to occupational health and safety will be applied to the project. The OHS measures will include the requirements of this Section and will take into account the General EHSGs and, as appropriate, the industry specific EHSGs and other GIIPs. 5. Establish the procedures for managing and monitoring the performance of contracted workers. 6. Engage with community workers and then develop the labor management procedures and engage including amount and method of payment. 7. Identify the potential risks of child labor, forced labor and serious safety issues which may arise in relation to primary suppliers.	Yes
ESS 3: Resource Efficiency and Pollution Prevention and Management Recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life-cycle.	1. Consider the ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. 2. Implement technically and financially feasible measures on Energy efficiency programs for improving efficient consumption of energy, water and raw materials, as well as other resources. 3. Develop and implement the pollution prevention and management plan and also avoid the release of pollutants or, when avoidance is not feasible, minimize and control	Yes

Environmental and Social Standard (ESS) Relevancy	ESSs Requirements	Applicability
	the concentration and mass flow of their release using the performance levels and measures specified in national law or the EHSGs.	
ESS 4: Community Health and Safety Addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of Borrowers to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable.	1. Evaluate the risks and impacts of the project on the health and safety of the affected communities during the project life cycle, including those who, because of their particular circumstances, may be vulnerable. 2. Security personnel need to be sought to ensure that government security personnel are deployed to provide security services.	Yes
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement Involuntary resettlement should be avoided. Where involuntary resettlement is unavoidable, it will be minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) will be carefully planned and implemented.	1. Compensation and benefits for affected persons shall be performed When land acquisition or restrictions on land use (whether permanent or temporary) cannot be avoided. 2. Engage with affected communities including host communities, through the process of stakeholder engagement. 3. Ensure a grievance mechanism for the project is in place. 4. Where land acquisition or restrictions on land use are unavoidable, conduct a census to identify the persons who will be affected by the project, to establish an inventory of land and assets to be affected. 5. Develop a plan that covers Physical displacement. 6. In the case of projects affecting livelihoods or income generation, develop a plan will measures to allow affected persons to improve, or at least restore, their incomes or livelihoods. 7. establish means of collaboration between the agency or entity responsible for project implementation and any other governmental agencies, subnational jurisdictions or entities that are responsible for any aspects of land acquisition, resettlement planning, or provision of necessary assistance	Yes
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development and it recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. ESS6 also addresses sustainable management of primary production and harvesting of living natural resources and recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples, whose access to, or use of, biodiversity or living natural resources may be affected by a project.	1. identify the potential project-related risks to and impacts on habitats and the biodiversity that they support. In accordance with the mitigation hierarchy, the initial assessment of project risks and impacts without taking into account the possibility of biodiversity offsets. 2. Assessment will include characterization of baseline conditions to a degree that is proportional and specific to the anticipated risk and significance of impacts. 3. Differentiated risk management approach to habitats based on their sensitivity and values. 4. Establish systems and verification practices which will: (a) identify where the supply is coming from and the habitat type of the source area; (b) where possible, limit procurement to those suppliers that can demonstrate that they are not contributing to significant conversion or degradation of natural or critical habitats; and where possible and within a reasonable period, shift PLN's primary suppliers to suppliers that can demonstrate that they are not significantly adversely impacting these areas.	Yes

Environmental and Social Standard (ESS) Relevancy	ESSs Requirements	Applicability
ESS 7: Indigenous Peoples Historically Underserved Traditional Local Communities ensures that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. ESS7 is also meant to avoid adverse impacts of projects on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, or when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.	1. Assess the nature and degree of the expected direct and indirect economic, social, cultural (including cultural heritage), and environmental impacts on Indigenous Peoples. 2. Where projects are designed to provide benefits only to Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, the PLN will proactively engage with the relevant Indigenous. 3. Obtain the FPIC of the affected Indigenous Peoples Historically Underserved Traditional. 4. Bank technical or financial support, in the context of a specific project or as a separate activity, for the preparation of plans strategies or other activities intended to strengthen. - Consideration and participation of Indigenous Peoples - Traditional Local Communities (as they may be referred to in the national context) in the development process. 5. A grievance mechanism should be established for the project.	Yes
ESS 8: Cultural Heritage recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. ESS8 sets out measures designed to protect cultural heritage throughout the project's life cycle. Read the full ESS8: Cultural Heritage	1. The environmental and social assessment, as set out in ESS1, PLN will consider direct, indirect and cumulative project-specific risks and impacts on cultural heritage. 2. Carry out meaningful consultations with stakeholders in accordance with ESS10 to identify cultural heritage that may be affected by the potential project. 3. Comply with local, national, regional, or international cultural heritage regulations and the protected area management plans. 4. In consultation, determine with cultural heritage experts, whether archaeological material discovered during the project life cycle requires: (a) documentation only; (b) excavation and documentation; or (c) conservation in place, and will manage the archaeological material accordingly. 5. Where a project intends to use a cultural heritage of project-affected parties including individuals and communities) for commercial purposes, the Borrower will inform the project affected parties of: (a) their rights under national law; (b) the scope and nature of the commercial development and the potential impacts; and (c) the potential consequences of such development and impacts.	Yes
ESS 9: Financial Intermediaries (FI) Recognizes that strong domestic capital and financial markets and access to finance are important for economic development, growth and poverty reduction. FIs are required to monitor and manage the environmental and social risks and impacts of their portfolio and FI subprojects, and monitor portfolio risk, as appropriate to the nature of intermediate financing. The way in which the FI will manage its portfolio will take various forms, depending on a number of considerations, including the capacity of the FI and the nature and scope of the funding to be provided by the FI.	FIs will put in place and maintain an ESMS to identify, assess, manage, and monitor the environmental and social risks and impacts of FI subprojects on an ongoing basis.	No
ESS10: Stakeholder Engagement and Information Disclosure	1. Identify the different stakeholders, both project-affected parties and other interested parties.	Yes

Environmental and Social Standard (ESS) Relevancy	ESSs Requirements	Applicability
Recognizes the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.	- Engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. - Develop and implement a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts.	

The ESS will require that environmental and social risks are managed in accordance with Good International Industry Practice (GIIP). In particular, GIIP includes environmental, health, and safety guidelines developed by the World Bank Group. These includes:

- WBG EHS General Guidelines (2007)¹
(General environmental and OHS requirements for construction and for all operational projects)
- WBG EHS Guidelines - Electric Power Transmission and Distribution (2007)²

For the Project and all investments, the key ESS requirements will be included in an Environmental and Social Commitment Plan (ESCP). The ESCP will be included in the GREFi legal agreements with PLN and will include such things as:

- Appointment of dedicated environmental and social experts at the Project and subprojects/investments level;
- Preparation and implementation of relevant instruments such as Environmental & Social Impact Assessment (ESIA), Environment & Social Management Plan (ESMP), Environmental Code of Practice (ECOP), Labor Management Plan (LMP), Stakeholder Engagement Plan (SEP), Biodiversity assessment and/or management plan, Land Acquisition and Resettlement Action Plan (LARAP) and Indigenous Peoples Plan (IPP);
- Management and supervision of contractors;
- Preparation and clearances of TORs for ESMS improvement and capacity building;
- Setting up and maintaining operational Grievance Redress Mechanisms (GRM) for external stakeholders and workers;
- Capacity building/training plan; and
- Monitoring and reporting arrangements.

3.2 Indonesian and PLN Policies

3.2.1 Indonesia Laws and Regulations

The national legislative and regulatory framework is described in the following subsections, which followed the same organization as the ESSs.

¹<https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=nPtquVM>

²<https://www.ifc.org/wps/wcm/connect/7b65ce6b-129d-4634-99dc-12f85c0674b3/Final%2B-%2BElectric%2BTransmission%2Band%2BDistribution.pdf?MOD=AJPERES&CVID=nPtftp32&id=1323162154847>

3.2.1.1 Environmental and Social Assessment

Indonesian laws and regulation on environmental and social assessment that applicable for the GREFi project are as follow:

- Omnibus Bill/Job Creation Law/Undang-Undang Cipta Kerja or UUCK (Government Regulation in Lieu of Law No. 2 Year 2022).
- Law No. 32 Year 2009 Regarding Environmental Protection and Management.
- Government Regulation No. 22 Year 2021 on Implementation of Environmental Protection and Management.
- Government Regulation (GR) No. 5 Year 2021 on Implementation of Risk-Based Business Licenses.
- Minister of the Environment and Forestry Regulation No. 4 Year 2021 on Business and/or Activity types that require an AMDAL, UKL-UPL, or SPPL.
- Minister of the Environment and Forestry Regulation No. 16 Year 2012 on Guidelines for Preparation of Environmental Documents.
- Minister of the Environment and Forestry Regulation No. 17 Year 2012 on Guidelines for Public Participation.
- Spatial Planning Law 26 Year 2007 on Spatial Planning and province/City level Law on spatial plans (RTRWs)/detailed spatial plans (RDTRs).
- Minister of the Environment and Forestry Regulation No. 26 Year 2018 on Guidelines for Preparation and Assessment and Examination of Environmental Documents in the Implementation of Electronically Integrated Business Licensing Services (OSS).
- Ministry of Energy and Mineral Resources (MEMR) regulation No. 11 Year 2021 Implementation of Electricity Business.

The following Table 3.2 shows the reference of each type of environmental document that needs to be obtained for project investments according to Minister of the Environment and Forestry Regulation No. 4 Year 2021.

Table 3.2 Determination of Environmental Document Type for Each Activity

No	KBLI No	Type of Activities	EIA/AMDAL Scale	UKL-UPL Scale	SPPL Scale	AMDAL Scientific Reason ³	AMDAL Category/UKL-UPL Category
Power Plant							
		Battery Energy Storage Systems ⁴	-	-	-	-	-
Transmission Network Development							
	35112, 35115, 35116	a. Voltage Tower (direct current)	> 230 kV	35 kV ≤ voltage ≤ 230 kV	< 35 kV	Potentially causes impacts in the form of: a. Community unrest due to falling land prices. b. presence of magnetic and electric fields. c. social, economic and cultural aspects, especially on land acquisition and public unrest	B
		b. Voltage Tower (alternating current)	> 230 kV	35 kV ≤ voltage ≤ 230 kV	< 35 kV		
		c. Cable Channel	> 230 kV	35 kV ≤ voltage ≤ 230 kV	< 35 kV		
		d. Marine Cable Channel	> 230 kV	35 kV ≤ voltage ≤ 230 kV	< 35 kV		

³ Scientific Reasons for Environmental Impact Assessment (AMDAL) was taken from the Minister of the Environment and Forestry Regulation No. 4 Year 2021, means providing rational and empirical justifications or explanations for conducting an Environmental Impact Assessment (AMDAL) based on the original regulatory framework. This framework outlines the specific criteria and requirements for assessing potential environmental effects of a proposed project or activity, ensuring that decisions are made in accordance with established scientific standards and legal guidelines for environmental protection and sustainable development.

⁴ There are currently no written criteria for determining environmental documentation based on voltage scale in the energy and mineral resources sector for BESS activities. However, it may be referenced to criteria related to the area's extent.

No	KBLI No	Type of Activities	EIA/AMDAL Scale	UKL-UPL Scale	SPPL Scale	AMDAL Scientific Reason ³	AMDAL Category/UKL-UPL Category
		e. High Voltage Substation	> 230 kV	35 kV ≤ voltage ≤ 230 kV	< 35 kV		
		f. Gas Insulted Switchgear (GIS) Substation	> 230 kV	35 kV ≤ voltage ≤ 230 kV	< 35 kV		
		g. HVDC Transmission Converter Substation/Station	> 230 kV	35 kV ≤ voltage ≤ 230 kV	< 35 kV		
Distribution Network Development							
	35113, 35115, 35117, 35118	a. Medium/Low Voltage Airline	-	1 kV ≤ voltage < 35 kV (in protected area)	100 V ≤ voltage < 35 kV		B
		b. Tension Marine Cable Channels	-	1 kV ≤ voltage < 35 kV	-		B
		c. Medium/Low Voltage Cable Channel	-	-	100 V ≤ voltage < 35 kV		B
		d. Low Voltage Sea Cable Channel	-		100 V ≤ voltage < 1 kV		B

No	KBLI No	Type of Activities	EIA/AMDAL Scale	UKL-UPL Scale	SPPL Scale	AMDAL Scientific Reason ³	AMDAL Category/UKL-UPL Category
		e. Medium Voltage Connection Substation		1 kV ≤ voltage < 35 kV			B

Deciding of the AMDAL category of A/B/C is done by a scoring system which is present in Appendix I, Government Regulation No. 22 of 2021. The complexity of the project, significant impact, environmental sensitivity and environmental capacity will lead to a decision on the AMDAL category. There are three categories of AMDAL as follows.:

- AMDAL A (180 working days for preparing the ANDAL and the RKL-RPL document),
- AMDAL B (160 working days for preparing the ANDAL and the RKL-RPL document); and
- AMDAL C (120 days for preparing the ANDAL and the RKL-RPL document).

3.2.1.2 Labor and Working Conditions

Indonesian laws and regulations on labor and working conditions that applicable for the GREFi project are as follow:

- Law 13 Year 2003 on Employment Law.
- Omnibus Bill/Job Creation Law/Undang-Undang Cipta Kerja or UUCK (Government Regulation in Lieu of Law No. 2 Year 2022).
- Law 7 Year 1984 on Ratification of the Convention on the Elimination of all Forms of Discrimination Against Women.
- Law 1 Year 1970 on Work Safety.
- Law 8 Year 2016 on Persons with Disabilities.
- Law 4 Year 1979 on Child Welfare.
- Law 23 Year 2002 on Child Protection as last amended by Government Regulation in lieu of Law 1 Year 2016.
- Law 21 Year 2000 on Labor Unions.
- Ministry of Energy and Mineral Resources (MEMR) regulation No. 11 Year 2021 Implementation of Electricity Business.
- Ministry of Manpower Regulation No. 5 Year 2018 on Occupational Health and Safety in a Workplace Environment.
- Ministry of Manpower Regulation No. 3 Year 1998 on Procedures to Report and Investigate Accidents.

3.2.1.3 Resource Efficiency and Pollution Prevention and Management

Indonesian laws and regulations on Resource Efficiency and Pollution Prevention and Management that applicable for the GREFi project are as follows:

- Law No. 32 Year 2009 on Environmental Management and Protection.
- Government Regulation No. 22 Year 2021 on Implementation of Environmental Protection and Management.
- Law No. 30 Year 2007 on Energy.
- Law No. 18 Year 2008 on Solid Waste Management.
- Government Regulation No. 22 Year 2021 on Implementation of Environmental Protection and Management.
- Government Regulation No. 81 Year 2012 on Management of Household Waste and Waste.
- Minister of the Environment Regulation No. 5 Year 2014 on Wastewater Standards stipulates the limit or level of pollutants and/or amount of pollutants in wastewater that is discharged by businesses and/or development activities.
- Government Regulation No. 70 Year 2009 on Energy Conservation.
- Ministry of Energy and Mineral Resources (MEMR) regulation No. 10 Year 2021 on Electricity Safety.
- Ministry of Environment and Forestry Regulation 6 Year 2021 on Procedures and Requirements for Management of Hazardous and Toxic Waste.

3.2.1.4 Community Health and Safety

Indonesian laws and regulations on Community Health and Safety that applicable for the GREFi project

are as follows:

- Law No. 32 Year 2009 Concerning Environmental Protection and Management.
- Law No. 22 Year 2009 Concerning Road Traffic and Government regulation No. 32 Year 2011 Concerning Management and Engineering, Impacts Analysis, and Traffic Management.
- Law No. 28 Year 2002 Concerning Buildings regulates the requirements for fully functional buildings applicable to both public and private facilities.
- Government Regulation No. 22 Year 2021 on Implementation of Environmental Protection and Management.
- Government Regulation No. 30 Year 2021 on Implementation of Road Traffic and Transportation Sector.
- Government Regulation No. 16 Year 2021 Concerning Buildings.
- Ministry of Energy and Mineral Resources (MEMR) regulation No. 11 Year 2021 on Implementation of Electricity Business.
- Ministry of Energy and Mineral Resources (MEMR) regulation No. 10 Year 2021 on Electricity Safety.

Ministry of Health Decree 876/MENKES/SK/VIII/2001 on Technical Guidelines for Analysis of Environmental Health Impact.

3.2.1.5 Land Acquisition and Resettlement

Indonesian laws and regulations on Land Acquisition and Resettlement that applicable for the GREFi project are as follows:

- Law No. 2 Year 2012 on Land Acquisition for Development for Public Purposes.
- Omnibus Bill/Job Creation Law/Undang-Undang Cipta Kerja or UUCK (Government Regulation in Lieu of Law No. 6 Year 2023 Chapter VIII on Land Acquisition for Development of Public Interest).

Government Regulation No. 19 Year 2021 on the Implementation of Land Acquisition for Development for Public Interest, which has been amended by Government Regulation No. 39 of 2023

- Government Regulation No. 24 Year 1997 on Land Registration.
- Government Regulation No. 18 Year 2021 on Management Rights, Land Rights, Flats Units, and Land Registration.
- Government Regulation No. 8 Year 1953 on State Land.

President Regulation No. 62 Year 2018 on Social Impact Management in Land Procurement for National Development, which has been amended by Presidential Regulation No. 78 of 2023.

- Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Regulation Number 19 of 2021 on the Implementing Provisions for Government Regulation Number 19 of 2021 Regarding the Organization of Land Procurement for Development for Public Interests.
- Minister of Energy and Mineral Resources (MEMR) Regulation No. 11 Year 2021 Implementation of Electricity Business.
- Minister of Energy and Mineral Resources Regulation No. 27 Year 2018 for compensation for land, buildings, and/or plants that are under the free space (right of way) of the electric power transmission network.

3.2.1.6 Biodiversity Conservation and Sustainable Management of Natural Resources

Indonesian laws and regulations on Biodiversity Conservation and Sustainable Management of Natural Resources that applicable for the GREFi project are as follows:

- Law No. 18 Year 2013 on the Prevention and Eradication of Forest Degradation.
- Omnibus Bill/Job Creation Law/Undang-Undang Cipta Kerja or UUCK (Government Regulation in Lieu of Law No. 2 Year 2022).
- Law 5 Year 1990 on Conservation of Living Natural Resources and their Ecosystems.
- Government Regulation No. 23 Year 2021 on Forestry.
- Minister of Environment Regulation No. 29 Year 2009 on Guidelines for Biodiversity Conservation.
- Presidential Decree Regulation No. 1 Year 2023 on Mainstreaming the Conservation of Biological Diversity into Sustainable Development Efforts in Indonesia
- Ministry of Environmental and Forestry Regulation No. 8 Year 2021 on Administration of Forest and Forest Management Plan, Utilization of Protected Forest and Production Forest.
- Ministry of Environmental and Forestry Regulation No. 9 Year 2021 on Administration of Social Forest.
- Minister of Energy and Mineral Resources Regulation No. 13 Year 2021 outlines guidelines for free space and minimum safe distance requirements of electrical power transmission networks, along with provisions for compensation for land, buildings, and/or plants situated within the designated free space.
- Government Regulation No. 23 Year 2021 on Forestry Management.

3.2.1.7 Indigenous Peoples

Indonesian laws, regulations and other references on Indigenous Peoples that applicable for the GREFi project are as follows:

- Law No. 41 Year 1999 on Forestry, which has been amended by Law No. 19 Year 2004. The Constitutional Court has reviewed Law No. 41 Year 1999 on the forest rights of MHA through the Constitutional Court Decree No. 35 Year 2012 which confirms that adat forests are no longer state forests.
- Basic Agrarian Law No. 5 Year 1960 determines the applicability of adat law over land and customary rights (hak ulayat).
- Law No. 6 Year 2014 on Villages.
- Law No. 23 Year 2014 on Local Government.
- Law No. 11 Year 2010 on Cultural Heritage.
- Law No. 27 Year 2007 on Coastal Zone and Small Island Management.
- Law No. 21 Year 2001 on Special Autonomy for Papua Province.
- Government Regulation No. 11 Year 2022 on National Register and Preservation of Cultural Heritage.
- Government Regulation No. 23 Year 2021 on Management of Forestry.
- President Regulation No. 186 Year 2014 on Social Empowerment of Remote Indigenous People.
- Minister of Environment and Forestry Regulation No. 9 Year 2021 on Social Forestry Management.
- Minister of Environment and Forestry Regulation No. 17 Year 2020 on Titled Forest and Indigenous Peoples Forest.
- Minister of Agrarian Affairs and Spatial Planning/National Land Agency Regulation No. 18 Year 2019 on Procedures for Customary Land Administration as part of a Customary Law Community.

- Minister of Home Affairs Regulation No. 52 Year 2014 on Guidelines for Recognition and Protection of Indigenous People.
- List of the IP presence issued by Ministry of Social Affairs, AMAN, Ministry of Environmental and Forestry, and the Customary Territory Registration Organization (BRWA, a non-government organization) for the identification and prioritization of customary forest legalization.

3.2.1.8 Cultural Heritage

Indonesian laws and regulations on Cultural Heritage that applicable for the GREFi project are as follows:

- Law No. 5 Year 2017 on the Cultural Advancement.
- Law No. 11 Year 2010 on Cultural Heritage.
- Government Regulation No. 11 of 2022 on National Register and Preservation of Cultural Heritage.
- President Regulation No. 78 Year 2007 on ratification of the UNESCO Convention for Safeguarding of the Intangible Cultural Heritage.

3.2.1.9 Stakeholder Engagement and Information Disclosure

Indonesian laws and regulations on Stakeholder Engagement and Information Disclosure that applicable for the GREFi project as follows:

- Law No. 14 Year 2008 on Public Information Disclosure.
- Law No. 32 Year 2009 on Environmental Protection and Management.
- Law No. 7 Year 1984 on the Enactment of the Convention on the Elimination of All Forms of Discrimination Against Women.
- Government Regulation No. 22 Year 2021 on Implementation of Environmental Protection and Management.
- President Regulation No. 38 Year 2015 on Cooperation between Government and Business Entities in the Procurement of Infrastructure.
- President Instruction No. 9 Year 2000 on Gender Mainstreaming in National Development emphasizes women's participation in development processes.
- Minister of Environment and Forestry Regulation No. P.26 /MENLHK/SETJEN/KUM.1/7/2018 Guidelines for Preparation and Evaluation and Examination of Environmental Documents in the Implementation of Electronically Integrated Business Licensing Services.
- Minister of Environment and Forestry Regulation P.22/MENLHK/SETJEN/SET.1/3/2017 on Procedures for Management of Complaints of Pollution and/or Environmental Damage and/or Forest Damage.
- Minister of Environment and Forestry Regulation No. 16 Year 2012 on Guidelines for Preparation of Environmental Assessment Documents.
- Minister of Environment and Forestry Regulation No. 17 Year 2012 on Guidelines on Community Engagement in the Process of Environmental Impact Analysis and Environmental Permit.
- Ministry of Energy and Mineral Resources (MEMR) regulation No. 10 Year 2021 on Electricity Safety.

3.2.2 PLN E&S Management Program

3.2.2.1 Corporate-level Management System

For projects financed by the PLN funds, PLN has established a corporate-level system that provides a regulatory framework, and practical guidance to its entire workforce for their day-to-day operation including E&S management. The Integrated Management System (IMS) was established on 23 October 2020 and includes policies covering several principles such as:

- Monitoring, review, and development of the IMS in a sustainable way (the core Plan-Do-Check-Act circle).
- Compliance with all regulations and obligations not limited to laws, lenders' specific requirements, contracts, and stakeholder expectations/needs.
- Improvement of customer satisfaction in adopting the effective system, and Communication and synergy with stakeholders on how to solve disputes and establishment of the policy.
- In relation to E&S management, the policies within IMS state the commitment of the management and staff to setting up the performance achievement goals and monitoring the process, so that the intended quality of output is achieved.
- Setting up the competency of all staff and vendors to meet PLN standards.
- Establishment of the standards, guidelines, and work instructions to ensure that environmental risks in the project are mitigated/managed.
- Evaluate and monitor the risk of environmental pollution so the potential hazard is identified.
- Conduct the implementation of the conservation and energy efficiency, water, and other natural resources initiatives that are used in office activity.
- Manage natural resources in electrical productions that follow the life-cycle principle.
- Support the mitigation and adaptation process to climate change, decrease the greenhouse gas effect, forestation, and environmental conservation.

Under the IMS, PLN has numerous implementation procedures such as hazardous waste management, and emergency response, however regulations on social issues are limited to external communications, cultural heritage management for distribution lines, and environmental and social safeguards for distribution line's contractor. These includes:

- Technical Guidelines, HSSE No. 27/ 2021, Safeguard Procedure for Distribution Works for Partners (*Prosedur Perlindungan Pekerjaan Distribusi oleh Mitra Kerja*).
- Technical Guidelines, HSSE No. 28/ 2021, *Prosedur Penanganan Warisan Budaya Untuk Pekerjaan Jaringan Distribusi Dengan Pendanaan Luar Negeri* (Procedures for Handling Cultural Heritage for Distribution Network Works with Foreign Funds).
- Technical Guidelines, HSSE No. 29/ 2021, Procedure for Hazardous Waste Management for Distribution Works with Foreign Funds International Financing (incl. Warehouse Management).
- Technical Guidelines, HSSE No. 30/ 2021, Procedure for PCB Cross-contamination Prevention for Distribution Works with Foreign Funds.
- Technical Guidelines, HSSE No. 31/ 2021, Procedure for Management of Used Materials & Non-B3 Waste for Distribution Works with Foreign Funds.
- Technical Guidelines, HSSE No. 32/2021 Procedure for Handling Spilled Oil/Transformer Oil for Transmission & Distribution Works with Foreign Funds.
- Guidelines or Study on Determining Transmission Line Corridor with Scoring System, PLN 2020.

Many parallel regulations and procedures exist outside the IMS such as the one on biodiversity

management, including project-specific guidelines and procedures. Board of Directors Regulations (Perdir) are issued to complement the IMS, including through:

- Perdir 153/2019 Safeguard System;
- Perdir 0250/2016 Working Safety;
- Perdir 0251/2016 Installation Safety;
- Perdir 0252/2016 General Safety; and
- Board of Directors Decree (policy) 134.K.DIR/2007 Environmental, Health, and Safety.

It is noted that the PLN's corporate management program has applied a variety of quality process standards, including for E&S management:

- Environmental Management System (ISO 14001);
- Quality management System (ISO 9001);
- Occupational Health and Safety Management System (ISO 45001); and
- Corporate Social Responsibility (CSR) (ISO 26001).

In addition, PLN is currently preparing the following corporate-level technical guidelines i.e.,

- PLN's Environmental Safeguards Technical Guidelines (Draft Edition 3, September 2021) and Technical Guidelines of Land Acquisition & Resettlement, November 2020 (Draft Final)⁵. Both guidelines have not been fully adopted and implemented, currently they are still being consulted internally with relevant divisions/Units; the documents were intended to be used as a basis for implementing all international-funded projects.
- Guidelines for the Study of Transmission Line Corridor with Scoring System (Draft, 2020) which describes the initial screening and field survey including the technical aspect of transmission line corridor selection, such as topography, geology condition, road access and non-technical aspects such as the land use and tenure, social aspect, including the cultural heritage from primary and secondary source. The scoring result will determine the transmission line corridor design or planning for the alternative option.

3.2.2.2 Unit/Project-level Management System

For project-specific, regional operating units (such as Unit Induk Pembangunan (UIP), Unit Induk Wilayah (UIW), etc.) may have different E&S systems developed for respective projects they are responsible, independent of the PLN's own (as some already have their own integrated management system certified), however with reference to the corporate's IMS.

3.2.2.3 Environmental and Social Management for Internationally Funded Subprojects or Investments

For projects financed by international lenders, PLN adopts additional guidelines to cover the environmental and social requirements of the lenders that go beyond Indonesian laws and regulations and other PLN policies. For example, for ADB and KfW, PLN has also developed and implemented program-level E&S safeguards technical guidelines, which are tailored to the distribution/substation construction as well as small-scale renewable energy projects. These include as following:

- Environmental and Social Safeguards Technical Guidelines for Sustainable Energy Access in Kalimantan, Maluku and Papua (2020-2022); and
- Environmental and Social Support Implementation of the "Sustainable Energy Access in

⁵ Both guidelines have not been fully adopted and implemented, at the time of writing this report, they were still being consulted internally with relevant divisions/Units; the documents were intended to be used as basis for implementing all international-funded projects, including ISLE PforR

Sulawesi and Nusa Tenggara (2019-2021).

Furthermore, PLN is currently preparing the Corporate Environmental and Social Management System (ESMS). This ESMS aims to manage E&S risks and impacts, which covers exclusion list, E&S screening, risk assessment and mitigation are integrated and synchronized with investment decision and implementation processes.

There are Management Guidelines that will be applied as an integral part of ESMS implementation. The ESMS Project Development Stages are shown in Figure 3-1. Currently, Management Guidelines are still in the development process. These Management Guidelines include:

- 1) Labour,
- 2) Occupational Health and Safety (OHS),
- 3) Emergency Preparedness and Response,
- 4) Erosion Control,
- 5) Air Quality,
- 6) Noise and Vibration,
- 7) Hazardous Material,
- 8) Hazardous Waste,
- 9) Water Efficiency,
- 10) Water Quality,
- 11) Community, Health, Safety, and Security (CHSS),
- 12) Indigenous People,
- 13) Land Acquisition and Resettlement,
- 14) Biodiversity,
- 15) Cultural Heritage, and
- 16) Stakeholder Engagement and Grievance Redress Mechanism.

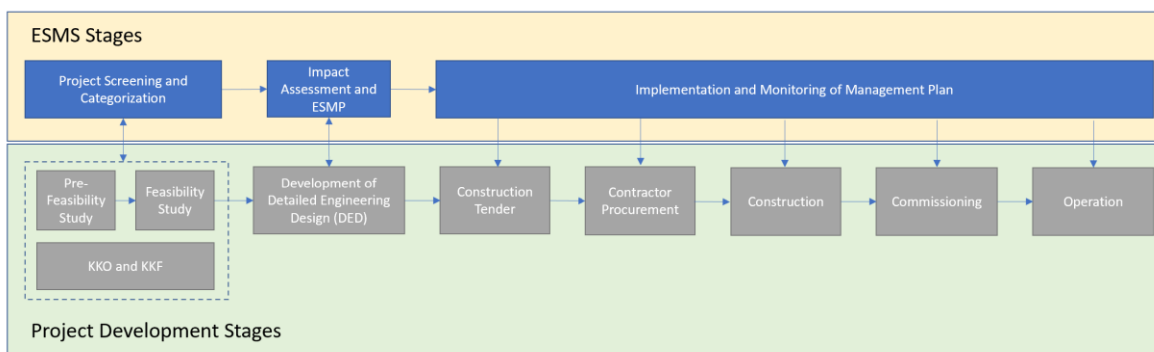


Figure 3-1 ESMS Project Development Stages

While ESMS is PLN's high-level management system which is generic enough to be apply to all (foreign-funded) projects, this ESMF is being developed for GREFi Project which is financed by the World Bank. GREFi has specific aspects such as different exclusions. Therefore, this GREFi ESMF is based on and includes many provisions under the ESMS but also includes GREFi specific aspects.

3.2.3 Current system and ESSs

This following provides key gap analysis between Indonesia laws (including PLN implementation) and World Bank ESSs.

Table 3.3 Key Gaps between National Framework and PLN Existing System against World Bank ESS

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
General		
Scope of application	ESSs apply to Associated Facilities to extent of Borrower's control/influence	Associated facilities not covered by Indonesia AMDAL law
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts		
Environmental and Social Risks and Impacts Assessment -	ESS1 requires that World Bank funded programs must conduct assessment related to the types of environmental and social risks and impacts that must be considered by the Program.	Indonesia: Environmental Impact Assessment (AMDAL) or Environmental Management and Monitoring (UKL-UPL) or Statement of Commitment to Implement Environmental Management and Monitoring (SPPL) are based on business scale, while Environmental and Social Impact Assessment (ESIA) and ESMP are based on impact. In addition, Indonesian laws emphasize on environment thus, social aspect discussion is limited.
		PLN: Documents Reviewed: - <i>Prosedur Penilaian Risiko dan Peluang serta Tindakan Perencanaannya PT-HSSE-01</i> - <i>Peraturan Direksi PT PLN (Persero) Nomor: 0071.P/DIR/2021 tentang Pedoman Umum Manajemen Risiko Terintegrasi PT PLN (Persero)</i> Gaps are: - The identified environmental risks have not specifically included all required environmental aspects as described under ESS 1. - ESS 1 further stipulates that social assessment shall be included. However, the social risks have not been identified under the PT-HSSE-01 procedure as no social aspects are mentioned to be included in Project's consideration. - The example of the risk assessment is not provided for review. However, the template for risk assessment in PT-HSSE-01 procedure has not indicated the analysis of the measures which shall be taken to mitigate the remaining risks.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
		- The procedure has not indicated if PLN (site/ region/ head office level) will periodically evaluate the identified environmental and social risks.
ESCP Development	ESS1 requires that World Bank funded programs must develop an Environmental and Social Commitment Plan (ESCP), according to the agreement with the World Bank to set up the summary of material steps and actions for mitigation and supervision.	Indonesia: Commitment to the environmental and social management is incorporated in AMDAL or UKL-UPL. It is called the Environmental Management Plan and Environmental Monitoring Plan (RKL-RPL). RKL-RPL document is approved by a committee that is facilitated by the government and binding and must be adhered to. PLN adheres to this regulation.
Institutional Capacity	The Borrower may include components in the project to strengthen its legal or technical capacity to carry out key environmental and social assessment functions. If the Bank concludes that the Borrower has inadequate legal or technical capacity to carry out such functions, the Bank may require strengthening programs to be included as part of the project.	PLN: Although PLN has committed to conducting Environmental and Social (E&S) training as outlined in its policies and technical guidelines, a comprehensive procedure detailing the training requirements and competencies for all relevant teams, applicable across all sites (not limited to Kalimantan, Maluku, Papua, Sulawesi, and Nusa Tenggara), has not been fully developed.
Stakeholder Engagement and Information Disclosure	As set out in ESS10, the Borrower will continue to engage with, and provide sufficient information to stakeholders throughout the life cycle of the project.	PLN: Documents Reviewed: <i>Prosedur Komunikasi PT-HSSE-03</i> Gaps are:

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
		When engaging in external communication, particularly with customers, the surrounding community, contractors, and suppliers, PLN will encounter the grievance process. According to ESS 10, this mechanism should be cost-free, non-retributive, responded to promptly, allow for anonymity, and make publicly available records documenting responses to all grievances received. These provisions have not yet been incorporated into the PT-HSSE-03 procedure.
Contractor Management	ESS1 requires that all contractors involved in the Program must operate according to ESS requirements, including special requirements incorporated in the ESCP. The program will manage all the contractors effectively.	PLN: Some environmental and social risks, such as biodiversity loss, air emissions, child labor, and forced labor, have not been specified in PLN's current process of contractor selection and evaluation.
Monitoring and Reporting	ESS1 requires the Borrower to monitor proportionate to nature of project, risks and impacts, and compliance requirements. The Borrower will provide regular ESCP Reports to World Bank.	No potential gaps are identified.
ESS2: Labor and Working Conditions		
Scope of application	ESS2 applies to workers employed by PLN who work on the project and to contracted workers, primary supply workers, and community workers	Under Indonesian law, the legal responsibility for workers would apply to Indonesian workers. However, it's important to note that according to Indonesian law, the project owner is not held responsible for workers hired by third parties, including those hired by subcontractors or by third parties and community workers.
Labor Management Procedure		Indonesia: There is no special regulation to develop a labor management procedure for a smaller-scale project.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
-	ESS2 requires labor management and provision of work environment by preparing and adopting work management procedures that covers providing information about work provision and procedure, work health and safety, non-discrimination policy and equal work opportunities, and labor union;	PLN: Documents reviewed: - <i>Pedoman Perilaku dan Etika Bisnis</i> - <i>Collective Labor Agreement</i> Gaps are: No potential gaps are identified. These aspects are generally covered in the Company Regulation (<i>Pedoman Perilaku dan Etika Bisnis</i>) and Collective Labor Agreement.
Avoiding the use of child labor and forced labor	ESS2 requires labor management and work environment provision to avoid the use of child labor and forced labor.	No potential gaps are identified.
Workers' Grievance Redress Mechanism	ESS2 requires workers' grievance redress mechanism for all the World Bank funded programs.	Indonesia: No potential gaps are identified. PLN: PLN has a Whistleblowing System that ensures any employee raising a grievance will not face any form of retribution or reprisal, such as job loss, lack of consideration for promotion, or training. However, this Whistleblowing System currently only applies to PLN's direct project workers.
Occupational Health and Safety	Measures relating to occupational health and safety will be applied to the project. The OHS measures will include (a) identification of potential hazards to project workers, particularly those that may be life threatening; (b) provision of preventive and protective measures, including	Gaps are: The Environmental and Social Due Diligence report for PT Perusahaan Listrik Negara (Persero) Transmission Line Projects Grid and Renewable Energy Finance Facility (GREFi) in September 2023 has brought to light a significant deficiency in adhering to Occupational Health & Safety management systems at PLN. This is evident through the observed disregard for established safety protocols crucial for safeguarding the well-being of workers. This gap not only jeopardizes the safety of individuals on site but also signifies a lack of dedication to fostering a secure work environment.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	modification, substitution, or elimination of hazardous conditions or substances; (c) training of project workers and maintenance of training records; (d) documentation and reporting of occupational accidents, diseases and incidents; (e) emergency prevention and preparedness and response arrangements to emergency situations; and (f) remedies for adverse impacts such as occupational injuries, deaths, disability and disease; and will take into account the General EHSGs and, as appropriate, the industry-specific EHSGs and other GIIP.	Furthermore, there is a concern regarding the oversight of fundamental safety practices on World Bank ESF-supported project sites. Key safety measures, such as the use of helmets and high-visibility clothing, are being neglected. Observations indicate that both the contractor team supervisor and the PLN supervisor were not wearing proper safety attire. Additionally, the implementation of PLN's safety requirements remains below the expected standard. This highlights the urgent need for a more robust commitment to upholding safety standards in the workplace.
ESS3: Resource Efficiency and Pollution Prevention		
Sustainable use of resources, including energy, water, and raw materials	ESS3 Paragraph 5 requires program to implement technically and financially sound steps to increase efficient use of energy, water, raw materials, and other resources.	Indonesia: No potential gaps are identified. PLN: - There is currently no procedure in place regarding resource efficiency in energy use. - Although PLN has implemented water efficiency initiatives, it has not formalized a specific procedure related to its commitment to water efficiency. - PLN has yet to develop a procedure concerning resource efficiency in the use of raw materials.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
Pollution prevention: General Requirements	ESS3 requires the program implementor to avoid the release of pollutant, or when unavoidable, to minimize and to control the release concentration and mass flow by following the steps and performance level set in the national law or in the Essential Health and Safety (EHS) guide, choosing the one that has a stricter standard. This applies to the release of pollutant to the air, water, and soil, due to routine, non-routine, unintentional, that can potentially have an impact at the local level, regional level, and cross-border level.	Indonesia: The identified gap is that the threshold set by the Government of Indonesia is less stringent compared to the standards outlined in Essential Health and Safety protocols.
Pollution prevention: Management of air pollution	Requires assessment of potential air emissions and implementation of technically and financially feasible and cost-effective options to minimize emissions	PLN: PLN has yet to develop and formalize a specific procedure regarding its commitment to addressing air pollution.
Pollution prevention: Management of Hazardous and Non-hazardous Wastes	Apply mitigation hierarchy to waste management. – National and international conventions for hazardous waste management and movement	PLN: Documents reviewed: - <i>PT-HSSE-05 Hazardous Waste Control Procedure;</i> - <i>PT-HSSE-06 Non-Hazardous Waste Control Procedure;</i> - <i>PT-HSSE-07 Wastewater Disposal Management Procedure;</i> - <i>PT-HSSE-08 Hazardous Waste Storage Management Procedure;</i>

ESS & Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	Verify hazardous waste management contractors are licensed and disposal sites operate to meet standards	<i>PT-K3L-29 Waste Management Procedure for Hazardous Materials, PCB, and Asbestos;</i> <i>PT-K3L-31 Procedure for Used Materials and Non-Hazardous Waste.</i> Gaps are: Several procedures still reference outdated Indonesian regulations.
Pollution prevention: Management of Chemicals and Hazardous Materials	- Minimize use of hazardous materials - Avoid use of internationally controlled materials	No potential gaps are identified.
Pollution prevention: Management of pesticides	Requirements for pesticide use	Not applicable for this project
ESS4: Community Health, and Safety		
Community Health and Safety	ESS4 requires the program implementor to evaluate the program's risks and impacts to community health and safety among affected groups during the program's life cycle, including the vulnerable groups due to their special conditions. If it includes the potential impact related to gender-based violence.	Indonesia: Indonesian Law does not cover H&S issues beyond construction sites and does not mandate emergency response plans to extend coverage to communities outside construction sites or project facilities. Consequently, local communities beyond the construction sites/ project facilities are not protected for potential H&S hazards, including emergencies. Moreover, there is no obligation to inform local communities about the emergency response plan.
		PLN: Documents reviewed: <i>Peraturan Direksi PT PLN Nomor: 0252.P/ DIR/ 2016 tentang Pedoman Keselamatan Umum di Lingkungan PT PLN</i> <i>Peraturan Direksi PT PLN Nomor: 0251.P/DIR/2016 tentang Pedoman Keselamatan Instalasi</i> Gaps are:

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
		- The identified causes have not included the potential natural hazards which may cause damage to PLN's infrastructures and lead to incidents occurrence in the surrounding community area (referring to ESS 4). - The guidance has not fully mentioned the required emergency-related socialization to the community as stipulated in ESS 4, including the Emergency Response Plan (such as early warnings, emergency tools, first aid, emergency contacts). - In Director Regulation No. 0252.P/DIR/2016, Article 8 (related to the prevention action) has not included the risk hazard assessment as mentioned under Article 5 (potential causes of incidents). The risk hazard assessment is required under ESS 4. - Article 8 has mentioned the hazards signs/ labels to be installed in PLN infrastructure. However, the commitment to install necessary hazards prevention equipment (such as gates, fences, etc.) has not been specifically mentioned. - The guidance fails to explicitly mention the responsibility for ensuring all corrective actions are addressed.
Infrastructure and Equipment Design and Safety	The Borrower will design, construct, operate, and decommission the structural elements of the project in accordance with national legal requirements, the EHSGs and other GIIP, taking into consideration safety risks to third parties and affected communities.	PLN: PLN has secured " <i>Surat Laik Operasi / SLO</i> " (Operation Eligibility Letter) for their infrastructures. However, there is no identification of required personnel certification as per issued SLO.
Traffic and Road Safety	The Borrower will identify, evaluate, and monitor the potential traffic ³ and road safety risks to workers, affected communities and road users throughout	PLN: PLN has not extensively developed the traffic and road safety procedure specifically during the construction phase where a high transportation mobility is expected.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	the project life cycle and, where appropriate, will develop measures and plans to address them.	
Emergency Preparedness and Response	The Borrower will identify and implement measures to address emergency events.	PLN: Documents reviewed: <i>Peraturan Direksi PT PLN (Persero) Nomor: 0072.P/DOR/2021 tentang Pedoman Penyelenggaraan Penanggulangan Bencana PT PLN (Persero)</i> Gaps are: - Article 10 (disaster management plan in early stage) has not specifically mentioned that PLN will conduct the emergency-related assessment including identifying the available onsite and nearby emergency equipment and identifying the nearest hospital/ clinics (referring to ESS 4) - Article 13 (competency and expertise mapping) has not specified the specific team members within the Emergence Response Team (<i>Tim Taruna</i> PLN) which shall receive the identified training. Besides, no indication if refreshment will be performed periodically.
Security Personnel	When the Borrower retains direct or contracted workers to provide security to safeguard its personnel and property, it will assess risks posed by these security arrangements to those within and outside the project site.	PLN: Documents reviewed: <i>Security Management System Manual, Procedures, and Work Instructions</i> Gaps are: - The methods for delivering the grievance are not explicitly mentioned its applicability also for external stakeholders (as stated in Article 5.1 of PLN.PST-SMP-PR-07-07). - The PLN.PST-SMP-PR-07-07 procedure for delivering the grievances related to Security Management System has not stated that it can be made anonymously (referring to ESS 10) and apply for non-retaliation especially grievances reported by PLN's employees (referring to ESS 2).

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
		- The PLN.PST-SMP-PR-07-07 procedure does not indicate the mechanism to track and ensure all received grievances are all appropriately addressed in a timely manner as prescribed in ESS 10. - ESS 10 further stipulates that the record of the grievance mechanism received, and the responses shall be made publicly available. This provision has not been established under the PLN.PST-SMP-PR-07-07. - Referring to ESS 4, PLN shall ensure security personnel are not implicated in, trained adequately (including in the use of firearms, if applicable), and exhibit appropriate conduct towards workers and effective communities. These provisions are not yet fully reflected in the existing procedures and work instructions of PLN where PLN: - o Has not committed to ensuring hired security personnel are not implicated; - o Has not explicitly identified applicable security tools under PLN.PST-SMP-IK-02-01; - o Has not established a code of conduct guidance for security personnel.
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement		
General	- Affected people: landowners, users with legal claims, and users with no legal claims. - Design project to avoid/minimize displacement. - Provide replacement cost and assistance, disclose standards, offer land-for-land where possible, pay compensation before displacing people where possible.	Indonesia: Applicable laws and regulations in Indonesia cover several aspects in ESS 5, such as no gap for affected assets replacement values as independent appraisal team determines compensation that includes loss of physical and non-physical assets. However, there are still gaps between the World Bank principles and the country legal framework that relate to the clear definition and requirements to identify land acquisition impacts significance, which will allow project to assess if any significant land or income loss, and thus, enable project to prioritize livelihood restoration implementation and monitoring. Furthermore, LARAP is not required if the land acquisition size is <5ha, and no documentation needs to be prepared or reviewed for negotiated settlements. Additionally, gaps exist in terms of compensating squatters, restoring livelihoods, and addressing indirect impacts related to land acquisition. Compensation for individuals benefiting from the affected land, such as squatters, illegal occupants, working farmers, and renters, is not regulated. Moreover, there are no requirements for the

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	– Engaged with affected communities, including women. – Grievance mechanism – Census, cut-off dates, notices; detailed plan and monitoring required; require audit if significant displacement	program to support livelihood recovery for affected individuals. (Detail gap provided in the LARPF). PLN: Documents reviewed: <i>Technical Guidelines for Land Acquisition and Involuntary Resettlement for Electrical Infrastructure Development (dated November 2019)</i> Gaps are: - The current appraisal standard, Indonesia Valuation Standard (SPI) 204, generally aligns with the World Bank compensation framework as it is based on fair replacement value and covers both physical and nonphysical objects. However, there is still a gap in the quality of resettlement documentation, which may not adequately list all compensable impacts, including income loss, or provide details of affected people's socioeconomic data required to identify the level of income or asset loss. - There is a gap in the implementation and monitoring of the livelihoods of affected people post-compensation. There are no provisions to ensure or monitor that the livelihoods of affected people will be restored or improved.
Voluntary Land Donation	ESS 5 provides the principle of “voluntary” land donation practice, community land sale, and issues related to parties who obtain income from illegal leasing.	Indonesia: No specific regulation governing voluntary land donation.
		PLN: PLN does not have written guidelines on VLD that provide detailed processes and procedures on VLD in line with international standards such as the Bank’s ESF, including minimum conditions that need to be met.
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources		
General	– Consider direct, indirect, & cumulative impacts in ESS1 EIA	Indonesia: Indonesia's regulations on forestry and biodiversity conservation generally align with ESS6 for protecting biodiversity. However, there are notable gaps. Indonesian regulations do not recognize the requirements for assessing project impacts on natural and critical habitats. Additionally, there is no specific regulation

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	- Characterize baseline conditions. - Manage risks with mitigation hierarchy and GIIP, including adaptive management. - Differentiated habitats, ESS applies to all, provides for biodiversity offsets. - ESS applies to modified habitats with significant biodiversity value. - Avoid natural habitats unless no feasible alternative, if affected achieve no net loss of biodiversity Critical habitat - Requirements if a project will affect legally protected and internationally recognized areas of high biodiversity value. - Strict conditions on affecting critical habitats, requires BMP - No introduction of spreading of invasive species - Requirements for projects involving primary	governing biodiversity offset strategies under Indonesian law. Furthermore, the impact on local communities due to the loss of ecosystem services is not required to be assessed or mitigated under current regulations. Forest Permit Securing a forestry permit from the Indonesian government is imperative for businesses seeking to operate PLN activities within or through forested areas. The Forest Permit, also known as <i>Persetujuan Penggunaan Kawasan Hutan</i>, is governed by Government Regulation No. 23 of 2021 concerning Forestry Management, providing approval for the utilization of a portion of Forest Area for development purposes outside of forestry activities, without altering the function and designation of the Forest Area. This permit serves as a critical tool in facilitating strategic objectives, including the establishment of power generation facilities, transmission, and distribution of electricity, as well as the implementation of new and renewable energy technologies by PLN. To obtain authorization for Forest Area usage, PLN must submit an application to the Minister of Environment, meeting both administrative and technical requirements. The Minister will then assess the application. Notably, approval for Forest Area utilization in infrastructure projects entails an obligation to engage in afforestation activities along the perimeter, serving as a protective measure. The duration of the Forest Permit aligns with the validity period of the respective business permit in its specific field and is executed in accordance with the provisions of prevailing laws and regulations. Furthermore, it undergoes evaluation by the Minister once every five years or as deemed necessary. This regulation signifies a meticulous approach to balancing developmental needs with ecological preservation, ensuring responsible and sustainable utilization of Forest Areas for the betterment of society and the environment. Transmission line and Distribution Practice

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	production and harvesting	The Indonesian government, through the Ministry of Energy and Mineral Resources Regulation No. 13 of 2021, provides guidelines on Free Space and Minimum Safe Distance for Transmission Network, specifically outlining the required clearances. These regulations serve as a reference for PLN (Perusahaan Listrik Negara, the Indonesian state-owned electricity company) in the construction of both Transmission Line and Distribution Line instrument paths. They define the clearances, both vertically and horizontally, around and along the conductors of the Electrical Transmission Network where no objects are allowed within to ensure the safety of humans, living beings, and other assets, as well as the operational security of the Electrical Transmission Network. The specific requirements for minimum safe distances in the transmission network operation are detailed in the regulation's annex. It emphasizes that meeting these safe distance requirements is crucial for maintaining the reliability of the power system's operation in order to meet the broader needs of society. In practice, transmission lines in Indonesia are constructed with a focus on minimizing environmental impact while ensuring efficient energy transmission. This is achieved, in part, by erecting taller towers and maintaining a minimum distance from forests, thereby reducing the need for extensive clearing along the right-of-way. The process also often employs labor-intensive methods without wholesale vegetation removal, demonstrating a commitment to biodiversity conservation and environmental conscientiousness. Indonesian regulations pertaining to forestry and biodiversity play a pivotal role in guiding these practices. Overall, this approach in Indonesia serves as a notable example of how to balance infrastructure development with ecological preservation, exemplifying a commendable best practice from an environmental perspective. On January 16, 2023, President Joko Widodo signed Presidential Instruction Number 1 of 2023, emphasizing the importance of integrating biodiversity into sustainable development in Indonesia. This instruction reflects awareness of climate change and

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
		efforts to protect Indonesia's forests, which are continuously diminishing and being converted into monoculture plantations. While presidential instruction is not formal law, it holds significant influence in guiding the government and ministers in related activities. This is a positive step, demonstrating the president's support for biodiversity. The instruction is expected to lead to more specific technical regulations within various ministries and provide crucial guidance for the business sector in ensuring the sustainability of biodiversity. PLN: Documents reviewed: - <i>Biodiversity Screening Tool</i> - <i>Guidelines for Study on Determining Transmission Line Corridor with Scoring System</i> As a mitigation and risk avoidance effort for these biodiversity-rich areas, PLN has developed a screening manual for selecting transmission line alignments to avoid them. This is outlined in the "Guidelines for Study on Determining Transmission Line Corridor with Scoring System, PLN Central Engineering 2020." The document thoroughly analyzes influential parameters for determining the transmission line corridor and subsequently assigns scores to these parameters. The aim is to standardize the process of selecting corridors for High Voltage/Extra High Voltage (SUTT/ET) and Direct Current High Voltage (SUTTAS) transmissions. This guideline streamlines decision-making for corridor selection, making it more efficient and accountable. The process involves: 1. Gathering secondary data from relevant sources for a preliminary desk study. 2. Conducting a desk study to shortlist locations meeting essential criteria. 3. Obtaining primary data through field surveys and interviews. If a location doesn't meet essential criteria due to missing data, it is disqualified. 4. Assessing common factors like land suitability, technical and environmental aspects using a scoring system. 5. Selecting the corridor alternative with the highest overall score.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
		The chosen alternative with the highest combined score is documented as the designated transmission line corridor. The detailed scoring guideline is available in Annex D section 3.4. Gaps are: - PLN currently has a Biodiversity Screening Tool that contains mitigation hierarchy, but its scope is still general and does not lead to specific procedures/techniques in implementing its management plan; - Based on the findings of the ESDD Trance 1 report, a gap has been identified concerning alignment in the selection of transmission line routes. The government only considers government-protected forests, while there is a possibility of Key Biodiversity Areas (KBAs) within the project's site area selection. This indicates that environmental assessments should consider more than just existing criteria, such as officially protected forests. It is important to broaden the scope of evaluation to include potential biodiversity within the project site selection areas. - The PLN Biodiversity Screening Tool does not yet include the Ecosystem Services and/or Cultural resource component which is an important part of biodiversity management; - There are no specific procedures or studies to identify potential of ecosystem services and/or cultural resource areas that have been specifically applied in relation to PLN projects; and - Biodiversity management is still based on AMDAL and/or UKL-UPL documents as required. - To date, no scheme or procedure has been made in designing offsets (compensation) for biodiversity that potentially affected by PLN project activities; - Biodiversity offsets scheme is still in the preparation or planning stage and has not yet been implemented; - Biodiversity Offset is a new thing for PLN. So that the implementation is still constrained by experienced human resources within the PLN that understand the Biodiversity Offset scheme; and

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
		Currently, there is no implementation of the mitigation hierarchy of PLN projects. One of the pilot projects is the Upper Cisokan, but it is still in the preparation stage for the implementation of the mitigation hierarchy.
Primary Suppliers	Where a Borrower is purchasing natural resource commodities, including food, timber, and fiber, that are known to originate from areas where there is a risk of significant conversion or significant degradation of natural or critical habitats, the Borrower's adequate environmental and social assessment will include an evaluation of the systems and verification practices used by the primary suppliers.	PLN: - There is no specific procedure set by PLN in combining international standards (IUCN, etc.) with national regulations related to sensitive areas (protected areas, world heritage, etc.). If project activities are funded by international funding, then PLN applies the highest standards (international standards as required by lenders); - Management of natural habitat that is "beyond compliance" is still rarely carried out by PLN; and - There are no specific procedures for natural habitat management applied to PLN projects in general to date.
ESS 7: Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities		
General	Assess the nature and degree of the expected direct and indirect economic, social, cultural (including cultural heritage), and environmental impacts on Indigenous Peoples who are present in, or have collective attachment to, the project area.	Indonesia: One major gap between ESS7 and relevant Indonesian laws and regulations related to the Indigenous Peoples is the requirement for the formal recognition of the IP communities as an eligibility criterion to be treated as Indigenous Peoples. No specific requirements for social assessments and preparation of Indigenous Peoples Plans (IPPs) across sectoral laws and definitions of IP and <i>Masyarakat Adat</i> (MA) are different. (Detail gap provided in the IPPF) PLN: Documents reviewed: <i>Technical Guidelines on the Environmental Protection for Electricity Infrastructure Development with Foreign Funding</i> Gaps are:

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	- Prepare a consultation strategy and identify the means by which affected Indigenous Peoples will participate in project design and implementation. - Proposed measures and actions will be developed in consultation with the affected Indigenous Peoples and contained in a time-bound plan, such as an Indigenous Peoples plan.	Although PLN has committed to address the aspect of Indigenous People as stated in the technical guidelines, the mitigation measures and procedures which are applicable for all sites (not limited to Kalimantan, Maluku, Papua) have not been extensively developed.
ESS 8: Cultural Heritage		
General	- Assess and avoid impacts on cultural heritage - Follow chance find procedure if a find is encountered - Involve experts if needed	Indonesia: No specific regulations on intangible cultural heritage. In addition, only those physical cultural heritage that are registered as such by the government is under protection, thus many cultural heritages of local significance are unprotected. PLN: Documents Reviewed: <i>PT-HSSE-28 Prosedur warisan budaya untuk distribusi</i> Gaps are: Requirements related to commercial use of cultural heritage are missing, also there is no definition of built heritage and natural features, except for movable heritage with very minimal explanation.
Stakeholder Consultation and Identification of Cultural Heritage	- Identify and consult with affected and interested stakeholders - Maintain confidentiality if needed	PLN: No critical gaps of change find procedure in Perdir HSSE No. 28/2021- PLN Cultural Heritage Management for Distribution line. The procedure already has an adequate explanation.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
	– Allow continued access to affected sites	
ESS 9: Financial Intermediaries (Not Applicable)		
ESS 10: Stakeholder Engagement and Information Disclosures		
General	ESS10 requires all World Bank funded programs to engage the stakeholders during the program's life cycle, and to prepare and implement Stakeholder Engagement Plan (SEP).	Indonesia: Existing laws and regulations with regard to stakeholder engagement and information disclosure during the AMDAL process mostly concern engagement with people directly affected by the project in terms of land acquisition and resettlement, but do not fully address engagement with broader stakeholders which is normally limited to consultation meetings of safeguards instruments such as AMDAL and LARAP (during project planning). Thus, the regulatory requirement for stakeholder engagement is limited to that early stage in an investment project, instead of taking place throughout the project's life cycle.
Engagement during Project Preparation	– Identify and analyze stakeholders, including disadvantaged or vulnerable. – Stakeholder Engagement Plan (SEP) required, with detailed requirements for disclosure, timing of consultations, measures for disadvantaged or vulnerable, etc. – Disclosure of information early to allow consultation on design. Consultation to allow ongoing two-way communication throughout project life cycle	PLN: Documents reviewed: - <i>Perdir No. 0119.P/Dir/2017 on The Guideline of PLN's Stakeholder Management</i> - <i>PLN's Perdir 153/2019</i> - <i>Draft of Environmental Safeguards Technical Guidelines</i> Gaps are: Detailed processes and procedures to conduct stakeholder engagement including the preparation of project specific SEP is not specified, and systematic documentation of stakeholder engagement beyond preparation of meeting minutes is often missing.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
Engagement during Project Implementation and External Reporting	Engagement and disclosure of information to continue throughout implementation, following Plan	PLN: Documents reviewed: - <i>Perdir No. 0119.P/Dir/2017 on The Guideline of PLN's Stakeholder Management</i> - <i>PLN's Perdir 153/2019</i> - <i>Draft of Environmental Safeguards Technical Guidelines</i> Gaps are: Stakeholder engagement is required, and the contractor is required to record and respond to grievances. However, detailed processes and procedures to conduct stakeholder engagement including the preparation of SEP is not specified, and systematic documentation of stakeholder engagement beyond the preparation of meeting minutes is often missing.
Meaningful Consultation	ESS10 requires all World Bank funded programs to determine items needed for information disclosure to ensure a meaningful consultation process.	Indonesia: Requirements on information disclosure by the government are not as strict as the Bank's. AMDAL and UKL-UPL requires public consultation to take place prior to the development of TOR, however SPPL does not require public consultation to take place.
Grievance Mechanism	ESS10 requires all World Bank funded programs to develop an inclusive and responsive grievance redress mechanism, that is accessible by all parties that are affected by the program, and proportional to the risks and impacts of the program.	Indonesia: No major potential gaps are identified. However, GRM is not required to be established except for land acquisition. Projects that do not require land acquisition are not required to establish a GRM, and GRM is required to cover only those impacts due to land acquisition, leaving many social impacts undetected or unaddressed. PLN: On grievance handling, the use of the existing PLN Call Center 123 for the grievance channel is limited to general public/customer complaints, such as electricity disturbances due to fallen trees, accidents, etc. Due to its national nature, Call Center 123 cannot detect project complaints. Complaints about projects that are already underway are the responsibility of the contractor and are stated in the tender document (related to the E&S aspects only). The contractor is obliged to record and resolve all public complaints during construction. However, the existing system applies to distribution/substations only.

ESS &Topic	ESF Requirements	Key Gaps in National Framework and PLN Existing System
Organizational Capacity and Commitment	Define roles & responsibilities, assign personnel to implement stakeholder engagement activities.	PLN: Documents reviewed: <i>PLN Directors' Decree No. 0417.K/DIR/2022 of 2022</i> Gaps are: A gap was found in the competency of the Energy Transition and Sustainability (ETS) Division and the assigned working team at the project level in order to able to implement this stakeholder engagement.

4 POTENTIAL ENVIRONMENTAL AND SOCIAL (E&S) RISKS, IMPACTS, AND MITIGATION

The development and operation of renewable energy-enabling, and particularly transmission projects have the potential to create various environmental and social risks and impacts. These projects are often located in sensitive areas, such as natural habitats, forests, or cultural heritage sites, and may involve land acquisition and displacement of communities. In addition, the construction and operation of some of these facilities may cause pollution, noise, and other disturbances to the environment and local communities. Therefore, it is important to assess and manage these potential E&S risks and impacts to ensure that the project is implemented in a sustainable and responsible manner and to avoid or mitigate adverse effects on the environment, local communities, and other stakeholders.

ESIA and ESMP Outline are available in Annex C.

4.1 Salient characteristic relevant to environmental and social assessment

Indonesia has 34 provinces, each with its own environmental and social characteristics. Indonesia is a vast country with a diverse range of environmental and social characteristics. Some of the most important environmental characteristics include:

- **Biodiversity:** Indonesia is one of the most biodiverse countries in the world, with an estimated 17% of the world's known species. The country is home to a wide variety of ecosystems, including tropical rainforests, mangrove forests, coral reefs, and savannas.
- **Natural resources:** Indonesia is rich in natural resources, including oil, gas, timber, and minerals. These resources have played a major role in the country's economic development.
- **Climate:** Indonesia has a tropical climate with high temperatures and humidity. The country is also prone to natural disasters, such as earthquakes, tsunamis, and volcanic eruptions.

Some of the most important social characteristics of Indonesia include:

- **Population:** Indonesia is the fourth most populous country in the world, with over 270 million people. The country is home to a wide variety of ethnic groups and religions.
- **Culture:** Indonesia has a rich and diverse culture, which is reflected in its art, music, and food.
- **Economy:** Indonesia is a developing country with a growing economy. The country is a major exporter of goods, such as textiles, electronics, and furniture.
- The environmental and social characteristics of Indonesia are complex and interconnected. These characteristics have a major impact on the country's development and its people.

Here are some specific examples of environmental and social challenges facing Indonesia:

- **Deforestation:** Indonesia loses an area of forest the size of Belgium every year. This is due to a number of factors, including logging, agriculture, and mining. Deforestation has a number of negative impacts on the environment, including climate change, biodiversity loss, and soil erosion.
- **Pollution:** Indonesia is one of the most polluted countries in the world. This is due to a number of factors, including industrial waste, agricultural runoff, and vehicle emissions. Pollution has a number of negative impacts on the environment, including water pollution, air pollution, and soil pollution.
- **Climate change:** Indonesia is one of the most vulnerable countries to climate change. This is due to a number of factors, including its geographic location, its reliance on agriculture, and its large population. Climate change is already having a number of negative impacts on Indonesia, including sea level rise, droughts, and floods.
- **Social inequality:** Indonesia is a very unequal country. The richest 10% of Indonesians control more than 70% of the country's wealth. This inequality has a number of negative impacts on society, including poverty, crime, and social unrest.

- These are just a few of the environmental and social challenges facing Indonesia. These challenges are complex and interconnected, and there is no easy solution. However, it is important to be aware of these challenges and to work to address them.

A brief summary of Geographical E&S Characteristics (baseline study) is present in Annex A.

The environmental and social impact assessment process under ESS 1 and Indonesian laws will allow PLN to identify the potential impacts and mitigations that are required for each investment wherever it is located.

As noted previously, the GREFi Project may support various types of investments, including:

- battery energy storage systems (BESS)
- transmission substations
- transmission lines

Though the specific E&S impacts resulting from these targeted investments will only be known upon the confirmation of their exact locations and footprint, the general impacts of each type of investment are described below:

Transmission Lines:

The construction and maintenance of transmission line rights-of way, especially those aligned through forested areas, may result in alteration and disruption to terrestrial habitat, including impacts to avian species and an increased risk of forest fires.

The combination of the height of transmission towers and distribution poles and the electricity carried by transmission and distribution lines can pose potentially fatal risks to birds and bats through collisions and electrocutions. Avian collisions with power lines can occur in large numbers if located within daily flyways or migration corridors. Additionally, primates may face potential electrocution hazards from contact with electrical infrastructure.

The ESDD report for the Sumatera 500kV and 275kV Backbone Transmission Line Projects indicates that the potential biodiversity impacts of the transmission lines include collisions for volant species, electrocution risks for birds, primates, and bats, as well as habitat loss and fragmentation. Additionally, the transmission lines intersect likely Critical Habitat for two species, the Sumatran Elephant and Sumatran Tiger, both of which are anticipated to inhabit the areas traversed by the transmission lines.

The construction of the transmission line will present risk to workers, including both safety and legal protection for worker's rights and conditions. Work crews are generally small and only present for short periods of time at any one location, so there are limited risks from labour influx and GBV.

Construction will also generate noise, traffic, dust, erosion, waste, and other impacts that are common to all constructions, but again these would be short-term in any one location. Transmission line corridors also must be cleared which destroys habitat and also leads to habitat fragmentation. Land acquisition for transmission lines may require relocation of some households or limit the use of lands in the corridor and may also affect Indigenous Peoples and cultural heritage.

Power transmission lines and associated access roads and facilities, may require the construction of corridors crossing aquatic habitats that may disrupt watercourses and wetlands, and require the removal of riparian vegetation. In addition, sediment and erosion from construction activities and stormwater runoff may increase the turbidity of surface watercourses.

There is public and scientific concern over the potential health effects associated with exposure to Electric and magnetic fields (EMF) exposed from power transmission lines and equipment.

During operation and maintenance, impacts are generally lower but there still may be waste generated, pesticides may be used, some traffic and other minor impacts. In addition, the presence of the corridor may continue to fragment habitats, and lines may present a hazard to birds under some circumstances.

Transmission Substation Upgrades and Constructions:

Construction risks for substations are similar to those of transmission lines but occur in a single location and can last for several months. Risks include hazards to workers' labor conditions and safety depending on their tasks. Risks may be more significant to communities than for transmission line construction. These can include environmental risks such as noise, traffic, dust, waste, and other impacts, as well as the risks of labor influx, including Gender-Based Violence (GBV). New substations will also require land acquisition and may result in potential economic or physical displacement, which can affect Indigenous Peoples and cultural heritage. Depending on the location, there can be impacts on biodiversity.

Impacts during operation would generally be much lower but could include the potential release of the potent greenhouse gas sulfur hexafluoride (SF₆), as well as electrical hazards to workers and trespassers. Land in corridors may be used for agriculture, but residences and workplaces must be kept at some distance from the line.

Polychlorinated biphenyls (PCBs) are regulated substances known for their environmental and health hazards. According to available data, since 2001, the Indonesian government officially banned the use, import, and export of PCBs through Government Regulation of the Republic of Indonesia Number 74 of 2001 concerning the Management of Hazardous and Toxic Materials. The Ministry of Environment and Forestry (KLHK) and the United Nations Industrial Development Organization (UNIDO) under the UN have collaborated to eliminate organic pollutants, including PCBs, throughout the archipelago. However, Indonesia is not completely free from PCBs, as approximately 10% of PCBs produced in 1929 are still present in the environment due to their persistent nature. PCBs Extended Inventory activities, including inventorying, collecting oil samples, and analyzing PCB content in oil samples from transformers owned and/or managed by PLN or other industries to determine PCB presence, are currently underway. Furthermore, the use of capacitors and transformers contaminated with PCBs is allowed until 2025, based on the Stockholm Convention. Nevertheless, all PCBs and PCB-contaminated equipment must be destroyed as soon as possible by 2028.

The ESDD report for Tranche 1 indicates that the Transmission Line (TL) poses a perceived low to medium risk of bird and primate electrocution throughout its entirety. The design of towers, conductors, and spacing of electricity cables, coupled with high voltage, mitigate risks compared to lower voltage cables. Despite this, due to anecdotal evidence and the presence of primates and birds along the TL, it is recommended to establish a monitoring system to track primate and bird activity on towers and document any fatalities. Specific sections, like the 275 kV Payakumbuh – Garuda Sakti segment, which traverses forested terrain inhabited by ten primate species, including gibbons, langurs, and macaques, present higher risk due to location factors. During field missions, reports of macaques climbing towers, particularly in this section, were documented. Instances of damage to junction boxes by 'monkeys', likely Long-tailed macaques (*Macaca fascicularis*), were reported by PLN, although photographic evidence was unavailable.

Where no suitable location can be found, PLN often uses Voluntary Land Donation (VLD) for the construction of poles. The risk is that the owner is not informed of how the land will be used and the impacts that will occur.

BESSs:

BESSs are normally built on small amounts of public and private lands, including PLN-owned land if available. They are often collocated on wind projects, with no additional land acquisition or impact on biodiversity. Potential impacts of construction would primarily involve Occupational Health and Safety (OHS) risks, handling of heavy machinery, and electrocution risks during installation. Additionally, batteries may contain hazardous chemicals that could contaminate water or land or pose risks to workers. During operation, there are also some risks of fire and explosion from battery malfunction, as well as risks from battery chemicals and heavy metals.

Given the relatively short lifespan of BESS, disposal of used battery chemicals and heavy metals becomes an important issue to address. Proper disposal methods are crucial due to the hazardous

materials contained within batteries. Improper disposal can lead to environmental contamination and health risks for workers and surrounding communities. Therefore, careful planning for the end-of-life management of BESS is necessary to ensure safe and environmentally responsible disposal or recycling of batteries, minimizing negative impacts on ecosystems and human health.

Additionally, in Indonesia, there is a licensed disposal facility, one of which is PT. Prasadha Pamunah Limbah Industri (PT PPLI). PT PPLI is an Indonesian company specializing in the management and disposal of industrial waste. As a disposal facility, PT PPLI is tasked with transporting, treating, and disposing of all hazardous waste in accordance with Indonesian regulations. The company plays a crucial role in handling hazardous waste generated by various industries in Indonesia.

4.2 Risk Mitigation

In order to mitigate the environmental and social risks associated with specific project activities, various measures are required, including the implementation of instruments such as waste management plans, traffic plans, erosion control strategies, and occupational health and safety/environmental health and safety (OHS/HSE) plans. To optimize effectiveness and streamline the planning process, these essential instruments can be seamlessly integrated into the Environmental and Social Impact Assessment - Environmental and Social Management Plan (ESIA-ESMP) or *Analisis Mengenai Dampak Lingkungan - Rencana Pengelolaan Lingkungan* (AMDAL/RKL-RPL) or Contractor Environmental and Social Management Plans, as relevant. By incorporating them into these overarching project management plans, they no longer require separate standalone documentation, making the overall planning approach more comprehensive and efficient.

Below is a summary of the Typical Mitigation Measures, Instruments, and Tools for each technology used by PLN as indicated in Tables 4.1-4.6.

Table 4.1 Typical Mitigation Measures, Instruments and Tools for Transmission Line Project

No		Potential WB ESS Triggered	Mitigation Measures	Guideline or Tools ⁶	Instrument
Planning phase or Pre-Construction					
1	Conflict on resettlement and land acquisition	ESS1, ESS 5	Implementation of land acquisition protocols, adopting a willing-buyer and willing-seller scheme, implementing LARPF	Land Acquisition and Resettlement Policy Framework (LARPF) and Land Acquisition Management Guideline (LA MG). See Annex F of ESMF for applying the LARPF.	LARAP
2	Illegal occupant in PLN land	ESS 5	Implementation of an impact mitigation hierarchy, starting from avoidance of areas with ongoing large-scale disputes, technical support for conflict resolution mediation	Land Acquisition and Resettlement Policy Framework (LARPF) and Land Acquisition Management Guideline (LA MG). See Annex F of ESMF for applying the LARPF.	LARAP

⁶ The instruments do not necessarily need to be standalone and can be part of a broader framework such as integrated into ESIA-ESMP or AMDAL/RKL-RPL

No		Potential WB ESS Triggered	Mitigation Measures	Guideline or Tools ⁶	Instrument
3	Impacts on IPs, including impact on customary land	ESS 7, ESS 8	Free, Informed and Prior Consent (FPIC) protocol will be required under circumstances warranting FPIC as guided in the IPPF.	ESMF, Indigenous People Policy Framework (IPPF) and Indigenous People MG. See Annex G of ESMF for applying the IPPF.	ESIA, IPP or integrated into other relevant instruments
4	Impact associated with selecting a transmission line route through a key biodiversity area (protected forest)	ESS 6	Conduct comprehensive ecological surveys to identify sensitive areas, habitats, and species that may be affected by the transmission line.	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)
			Evaluating the alignment of a transmission line design by considering multiple route options is crucial for minimizing ecological impact while meeting technical and economic requirements.		
5	Habitat alteration (terrestrial as well as aquatic);	ESS 6	Choosing a site that has already been disturbed or degraded, rather than a pristine ecosystem.	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)
			Avoiding sensitive habitats and minimizing the footprint of the project can help reduce the impact on wildlife and ecosystem		
6	Exclusion of IPs and vulnerable peoples in the consultation process	ESS 1, ESS 7, ESS 10	Free, Informed and Prior Consent (FPIC) protocol will be required under circumstances warranting FPIC as guided in the IPPF. Implement SEPF.	ESMF, Indigenous People Policy Framework (IPPF), Indigenous People MG, Stakeholder Engagement Framework (SEF) and SE MG. See Annex G of ESMF for applying the IPPF.	ESIA, IPP or integrated into other relevant instruments
			Inclusive participation and community engagement including with vulnerable groups		
Construction Stage					
1	Waste generation	ESS 3	Reducing waste at the source, implementing recycling and composting programs, and implementing appropriate disposal measures for hazardous and non-hazardous waste. Providing education and outreach to workers and the	Hazardous Waste Management Guideline, Non-Hazardous Waste Management Guideline	

No		Potential WB ESS Triggered	Mitigation Measures	Guideline or Tools ⁶	Instrument
			community on waste reduction and proper waste disposal practices		
2	Fugitive dust and other emissions, such as construction vehicles;	ESS 4	Using low emission vehicles, perform traffic transportation management, perform emission distribution analysis in AMDAL or UKL/UPL, obtain technical approval if necessary. Regular monitoring, water spraying, and covering of exposed area	Air Quality Management Guideline	ESIA or ESMP as relevant
3	Soil erosion;	ESS 3	Management of sediment mobilization and transport; Clean run-off management; Facility design and drainage plans; Design of structural (slope) stability; and Managing disturbance to water bodies.	Erosion and Sediment Control Management	ESIA or ESMP as relevant
4	Electric magnetic fields;	ESS 3, ESS 4	Low EMF equipment and materials, implementing appropriate grounding and shielding measures, and maintaining safe distances between high EMF equipment and workers or the public. Providing education and outreach to workers and the community on the potential risks of EMF exposure and how to minimize exposure. Regular monitoring	Community Health, Safety and Security Management Guideline	ESIA or ESMP as relevant
5	Impacts of construction of bridges, and roads for access on aquatic habitats (both in construction and maintenance phases).	ESS 4, ESS 6	Conduct biodiversity impact analysis	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)
6	Right of way construction causing habitat fragmentation, and loss of wildlife habitats;	ESS 6	Conduct scoring system and conduct biodiversity impact analysis	Determining Transmission Line Corridor with Scoring System Guidelines Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)

No		Potential WB ESS Triggered	Mitigation Measures	Guideline or Tools ⁶	Instrument
7	Noise and vibration;	ESS 3, ESS 4	Implementing noise barriers, sound insulation, and vibration damping and regular monitoring	Noise and Vibration Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
8	Worker camps and associated waste	ESS 3, ESS 4	Engaging with local community, engaging government that related to waste handling, engaging with local manpower agencies	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
9	Sexual exploitation and abuse, STD and HIV/AIDS	ESS 2, ESS 4	Developing and implementing Code of Conduct, Training and Awareness	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
10	Hazardous materials such as oil spills;	ESS 3	Implementing spill prevention measures	Hazardous Material Management Guideline	ESIA or ESMP as relevant
			Ensuring proper storage and handling practice		
			Regular inspections and maintenance		
			Developing an emergency response plan		
11	Visual and noise disturbance by maintaining equipment in that locality	ESS 4	Regular inspections and maintenance of equipment and facilities, implementing noise-reducing measures, and implementing appropriate landscaping or screening measures	Noise and Vibration Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
Operation Stage					
1	Maintenance of rights of way vegetation controls in the form of land clearance.	ESS 3, ESS 6	implementing appropriate vegetation management practices, such as using low-impact techniques for land clearance and implementing appropriate measures to minimize impacts on soil, water, and biodiversity	Biodiversity Management Plan Guideline Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)

No		Potential WB ESS Triggered	Mitigation Measures	Guideline or Tools ⁶	Instrument
2	Overhead risks to birds and bats;	ESS 6	implementing appropriate environmental impact assessment studies, identifying sensitive areas. Implementing appropriate monitoring and reporting of bird and bat activity and potential impacts on their populations	Biodiversity Management Plan Guideline Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)
3	Hazardous materials Sulphur Hexafluoride (SF6);	ESS 3	minimizing or eliminating the use of SF6 in equipment design, retrofitting or replacing existing equipment with SF6-free alternatives, and implementing appropriate storage and handling procedures for SF6. Implementing appropriate monitoring and reporting of SF6 use and potential emissions. Providing education and training to the workers	Hazardous Material Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
4	Fuels for construction vehicles; and	ESS 3	Implementing proper handling and storage measures, providing training to staff on safe handling and transport of fuels and panels, and following regulations for hazardous materials and waste management. Conducting regular inspections and maintenance of equipment and facilities, and having emergency response plans	Hazardous Material Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
5	PCB's handling and disposal for retrofitting old transmission lines	ESS 3	Providing training and education to the worker, proper hazardous material storage and handling	Hazardous Material Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
Occupational Health (for all stages)					
1	Live Power;	ESS 2	Provide training and education to the worker, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

No		Potential WB ESS Triggered	Mitigation Measures	Guideline or Tools ⁶	Instrument
2	Working at height;	ESS 2	Certified worker, Implementing OHS System Management, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
3	Electrical hazards;	ESS 2	Implementing OHS System Management, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
4	Exposure to toxic metals and chemicals; and	ESS 2	Training and awareness related to hazardous material and waste, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
5	Falling materials.	ESS 2	Implementing OHS System Management, Training and awareness, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
6	Electric Magnetic Field	ESS 2	low EMF equipment and materials, implementing appropriate grounding and shielding measures, and maintaining safe distances between high EMF equipment and workers or the public. Providing education and outreach to workers and the community on the potential risks of EMF exposure and how to minimize exposure. Regular monitoring	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
Community Health and Safety (for all stages)					
1	Electrocution	ESS 4	Implementing appropriate signage, fencing, and barriers around electrical equipment	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

No		Potential WB ESS Triggered	Mitigation Measures	Guideline or Tools ⁶	Instrument
2	Electromagnetic interference	ESS 4	Utilizing low EMF equipment and materials, implementing appropriate grounding and shielding measures, and maintaining safe distances between high EMF equipment and workers or the public. Additionally, providing education and outreach to workers and the community on potential risks of EMF exposure and how to minimize it, along with regular monitoring.	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
3	Visual, noise and ozone	ESS 4	Choosing appropriate locations for the transmission lines that minimize their visual impact, using noise barriers and mufflers to reduce noise emissions from equipment, and selecting appropriate materials and technologies that minimize ozone emissions. Proper maintenance and inspection	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
4	Aircraft navigation	ESS 4	proper planning, design, and communication with aviation authorities, implementing SEPF	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
5	Labor influx; and	ESS 4	providing temporary housing in designated areas, implementing appropriate transportation measures, providing adequate sanitation facilities, and implementing appropriate waste management practice	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
6	Sexual exploitation and abuse.	ESS 4	Proving training and awareness	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

Table 4.2 Mitigation Measures, Instrument and Tools for Distribution Line Project

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
Planning phase or Pre-Construction					
1	Conflict on VLD	ESS1, ESS 5	Implementation of VLD protocols	Land Acquisition and Resettlement Policy Framework (LARPF) and Land Acquisition Management Guideline (LA MG). See Annex F of ESMF for applying the LARPF.	LARAP
2	Impact associated with selecting a distribution line route through urban area	ESS 4	Conduct a detailed analysis of urban planning and zoning regulations to identify suitable routes that minimize impacts on existing infrastructure and land use	Guidelines for Study on Determining Transmission Line Corridor with Scoring System	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
			Select routes that follow existing rights-of-way, roadways, or other utility corridors to minimize disruption to urban areas. Avoid sensitive zones and high-density residential or commercial areas.		
Construction Stage					
1	Domestic waste	ESS 3	Reducing waste at the source. Providing education and outreach to workers and the community on waste reduction and proper waste disposal practices, engaging with local community, engaging with local manpower agencies	Non-Hazardous Waste Management Guideline	ESIA or ESMP as relevant
2	Fugitive dust and other emissions, such as construction vehicles;	ESS 4	Using low emission vehicles, perform traffic transportation management, perform emission distribution analysis in AMDAL or UKL/UPL, obtain technical approval if necessary. Regular monitoring, water spraying, and covering of exposed area	Air Quality Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
3	Electric magnetic fields;	ESS 3, ESS 4	Low EMF equipment and materials, maintaining safe distances between high EMF equipment and workers or the public. Providing education and outreach to workers and the community on the potential risks of EMF exposure and how to minimize exposure. Regular monitoring	Community Health, Safety and Security Management Guideline	ESIA or ESMP as relevant
4	Noise, vibration;	ESS 3, ESS 4	Implementing noise barriers, sound insulation, and vibration damping. Regular monitoring	Noise and Vibration Management Guideline	ESIA or ESMP as relevant
5	Impacts of construction of bridges, and roads for access on aquatic habitats (both in construction and maintenance phases).	ESS 4, ESS 6	Conduct biodiversity impact analysis	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)
Operation Stage					
1	Maintenance of rights of way vegetation controls in the form of land clearance.	ESS 3, ESS 6	Implementing appropriate vegetation management practices, such as using low-impact techniques for land clearance and implementing appropriate measures to minimize impacts on soil, water, and biodiversity	Biodiversity Management Guideline. See Annex D section 3.4. Determining Transmission Line Corridor with Scoring System Guidelines. See Annex D section 3.5.	BMP or integrated into other relevant instruments (ESMP)
2	Overhead risks to birds and bats;	ESS 6	Implementing appropriate environmental impact assessment studies, identifying sensitive areas. Implementing appropriate monitoring and reporting of bird and bat activity and potential impacts on their populations	Biodiversity Management Guideline	BMP or integrated into other relevant instruments (ESMP)
Occupational Health (for all stages)					

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
1	Live Power;	ESS 2	Provide training and education to the worker, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
2	Working at height;	ESS 2	Certified worker, Implementing OHS System Management, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
3	Electrical hazards;	ESS 2	Implementing OHS System Management, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
4	Exposure to toxic metals and chemicals; and	ESS 2	Training and awareness related to hazardous material and waste, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
5	Falling materials.	ESS 2	Implementing OHS System Management, Training and awareness, PPE	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
6	Electric Magnetic Field	ESS 2	low EMF equipment and materials, implementing appropriate grounding and shielding measures, and maintaining safe distances between high EMF equipment and workers or the public. Providing education and outreach to workers and the community on the potential risks of EMF exposure and how to minimize exposure. Regular monitoring	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
Community Health and Safety (for all stages)					
1	Electrocution	ESS 4	Implementing appropriate signage, fencing, and barriers around electrical equipment	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
2	Electromagnetic interference	ESS 4	Low EMF equipment and materials, implementing appropriate grounding and shielding measures, and maintaining safe distances between high EMF equipment and workers or the public. Providing education and outreach to workers and the community on the potential risks of EMF exposure and how to minimize exposure. Regular monitoring	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
3	Visual, noise and ozone	ESS 4	Housing appropriate locations for the distribution lines that minimize their visual impact, using noise barriers to reduce noise emissions from equipment, and selecting appropriate materials and technologies that minimize ozone emissions. Proper maintenance and inspection	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
4	Sexual exploitation and abuse.	ESS 4	Provide a training and awareness	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

Table 4.3 Mitigation Measures, Instrument and Tools for BESS Project

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
Planning phase or Pre-Construction					
1	Illegal occupant in PLN land	ESS 5	Implementation of an impact mitigation hierarchy, starting from avoidance of areas with ongoing large-scale disputes, technical support for conflict resolution mediation	Land Acquisition and Resettlement Policy Framework (LARPF) and Land Acquisition Management Guideline (LA MG). See Annex F of ESMF for applying the LARPF.	LARAP
2	Impact associated with selecting the BESS location adjacent or through a key biodiversity area (protected forest)	ESS 6	Conduct comprehensive ecological surveys to identify sensitive areas, habitats, and species that may be affected by the transmission line.	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP)
			Evaluating the site location design by considering the options is crucial for minimizing ecological impact while meeting technical and economic requirements.		
Construction Stage					
1	Site preparation and land clearance;	ESS 3, ESS 4	Conducting EIA/AMDAL	Environmental and Social Management Plan (RKL-RPL)	ESIA or ESMP as relevant
2	Emissions from construction vehicles;	ESS 4	Application of emissions control techniques, including management of other aspect such as traffic/transportation management, using low emission vehicles	Air Quality Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
3	Particulate matter and erosion;	ESS 4	Perform emission distribution analysis in AMDAL or UKL/UPL, obtain technical approval if necessary. Regular monitoring, water spraying, and covering of exposed area	Erosion and Sediment Control Management Guidelines	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
4	Alteration to drainage channels;	ESS 3, ESS 4	Perform hydrological analysis of water runoff	Wastewater and Water Quality Management Guideline	ESIA or ESMP as relevant

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
5	Habitat loss and land degradation;	ESS 6	Choosing a site that has already been disturbed or degraded, rather than a pristine ecosystem. Avoiding sensitive habitats and minimizing the footprint of the project can help reduce the impact on wildlife and ecosystem	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP
6	Access road construction and habitat fragmentation;	ESS 4, ESS 6	Perform traffic analysis, conduct biodiversity impact analysis	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP
7	Transmission line construction and habitat fragmentation;	ESS 6	Perform traffic analysis, conduct biodiversity impact analysis	Biodiversity Management Guideline. See Annex D section 3.4.	BMP or integrated into other relevant instruments (ESMP
8	Noise and vibration;	ESS 3, ESS 4	Implementing noise barriers, sound insulation, and vibration damping. Regular monitoring	Noise and Vibration Management Plan	ESIA or ESMP as relevant
9	Construction of labour camps and waste management.	ESS 3, ESS 4	Engaging with local community, engaging government that related to waste handling, engaging with local manpower agencies	Waste Management Plan; and Community Health Safety Security Management Plan Guideline	ESIA or ESMP as relevant
10	Sexual exploitation and abuse, STD and HIV/AIDS	ESS 2, ESS 4	Developing and implementing Code of Conduct, Training and Awareness	Community Health Safety Security Management Plan Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
Operation Stage					
1	Particulate matter;	ESS 3	implementing emission control technologies, such as electrostatic precipitators (ESPs) or fabric filters, using cleaner fuels, such as low-Sulphur diesel or natural gas	Air Quality Management Guideline	ESIA or ESMP as relevant
2	Particulates in transfer and storage;	ESS 3	Regular maintenance and cleaning of equipment, and use of low-emission fuels	Air Quality Management Guideline	ESIA or ESMP as relevant

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
3	Solid and liquid waste;	ESS 3	Recycling and reusing materials, minimizing waste generation, and proper disposal of waste.	Non-Hazardous Waste Management Guideline Wastewater and Water Quality Management Guideline	ESIA or ESMP as relevant
4	Hazardous waste from used battery handling;	ESS 3	Implementing proper handling, storage, and disposal measures. This includes using designated battery storage areas with proper ventilation and spill containment, providing training to staff on safe handling and disposal of batteries, and following regulations for hazardous waste management	Hazardous Waste Management Guideline	ESIA or ESMP as relevant
Occupational Health (for all stages)					
1	Heat;	ESS 2	Implementing heat stress prevention measures, such as providing shade and ventilation in work areas, scheduling work during cooler times of the day, providing cool drinking water, and providing training to workers on the signs and symptoms of heat stress	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
2	Working at height;	ESS 2	Certified worker, Implementing OHS System Management	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
3	Electrical hazards;	ESS 2	Implementing OHS System Management	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
4	Exposure to toxic metals and chemicals; and	ESS 2	Training and awareness related to hazardous material and waste	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
5	Falling materials.	ESS 2	Implementing OHS System Management, Training and awareness	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
6	Flammable materials handling for workers	ESS 2	Implementing OHS System Management, Training and awareness,	Labor and Working Condition Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
Community Health and Safety (for all stages)					
1	Spread of disease;	ESS 4	Providing clean water and sanitation facilities, promoting hand washing and other hygiene practices, and implementing appropriate waste management practices. Providing education and outreach to the community on disease prevention and detection	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
2	Fire and Electrical hazards	ESS 4	Proving training and awareness to the community, emergency response plan	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
3	Exposure to hazardous materials; flammable materials	ESS 4	Providing training to staff on safe handling and disposal of hazardous materials, and following regulations for hazardous materials and waste management. Implementing emergency response plan	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
4	Labor influx; and	ESS 4	Providing temporary housing in designated areas, implementing appropriate transportation measures, providing adequate sanitation facilities, and implementing appropriate waste management practice	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)

No	Typical E&S Risk	Potential WB ESS Triggered	Mitigation Measures	Guideline or and Tools	Instrument
5	Sexual exploitation and abuse.	ESS 4	Providing training and awareness	Community Health, Safety and Security Management Guideline	Integrated into relevant instruments (ESIA, ESMP or C-ESMP)
Decommissioning					
1	Hazardous waste (used battery)	ESS 3	Providing training to staff on safe handling and disposal of hazardous materials, and following regulations for hazardous materials and waste management. Implementing emergency response plan. The hazardous waste should be collected, processed, and disposed of by licensed disposal facilities, such as PPLI.	Hazardous Waste Management Guideline Labor and Working Condition Management Guideline	ESIA or ESMP as relevant
2	Diesel storage	ESS 3	Implementing proper handling and storage measures, providing training to staff on safe handling and transport of fuels and panels, and following regulations for hazardous materials and waste management. Conducting regular inspections and maintenance of equipment and facilities, and having emergency response plans	Hazardous Material Management Guideline	ESIA or ESMP as relevant
3	Clean up of the contaminated site	ESS 3	Implementing spill prevention and response plans, conducting regular inspections and maintenance of equipment and facilities, and following regulations for hazardous materials and waste management	Hazardous Waste Management Guideline	ESIA or ESMP as relevant

4.2.1 Labour mitigation measures

The GREFi Project and its investments will involve all of workers criteria described in ESS2 as presented in **Table 4.4** to support the project activities, including project management, preparation, and implementation, including supervision and monitoring.

Table 4.4 PLN Anticipated Project Workers

Category	ESS2 Definition	Types of Workers	Expected Roles
Direct workers	People employed or engaged directly by the PLN to work specifically in relation to the project, in which PLN have a direct employment relationship and specific control over the work, working conditions, and treatment. Direct workers are paid directly by PLN, and subject to the PLN day-to-day instruction and control.	PLN Headquarter staff	Provide day-to-day management of all project activities, including technical assistance and oversight support. Headquarters staff primarily oversee all of PLN's projects and are involved in the decision-making process. However, they are unlikely to be directly involved in the implementation of each investment activity.
		PLN Regional (UIP) staff	Provide day-to-day management and oversee the implementation of specific investment activities.
		Consultants, e.g. E&S individual consultant directly hired by PLN	Assist PLN by offering advice on various matters, including sustainability services, managerial support, and other relevant areas.
		Community facilitators, e.g. dedicated GRM officer directly hired by PLN	Facilitate community engagement, raise awareness, and handle or administer community grievances.
Contracted workers	People employed or engaged through third parties ⁷ to perform work related to	Construction workers employed by selected contractors and subcontractors. These may include members of local communities employed by contractors and/or subcontractors as casual workers.	Undertake tasks related to construction, encompassing planning, site clearance and preparation, civil works, and electrical installation.

⁷ Third parties may include contractors, subcontractors, brokers, agents or intermediaries.

Category	ESS2 Definition	Types of Workers	Expected Roles
	core functions ⁸ of the project, regardless of location. The third-party exercises control over the work, working conditions, and treatment of this worker classification, even if the project worker under this classification is working on an ongoing basis on project activities.	Detailed Engineering Design (DED) consultants	Assist PLN in providing advisory support on technical services, including building design, site planning, budget calculation (Bill of Quantity), and supervision during construction.
Primary supply workers	People employed or engaged by the PLN's primary suppliers ⁹ . The primary supplier exercises control for the work, working conditions, and treatment of this worker.	Workers of the Tier 1 supplier to the Contractor that supplies for goods or materials of the project core functions on an ongoing basis; for example, workers employed by construction material vendors. This includes casual workers.	Provide directly to the project goods or materials essential for the construction works (i.e. stones, gravels, sands, timbers, light steels, cement, etc.

ASSESSMENT OF KEY POTENTIAL LABOUR RISK

The overall Project impact is expected to be positive with no adverse environmental and social impacts. However, there are several labor risks related to Project activities, including physical labor and non-physical labor which presented in [Table 4.5](#).

Table 4.5 Potential Labour Risk and Mitigation Measures

Risks	Mitigation Measures
OHS risk is high due to physical hazards associated with demolition and construction work activities, project type (i.e. electrocutions) and nature of project locations (i.e. potential erosion/landslide)	Provision of OHS training (e.g., OHS induction, toolbox meetings), appropriate Personal Protective Equipment (PPE), oversight by supervising engineers, performance of Job Safety Analysis (JSA), and issuance of work permits for high-risk activities.

⁸ Core functions of a project constitute those production and/or service processes essential for a specific project activity without which the project cannot continue.

⁹ Primary suppliers are those suppliers who, on an ongoing basis, provide directly to the project goods or materials essential for the core functions of the project.

Risks	Mitigation Measures
	Provision of OHS inspectors/supervisors by the Contractor/Primary Supplier with relevant experience and a sufficient number for the size of the workforce and work area. Provision of medical arrangements on-site (e.g., first aid kits and first aid responders) or coordination with nearby medical service providers for serious injuries or accidents. Workers must ensure safety access to and within the worksite, taking precautions against hazards such as inclement weather, slippery surfaces, high river flows, and landslides.
Use of third-party contractors and primary suppliers with different levels of awareness/experience/capacity in identify and manage OHS risks. Nevertheless, PLN's leverage to enforce corrective actions on these types of workers may be limited.	Screening and selection criteria for direct PLN contractors, and primary suppliers, as well as their workers' skills and experience, should be outlined in the bidding documents and contracts. Additionally, provision should be made for OHS training and the presence of OHS inspectors/supervisors, as mentioned earlier.
Labor risks of workers hired by third party (neither the PLN nor the EPC Contractor).	Provision of C-ESMP to be agreed and implemented by third-party workers. Screening and selection of the workers hired by third party, including their skills/experience criteria to be described in the bidding documents and contracts. Provision of clear work's terms and conditions, including the amount and method of payment (if applicable) and other benefits and arrangement of working hours.
Child labor/risk of underage labor (under 15) is considered moderate with the exception of community workforce¹⁰ and primary supply workers. Participation of youth labor (15-17 years) is likely and there is a risk that they may be involved in hazardous work or experience interruption of education.	Codes of Conduct and age requirements for the workforce to be incorporated into bidding documents and worker contracts. Labor supervision and verification of the age of workers prior to recruitment. The minimum age for workers is 16 years old, with the note that youth labor (aged 16-18) is only hired to work in non-hazardous workplaces and must not interrupt education and/or emotional and mental development.

¹⁰ Community workforce refers to people employed or engaged in providing community labor. Project activities may include the use of community workers in a number of different circumstances, including where labor is provided by the community as a contribution to the project, or where projects are designed and conducted for the purpose of fostering community-driven development.

Risks	Mitigation Measures
The presence of construction workers and service providers (and in some cases family members of either or both) can generate additional demand for the provision of public services, such as water, electricity, and medical services. This is particularly the case when the influx of workers is not accommodated by additional or separate supply systems.	Clear information on work benefits to be provided to the worker at hiring, including clear arrangements for the benefit of the worker's family members. Medical services arrangement and medical benefits to be defined in the contract, including provisions for work-related incidents/accidents and non-work-related illnesses.
Risk of work environment discomfort, including in workers' camp due to poor sanitation and excessive noise from construction site as well as potential worker beddings at construction site.	Specification of the workers' camp should be defined in the C-ESMP, following the WB Group EHS guidelines. The workers' camps will consider the number of persons per room, the arrangement of common rooms/utilities, health screening of workers entering the camp, first aid and medical emergency response, socialization on health and hygiene awareness, especially on communicable diseases. Arrangements for vulnerable workers (i.e., women, persons with disabilities, etc.) should include separated sleeping/rooms/camps, sanitary and washing facilities, and socialization and implementation of the Feedback and Grievance Redress Mechanism (FGRM). Arrangements for the provision of basic needs services such as food/catering, drinking water, laundry, etc., should also be included.
Risks of sexual exploitation and abuse/ sexual harassments (SEA/SH) to female workers.	Provision, socialization and training of Gender Based Violence (GBV) and SEA/SH, including signing Code of Conduct for all workers, as defined in paragraph 3 of ESS 2.
Delivery of supplies for construction workers and the transportation of workers can lead to an increase in traffic and a rise in accidents.	Traffic management as further defined in the CESMP, FGRM for local communities.
Emergency situations arise from work incident/accident (i.e. fire, chemical spill, medical) or natural disaster (i.e. flood, landslide, earthquake).	Provision, socialization and training of emergency response procedure to the worker and affected community (as applicable).

Such potential risks will continue to be assessed in light of the selection of construction sites (i.e., urban, peri-urban, and rural), the size of construction works, and potential impacts on host communities. In addition to the above measures, PLN should also refer to Labor Management Guidelines, which are part of the ESMS, to anticipate potential risks during the GREFI Project and its investments.

5 ENVIRONMENTAL AND SOCIAL MANAGEMENT

Environmental and social (ES) management for the guaranteed financing transactions will include activities \ risk pre-screening, screening, risk categorization, environmental and social due diligence, review and clearance, and monitoring and reporting. The processes for these activities are discussed in the following subchapters.

5.1 Project Pre-screening Process

The PLN Project Pre-Screening¹¹ (PP team) will meet as soon as it is formed. The Team will establish written communication (preferably by email) to analyse relevant environmental and social information that is collected for the Project Pre-Screening. The Team will discuss the selection of their assets/investments that will be proposed for guaranteed financing under GREFi. Throughout this pre-screening process, the Team will consult the PLN Environmental and Social (ES) Team to determine the potential E&S issues and any specific issues relevant to the project context. The PLN ES Team will also provide input on the adequacy of the pre-screening process against the applicable international standards for the project.

Information/data to support for pre-screening process may be sourced from the following project investment documents:

1. EIA (AMDALs/UKL-UPLs/ESMPs)
2. Pre-Feasibility Study (Pre-FS) and FS, or Operational & Financial Work Assessments (*Kajian Kerja Operasional & Kajian Kerja Finansial*, or “KKO & KKF”)¹²
3. Permits/Approvals
4. Other E&S Instruments (LARAPs)
5. Contractor’s ESMPs
6. Monitoring and Progress Reports
7. Other project related documents when available, such as DED

The pre-screening process is provided in Figure 5-1. When the result of the Project Pre-Screening is acceptable by PLN ES Team. The PP Team will proceed to proposing the investment to the World Bank for further process on GREFi requirements that is described in Figure 5-2.

¹¹ Project Pre-Screening Team consist of: 1) Representative of the Project Planning Team, 2) Representatives of the Main Unit, 3) E&S specialist (could be from ES Team or PP Team), 4) Representative of PC Team and PO Team to ensure full integration of E&S risk management in construction and operational processes.

¹² In existing PLN project development process, project that involves significant infrastructure development like a power plant or a transmission line, requires a Pre-Feasibility Study (Pre-FS) and Feasibility Study (FS); while for project that does not involve significant infrastructure development, such as distribution line establishment, a simpler assessment named Operational & Financial Work Assessments (*Kajian Kerja Operasional & Kajian Kerja Finansial*, or “KKO & KKF”) is conducted.

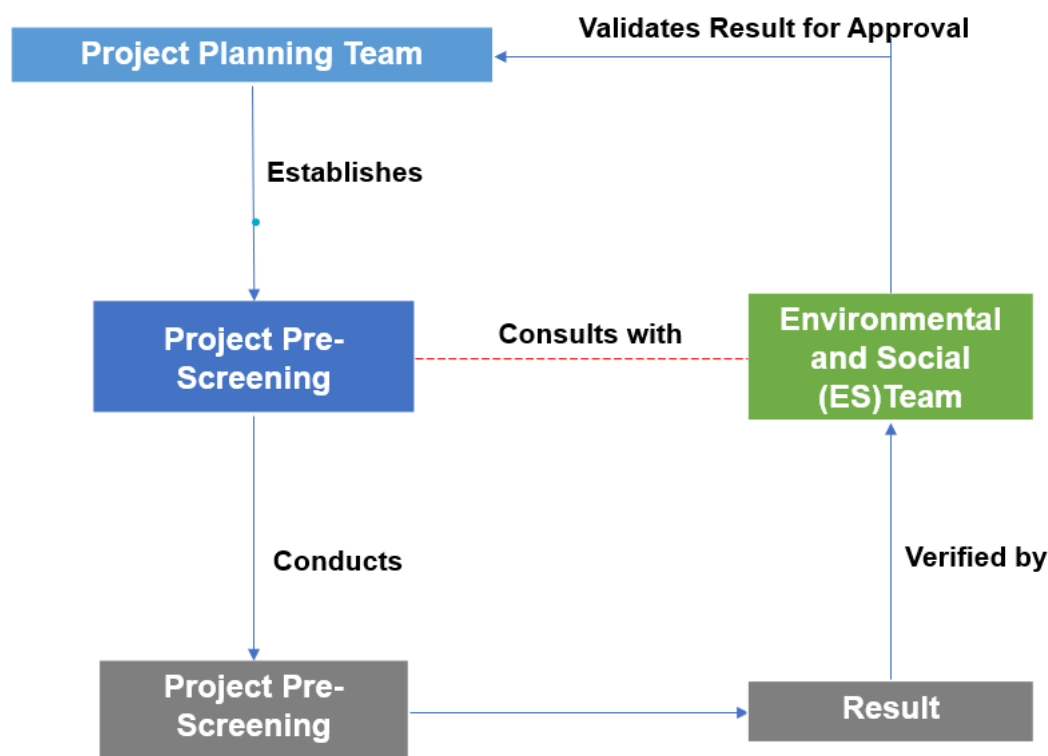


Figure 5-1 Project Pre-screening Process

5.2 Environmental and Social E&S Due Diligence (ESDD) Process

There are two types of project investments under the GREFi i.e.: existing projects/investments and new projects/investments (in preparation). Existing investments are where the construction of infrastructure is ongoing or completed, or where operation of the infrastructure has commenced. New investments are where the investment is in the preparation stage where construction or operation of the infrastructure has not commenced. Both processes are similar with the exceptions of: (i) the availability of project documents for the screening and due diligence processes, (ii) a larger opportunity to integrate ES considerations into the design of new investments, and (iii) a higher probability to reject the guaranteed financing for existing investments due to lower opportunity to consider ES gap filling measures into the design, construction, and operation of the infrastructure where unacceptable ES risks and impacts have materialized.

Under the ESDD for new project investments, PLN has more flexibility to adjust the project plan and design before commencing bidding and construction to meet the ESMF eligibility outlined in Table 5.1. In contrast, for existing project investments, those proposed for guaranteed financing have already completed the pre-construction/construction stages and may even be in operation. As such, PLN has minimal flexibility to change the project design to meet the ESMF eligibility criteria, and it will be more challenging for PLN as it will require larger resources, money, and time. There is a higher probability of rejecting existing project investments (compared to new project investments) if it does not meet the ESMF eligibility. The ESDD process for existing and new projects is presented in Figure 5-2 below.

After PLN conducts pre-screening as described in section 5.1 and decides to propose investments for GREFi, an Environmental and Social Due Diligence (ESDD) will be applied for all proposed investments under each tranche. This assessment will be undertaken by independent Environmental and Social (E&S) consultants hired by the Bank. The ESDD process will adhere to the ESDD Terms of Reference

(TOR) specified in Annex B of this ESMF.

In the ESDD process, the consultants perform a risk screening to identify relevant instruments necessary for the due diligence process. This step will pinpoint potential environmental and social risks associated with the investment. Following the risk screening, the ESDD consultants will identify any gaps in compliance and recommend corrective actions to address these gaps. This ensures that the investment aligns with the required standards. Then, the ESDD consultants will prepare a comprehensive ESDD report along with a Corrective Action Plan (CAP). This report documents the findings and the actions required to mitigate identified risks. The World Bank and PLN will review and agree on the CAP. This step is crucial for ensuring that both parties are aligned on the necessary corrective measures and their implementation.

The estimated duration for completing the ESDD process, including agreeing on the CAP, is around three months. The World Bank then decides on the eligibility of the investment based on ESDD report and/or the CAP status. During the eligibility decision process, PLN will ensure that all proposed projects/investments and the agreed-on CAP align with the capabilities and policy direction of PLN management. Furthermore, PLN will be responsible for implementing and adhering to the CAP. If the investment is deemed ineligible, it is rejected by the Bank, and the process stops. If the investment is eligible, the World Bank will issue a memo confirming the eligibility decision on the proposed investment for each tranche. As the RFP process takes time, PLN could potentially proceed with the financing in parallel (e.g., PLN secure the financing for those investments regardless of the WB guarantee), whereas the CAP agreement is only a condition for the effectiveness of the IBRD Guarantee. Finally, PLN will issue a Request for Proposal (RFP) for guaranteed financing, moving the investment forward in the financing process.

All the ESDD reports including the CAP will be disclosed on PLN's website including the annexes.

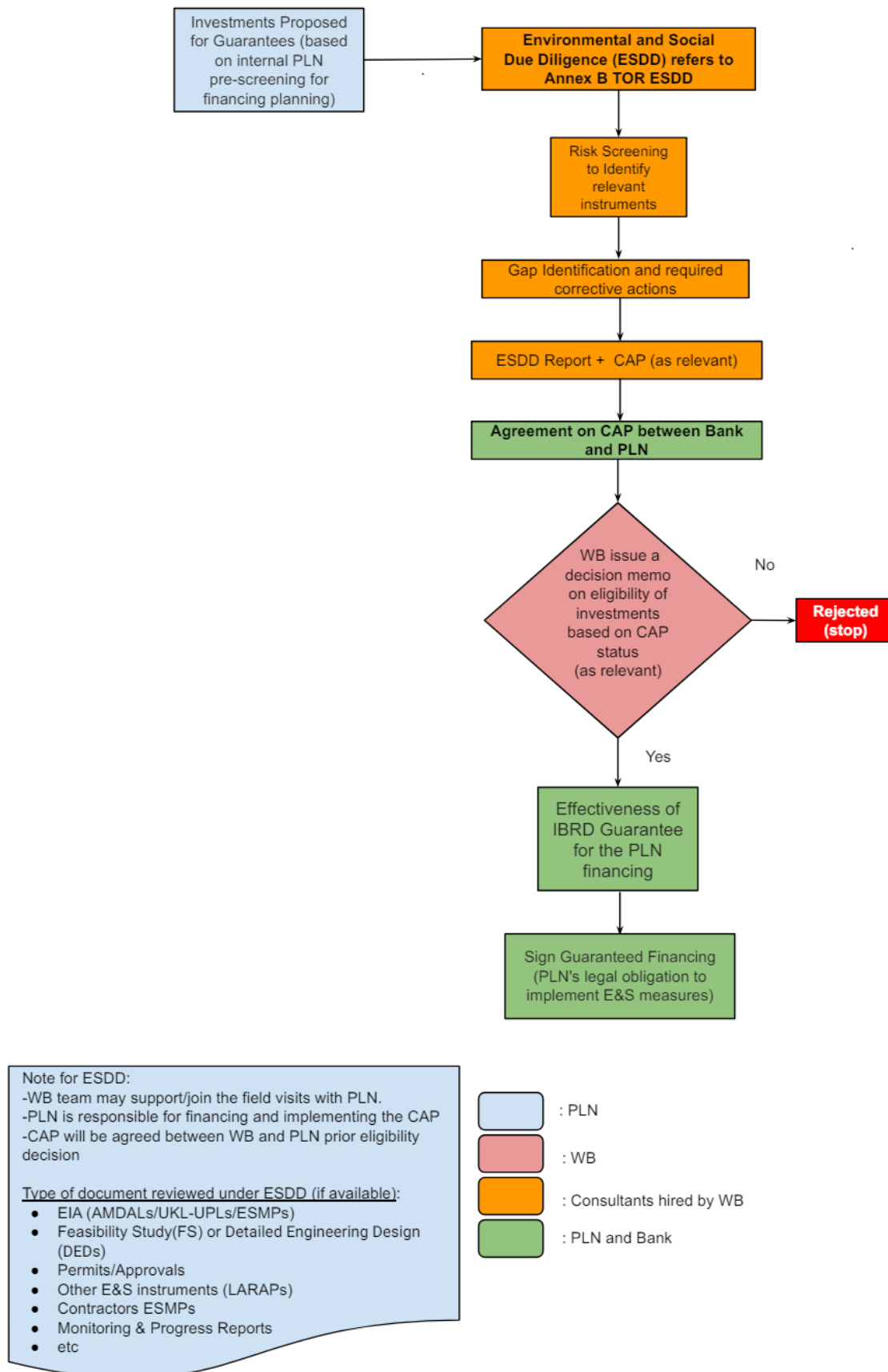


Figure 5-2 Existing Project and New Project Screening and Due Diligence E&S Process

5.3 E&S risk screening and risk categorization

ESDD Consultants hired by the World Bank will conduct risk screening to identify relevant environmental and social (ES) instruments for both new and existing projects/investments. Each investment will be assigned a risk category. There are four risk categories in this ESMF: High, Substantial, Moderate, or Low, according to the definitions provided in Table 5-2 below. The risk category assigned to each project investment determines the level of assessment and management efforts needed to address the associated risks. This includes allocating appropriate budgets and resources to effectively mitigate and monitor those risks. In other words, even though a project investment may be classified as high risk, it does not automatically disqualify it from receiving guaranteed financing. As long as the project meets the specified criteria, such as implementing robust risk management strategies, it remains eligible for guaranteed financing. The risk category serves as a guideline for determining the extent of scrutiny and resources required to ensure proper risk mitigation measures are in place.

Risk categorization is based on the risk criteria of the ESMF. To support PLN in applying the risk categorization of potential investments under GREFi, Table 5-2 pairs the risk criteria to indicate the equivalent risk category under the ESMF and PLN's ESMS. The risk category will be defined by the PLN PP team and accepted by the PLN ES team.

The project categorization process defines the nature and level of the E&S Impact Assessment (for new project investments) or supplemental E&S impact assessments (for existing project investments) that will need to be conducted for the investment. In determining the appropriate risk classification, there will be account for relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the PLN unit (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs. In general, projects with higher risks – that is higher risks before mitigation – will require a more comprehensive Impact Assessments than projects with less significant risks. A higher risk project will typically require a more detailed risk analysis with mitigation actions that will need to be monitored more frequently. The engineering design of a project can be relatively advanced at this stage, but the impact assessment itself may identify issues that require engineering interventions to mitigate risks. For that reason, the impact assessment should proceed in parallel, or in advance of, the detailed engineering design in order to avoid costly revisions that may be needed to avoid or mitigate significant risks.

**Table 5-1. Risk Categorization for GREFi Project Investments
(The World Bank ESF vs PLN's ESMS Risk Criteria)**

The World Bank ESF Risk Criteria		PLN's ESMS Risk Criteria
Project type, location, sensitivity, scale	Nature & magnitude of ES risks & impacts, available mitigation	
High Risk Classification		Extremely High Risk Very High Risk
• complex • large to very large scale • in sensitive location(s)	• wide range of significant adverse risks and impacts • long term, permanent and/or irreversible, impossible to avoid entirely • some cannot be mitigated or require complex, unproven mitigation, sophisticated social analysis • high in magnitude and/or in spatial extent (large to very large area or population); • significant adverse cumulative or transboundary impacts; • high probability of serious adverse effects to human health and/or the environment • high value and sensitivity (e.g. Protected and internationally recognized areas) • high value, sensitive lands or rights of IP and other vulnerable minorities • Intensive or complex involuntary resettlement or land acquisition	Extremely High Risk Strong likelihood that activities would lead to significant impacts that adversely affect people or the environment. With direct management interventions, it is still highly likely that the activities may not achieve its operational objectives or sustain the desired E&S outcomes because of risks related to context, institutional complexity/capacity risks, and/or political and reputational risks Project. There may not be readily available or tested technical mitigation measures. Very High Risk Strong likelihood that activities (including PLN project) would lead to significant impacts that adversely affect people or the environment. In the absence of direct management interventions, it is also highly likely that the activities may not achieve its operational objectives or sustain the desired E&S outcomes because of risks related to context, institutional complexity/capacity risks, and/or political and reputational risks

The World Bank ESF Risk Criteria		PLN's ESMS Risk Criteria
	• Impacts on cultural heritage or densely populated urban areas • may give rise to significant social conflict, harm or human security risks • a history of unrest in area or sector, concerns about use of security forces	Project. Known and demonstrated risk management measures is likely available.
Substantial Risk Classification		High Risk
• not as complex • Large to medium scale • not such sensitive location	• some significant risks and impacts • mostly temporary, predictable and/or reversible • possibility of avoiding or reversing but with high risk investment and time • may give rise to limited degree of social conflict, harm, human security risk; • medium in magnitude and/or in spatial extent (medium to large area and population) • less severe, more readily avoided/mitigated cumulative and/or transboundary impacts; • medium to low probability of serious adverse effects to human health and/or the environment (with known and reliable mechanisms to prevent or minimize) • lower effects on areas of high value or sensitivity • more readily available and reliable mitigatory and/or compensatory measures	Strong likelihood that activities (including PLN project) would lead to adverse E&S consequences. With direct intervention, it is possible that the activities will achieve its E&S operational objectives or sustain the desired E&S results because of context, institutional complexity, or reputational risks. However, these risks are less diverse or complex and many are more predictable than for a High-risk Project. Known and demonstrated risk management measures is likely available.
Moderate Risk Classification		Moderate Risk

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The World Bank ESF Risk Criteria		PLN's ESMS Risk Criteria
• no activities with high potential for harming people or environment • located away from sensitive areas	• risks and impacts not likely to be significant • not complex and/or large • predictable and expected to be temporary and/or reversible. • low in magnitude;	Moderate likelihood that activities (including PLN project) would lead to some E&S consequences. Activities are not likely to require significant changes to PLN's overall management approaches, and it is highly likely that the activities achieve its operational objectives and sustain the desired E&S outcomes because of lower context, institutional complexity/capacity, or political and reputational risks. These risks are well understood and are expected to be limited in impact.
Low Risk Classification		Low Risk
• Minimal or negligible risks to and impacts on human populations and/or the environment • few or no adverse risks and impacts and issues • No further assessment after screening		Low likelihood that the achievement of the operational objectives of the activities (including PLN project) could be affected by E&S risk factors because they are not present or are not relevant to the operation. The operation is not likely to have adverse impacts on E&S. Activities are not likely to be controversial, and PLN has demonstrated capacity for managing risks.

The project categorization process guides the overall approach to assessing and managing environmental and social risks and impacts. The ESMF provides a systematic framework for categorizing projects based on their potential environmental and social risks, and it outlines the corresponding assessment and management requirements for each category. Here's how the project categorization process is guided in the ESMF:

- **Categorization Criteria:** The ESMF establishes clear criteria for categorizing investments based on their potential environmental and social risks and impacts. These criteria may include factors such as project size, location, nature of activities, and sensitivity to the surrounding environment. The categorization criteria help determine which risk category a project falls into.
- **Risk Categories:** The ESMF defines different risk categories, such as high-risk, substantial-risk, moderate-risk, and low-risk, based on the severity and significance of potential environmental and social impacts. The categorization process assigns each project to the appropriate risk category, reflecting its potential risks and impacts.
- **Assessment Requirements:** The ESMF outlines the specific assessment requirements for each risk category. For high-risk projects, a more comprehensive and detailed assessment is typically required, covering a broad range of environmental and social aspects. Medium and low-risk projects may undergo a more streamlined assessment process, focusing on key issues and potential impacts.
- **Mitigation and Management Measures:** The ESMF provides guidance on the appropriate mitigation and management measures for each risk category. It outlines the types of measures that should be implemented to address identified risks and impacts, taking into account the severity and significance of potential effects.
- **Stakeholder Engagement:** The project categorization process in the ESMF guides the level of stakeholder engagement required for each risk category. High-risk projects usually involve more extensive stakeholder consultations and engagement, considering the potential significant impacts and associated concerns. Medium and low-risk projects may focus on engaging key stakeholders relevant to the project's specific environmental and social aspects.
- **Monitoring and Reporting:** The ESMF establishes monitoring and reporting requirements based on the risk categorization. High-risk projects may require more frequent and detailed monitoring and reporting to track and evaluate the effectiveness of mitigation measures and compliance with environmental and social standards. Medium and low-risk projects may have less rigorous monitoring and reporting obligations.

By incorporating the project categorization process of the ESMF, the framework ensures that the assessment and management of environmental and social risks are tailored to the specific characteristics and potential impacts of each project. It provides clear guidance on the level of assessment, mitigation measures, stakeholder engagement, and monitoring and reporting requirements based on the assigned risk category, facilitating a consistent and structured approach to project management and compliance with the World Bank E&S standards.

5.4 Eligibility for Financing

As mentioned in Figure 5.2, the eligibility of proposed investments will be determined upon the completion of the Environmental and Social Due Diligence (ESDD). Eligibility for some investments will be contingent on PLN implementing the Corrective Action Plan (CAP). The Bank will conduct the eligibility decision process together with PLN once PLN has demonstrated appropriate actions as required by the CAP. The eligibility criteria include mandatory measures for managing project risks in alignment with ESMF and SEF requirements. These criteria will be crucial in deciding the go or no-go status of investments, considering the status of CAP implementation.

The eligibility criteria will highlight high-risk aspects and efforts for risk mitigation to be implemented in

the CAP. It's important to note that the scale or size of an investment does not automatically disqualify it from consideration. However, larger-scale projects may require additional resources, time, and money to meet the screening criteria provided in Table 5-1.

While eligibility for guaranteed financing depends on meeting the requirements, it's crucial to acknowledge that as the risk level increases, meeting EHSS requirements becomes more intricate. Investments categorized as "High Risk" must navigate through a more complex set of criteria and demonstrate robust mitigation measures to address associated risks. The aim is to ensure that the project aligns with relevant environmental and social standards, promoting sustainability and responsible development practices.

Table 5.1 Detailed Eligibility Criteria for Potential PLN Developments

Topic	New Project Developments (including projects in preparation)	Existing Project Developments (projects under construction or operation)
Biodiversity	Activities that have adverse impacts to the following habitats or ecosystems should be redesigned to avoid such area: a. habitat of significant importance to Critically Endangered or Endangered species, as listed in the IUCN Red List of threatened species or equivalent national approaches that would be affected by the project; b. habitat of significant importance to endemic or restricted-range species; c. habitat supporting globally or nationally significant concentrations of migratory or congregators species; d. highly threatened or unique ecosystems. When activities are proposed to be located in the above habitats and/or ecosystems, the design and/or scientifically proven studies should demonstrate that all of the conditions below are met: a. No other viable alternatives within the region exist for development in habitats of lesser biodiversity value; b. All due process required under international obligations or national law that is a prerequisite to granting approval for activities in or adjacent to a critical habitat has been complied with; c. Potential adverse impacts, or likelihood of such, on the habitat will not lead to measurable net reduction or negative change in those biodiversity values for which the critical habitat was designated; d. Net reduction in the population of any Critically Endangered, Endangered, or restricted-range species, over a reasonable time period is not anticipated; e. Do not involve significant conversion or significant degradation of critical habitats.	Activities which indicate the occurrence(s) of significant adverse impacts to critical species and/or critical habitats should provide sufficient and current field data to assess and justify the eligibility of such investment. Scientifically proven studies should demonstrate that the affected area is not unique and irreplaceable from a biodiversity standpoint and that a biodiversity offset program is feasible to achieve a biodiversity net gain. The biodiversity offset program should be robust and appropriately designed to incorporate long term biodiversity monitoring and evaluation programs aimed at assessing the status of the critical habitat should be integrated into the activity management program.

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Topic	New Project Developments (including projects in preparation)	Existing Project Developments (projects under construction or operation)
	f. A mitigation strategy is designed to achieve net gains of those biodiversity values for which the critical habitat was designated; and g. A robust and appropriately designed, long term biodiversity monitoring and evaluation program aimed at assessing the status of the critical habitat is integrated into the activity management program.	
Natural Disaster	Activities will not be in areas that are prone to natural disasters (flooding, liquification, earthquake, etc.) that cannot be sufficiently mitigated by the design.	Designs have taken into account potential natural disasters and are sufficient to prevent significant adverse impacts due to a natural disaster.
Land Acquisition	Land acquisition can be managed in accordance with ESS5 and the LARPF. See Annex F of ESMF for applying the LARPF.	Land acquisition that has not and will not cause physical displacement affecting 200 people or more, or a loss of 10% or more of productive assets for 200 people or more. Does not apply if land acquisition and resettlement has been planned and carried out under a land acquisition and livelihood restoration program consistent with international standards such as the WB's ESF, ADB's SPS and IFC's PSs, and any future land acquisition and resettlement can be carried out in accordance with ESS 5. See Annex F of ESMF for applying the LARPF.
Cultural heritage	Activities can be managed in accordance with ESS8 and the ESMF.	Activities have not caused significant impacts on cultural heritage sites that are registered in the government data or recognized by IP or non-IP local communities as having significant value to them, and future activities can be managed in according to ESS 8 and ESMF.
Labor	Activities where there is limited potential forced or child labor in investments or supply chains and where investment labor management can be managed in accordance with the WB's ESS2 and the GREFi LMP.	Activities where labor and working conditions are being managed in accordance with the international standards, such as WB's ESF, ADB's SPS, and/or IFC's PSs, and can be managed in accordance with the ESS 2 and LMF. This include workers having written contracts with appropriate terms and conditions that are required by law and international standards, and where there is no evidence of child or forced labor in the investment and supply chain workforces.
Indigenous Peoples	Activities that can be carried out in accordance with the WB's ESS7, and the IPPF. See Annex G of ESMF for applying the IPPF	Activities have not (i) acquired IP's traditional territories (ancestral domain); (ii) physically relocated IP communities ; (iii) cause significant impacts on IP's cultural heritage; or (iv) cause significant impacts on access to natural resources for IP communities, unless activities were conducted in accordance with international standards such as the WB's ESF, ADB's SPS and IFC's PS, including informed consent from the entire IP community as well as the persons who

Topic	New Project Developments (including projects in preparation)	Existing Project Developments (projects under construction or operation)
		were affected, based on participatory processes, and any future activities that will affect IPs can be conducted in accordance with ESS 7.
International Waterways	Activities that will not affect international waterways as defined in OP 7.50	Activities have not and will not affect international waterways.

5.5 Impact assessment (IA)

Under national law, the typical PLN projects is subjected to MOEF regulation No. 4/2021, which requires an Environmental Approval Document according to Indonesian Law. Indonesian law requires different level of impact assessment for Transmission Line Transmission Substation, and BESS with the level depending on the technical detail (for example: voltage of transmission line) of the development. The law requires case-by-case decision for substation, and the BESS.

World Bank ESS1 requires an impact assessment for all investments supported/finance by the World Bank, with level of assessment dependent on the level of risk. Therefore, impact assessment under GREFi may be more in-depth than national law would require. For new projects, the level of impact assessment would depend on risk. For existing projects, additional assessment may be needed so that gap would be filled, if the assessment under national law did not accurately identify and mitigate risk and impact.

The World Bank will establish the Terms of Reference (TOR) for impact assessments, particularly for investments associated with extreme/very high and high risks. The TOR will be reviewed and cleared by the World Bank prior to commencing the assessment process.

It is important to note that the impact assessment is not only a document (i.e., AMDAL, UKL-UPL, SPPL, ESIA) but also a process. Therefore, impact assessment begins with project screening and categorization and continues through project monitoring. Each step of the process will be more in-depth as more information as available. Thus, Project Screening and Categorization and later steps in the process will continue to identify areas where the IA will need to focus, such as filling gaps or paying more attention to specific sensitive receptors and impacts.

Ideally, impact assessment is conducted concurrently with the feasibility study and/or detailed design. This allows environmental and social issues to be considered at the very beginning. Impact assessments may be completed within the national IA (AMDAL, UKL-UPL, and SPPL) or through an “international ESIA”. Regardless, the impact assessment will be conducted following stage as presented Figure 5-4 below.

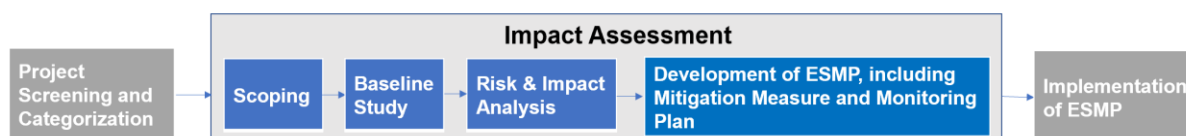


Figure 5-3 Schematic Flowchart of Impact Assessment Process

Specific components under GREFi Impact Assessment that may go beyond the coverage required by national law (i.e., in an AMDAL, UKL-UPL, or SPPL) could include such topics as:

- risk assessment in the scoping process (as described above);
- more detailed description of baseline on environmental and social conditions.
- more detailed biodiversity assessment especially on assessing key biodiversity areas;

- more comprehensive alternative analysis;
- potential associated facilities as defined by ESS1;
- assessment of impact of climate change on the project, and contributions of the project to greenhouse gases (GHGs);
- assessment of labor management and impact on worker's safety, and welfare, including mechanism for workers to express concerns or complaints to management. The assessment of labor management should include Gender Based Violence (GBV)/Sexual Exploitation and Abuse (SEA)/Sexual Harassment (SH);
- socio-economic surveys that pay particular attention to gender equality and vulnerable groups, including but not limited to Indigenous Peoples (IP);
- assessment of cultural heritage;
- loss of livelihoods and impacts on welfare, including those that may not result from land acquisition or clearance;
- cross-border and global impact assessments;
- more intensive stakeholder engagement, including beginning earlier in the process, and including mechanism on managing grievances;
- minimization of impacts by application of international standards, including GIIP;
- more detailed environment and social management and monitoring plan (ESMMP), which will list the E&S management plan that are required of PLN (SEP, BMP, IPP, LARAP, LMP, Contractor Management Plan, etc.) or contractors (C-ESMP, including plans for waste management, traffic measurement, noise and dust management, etc.).
- more detailed requirement for monitoring, supervision, and reporting on E&S performance by contractors to PLN and PLN to IFI.

5.6 Review and Approval process

For new project investments, all relevant environmental and social management instruments/tools, such as the ESIA (ANDAL and RKL-RPL), ESMP (UKL-UPL), including TORs of the expected civil works, goods and services will be subject to internal review by the PLN TEK Division and cleared by the World Bank for all risks in accordance with the agreed CAP of the ESDD report for all investments (low to high risks). The construction ESMP prepared by the contractor will be reviewed and cleared by the PLN ES team prior to commencing construction to ensure that is aligned with the ESIA or ESMP, as relevant. Review and clearances will follow the applicable Gol's regulations and this ESMF. Environmental approvals are secured before the project's commencement of construction as regulated. Clearance from the Environmental Agency at the District and/or Provincial level also needs to be recorded as part of internal monitoring and review under GREFi.

As indicated in Figures 5-2, ESDDs and CAPs for all investments will be reviewed and cleared by the World Bank prior to the Eligibility Decision of releasing a memo for guaranteed financing transaction.

5.7 Procurement

For new project investments, the relevant Environment, Social, Health, and Safety (E&S) requirements as set out in ESIA, ESMPs, LARAP, IPP and ESDDs (including certain E&S requirements of the IFI for contractor procurement (if have not been covered)) will need to be integrated into Terms of References (TOR) of the expected works, bidding documents and contracts with third-party providers for civil work, consulting services/technical assistance support, and other activity.

Terms of Reference (TOR) of the expected civil works, containing the E&S requirements and provisions, will be developed by PC/PO Team. This TOR will be reviewed by the ES Team (TEK Division), prior to be included in the technical bidding document and prior to the bid announcement. The tender documents will specify items required in the contractors' proposals that allow PLN to assess their qualifications to achieve the outcomes in project ESMP. Some items to be included are the following:

- List of proposed E&S Management Strategies and Implementation Plan (MSIP) and examples of MSIP from past projects (full MSIP to be developed by the selected contractor);
- Budget proposal in Bill of Quantity (BoQ) for the unit cost and quantities of mitigation actions, which may be presented in the form of provisional sum where the exact unit cost and/or quantity of mitigation measures are hard to estimate;
- Detailed resources for key E&S management and their demonstrated capability for handling the identified E&S risk and impact;
- Commitment to support or carry out and report the implementation of mitigation measures as presented in the C-ESMP in full response to the project ESMP; and
- Commitment to be transparent and cooperative with any monitoring/supervision/evaluation activity that is conducted by PLN (ES Team, PP Team, PC Team, and/or PO Team).

Whenever possible, proposal evaluation criteria should include E&S consideration, ES Team (TEK Division) should participate in proposal evaluation and contractor selection. PLN will need to determine how to incorporate any additional E&S requirements, as per the CAPs, that may be required under a GREFi-guaranteed financing investments into existing contracts under current projects.

Annex C provides the outlines for ESIA and ESMP.

The stages of the bidding process and the accompanying key actions of E&S requirement integration are summarized in table below.

Table 5.2 Actions to Integrate ESMP in the Bidding Document and Construction Contract

Stage of Bidding Process	Actions by PC/PO Team
Contractor TOR Development	• Ensure that the TOR has clearly defined the E&S requirements, technical specifications from relevant E&S management plans, required skill and experience in managing their implementation, Contractor's ESMP monitoring and reporting requirements, and relevant provisions regulating the contractor/supply chain responsibility; • Identification of any gaps, inconsistencies or areas of concern that could later be addressed through additional provisions in the "particular conditions of contract".
Review of Draft of Tender Document (prior distribution to bidders)	• Review contract conditions included in tender documents to: ○ Ensure that the relevant E&S management plans are incorporated and mitigation plans adequately planned and budgeted in the contract. ○ Ensure that a full implementation of the acceptable Contractor's ESMP forms part of and is explicitly referred to in the tender documents. ○ Identify labor-relevant provisions (workers, camps, child and forced labor, safety, grievance redress, etc.) for which falls under the contractor's responsibility, as well as identification of gaps, inconsistencies or areas of concern that could be addressed

Stage of Bidding Process	Actions by PC/PO Team
	through additional provisions in the “particular conditions of contract” and/or technical specifications in reference to the labor management strategy/plan. ○ Include a requirement that all workers sign ‘Codes of Conduct’ governing behavior and identifying sanctions. ○ Clearly identify that relevant E&S (including labor, health, safety and security) training programs, implementing the Codes of Conduct, etc. will be undertaken (Contractor may use external providers) ○ Clarify the contractor’s responsibility to manage H&S risks to local communities that directly result from its operation • Ensure key personnel proposed for the tasks includes competent E&S personnel, e.g., OHS manager, supervisor, and field staff for construction; Human Resource manager and staff, Public Relation/General Affair manager and staff, E&S specialists as needed (e.g., for resettlement, biologist, geologist, etc.). • Ensure the Particular Conditions of Contract clearly states that failure to meet the E&S requirements during completion of a milestone may result in the withholding of payment for that milestone until full compliance is achieved. • Include that the Particular Conditions of Contract specify E&S reporting requirement of the contractor to PLN, i.e., frequency (monthly, bi-monthly, etc.), line of reporting of the contractor (e.g., to OHS Team of Main Unit, Asset Team of Main Unit, etc.), and format of reporting (hardcopy, email, etc.). • Ensure tender documents clarify the responsibilities of the contractor to prepare and adhere to the relevant E&S management plans and project E&S commitments and that no civil works will commence until the Contractor’s ESMP has been approved by the Main Unit in-charge of management of the project or, if applicable, the supervision engineer. • Ensure that the tender documents detail how the contractor and supervision engineer will be required to monitor and report on the impacts on the local community, issues related to increasing presence of non-local workers and workers’ camps. • Propose Key Performance Indicators (KPIs) for Contract Management, reflecting issues and risks specific to the contract and the monitoring plan.
Bid evaluation	• Ensure that all evaluators are familiar with the E&S requirements of the project so they are all able to evaluate them consistently. • Review and verify that bids submitted by the bidders respond to requirements with regard to relevant E&S management plans in sufficient details, including with regard to engagement with the local community, clear lines of communication, consistent record keeping, capacity to manage H&S risks.
After contract signing	• Prior to commencing works, the contractor submits the full contractor’s ESMP and potential labor data based on the TOR, which includes specific management plans relevant to its service scope including for:

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Stage of Bidding Process	Actions by PC/PO Team
	(i) work activities; (ii) labor management; (iii) occupational health and safety management; (iv) environmental management; (v) social management; (vi) community health safety and security management; and (vii) emergency response and preparedness. • Main Unit (can be also attended by IA Sub-Team, ES Team, PP Team, and PC Team) in-charge of management of the project and the supervision engineer conduct a kick-off meeting with the selected contractor to provide information on types of work, work description, potential hazard, risk mitigation and E&S impact within the project. The submitted Contractor's ESMP will be confirmed during this meeting. In case the C-ESMP submitted by the contractor does not meet the E&S requirement, the Contractor will be given time to modify the C-ESMP to meet all relevant requirements. C-ESMP will be finalized and approved by the Main Unit in-charge of management of the project prior to mobilization or any works start. • Set up a process for contract management that plans for regular meetings of the parties to monitor the contractor's performance in all areas. • Ensure the contractor's ESMP are updated promptly and redisclosed as appropriate to address new issues. • Ensure that the following measures are fully documented for the Project review: ○ E&S training activities for workers, activities related to the Code of Conduct, etc.; ○ Socialization with local communities conducted; ○ Performance of recommended specific management plans; and ○ KPIs (including the local community/stakeholder engagement plan, if applicable). • Ensure that the Contractor will not undertake any activities other than survey work that does not involve land disturbance or involving the community unless Contractor's risk assessment and E&S management program for those activities have been reviewed and approved by Main Unit.

5.7.1 Provision of Labor Recruitment

Contractor

Contractors and other third-party companies will be obligated to manage its direct workers and environmental and social impacts resulting from the investment under their control. PC Team (Construction) or PO Team (Operation) in coordination with the ES Team and the Main Unit will develop TOR that will require development of Contractor E&S Management Plans (C-ESMPs), which describe in a comprehensive and structured manner the various E&S considerations, controls and commitments related to the main activities that the Contractor will be required to implement as part of its scope of work. In addition, responsible parties' division at PLN (i.e. Supply Chain Division, etc.) will incorporate standardized labor, environmental and social clauses in the tender documentation and contract documents so the potential bidders are aware of the expected performance.

The following measures, will be followed by contractors and monitored by the PLN Human Capital and Talent Development Division to ensure fair treatment of all employees:

- Recruitment procedures will be transparent, public and non-discriminatory, and open with respect to ethnicity, religion, sexuality, disability or gender.
- Applications for employment will only be considered if submitted via the official application procedures.
- Clear job descriptions will be provided in advance of recruitment and will explain the skills required for each post.
- All workers will have written contracts describing terms and conditions of work and will have the contents explained to them. Workers will sign the employment contract.
- Employees will be informed at least two months before their expected release date of the coming termination.
- The contracted workers will not be required to pay any hiring fees. If any hiring fees are to be incurred, these will be paid by the Employer.
- Depending on the origin of the employer and employee, employment terms and conditions will be communicated in two languages, in the state language and the language that is understandable to both parties.
- In addition to written documentation, an oral explanation of conditions and terms of employment will be provided to workers who may have difficulty understanding the documentation.
- It is noted that language-related problems are not expected, but if they are interpretation will be provided for workers as necessary.
- Foreign workers will require work permits, which will allow them to work in Indonesia.
- All workers will be 18 years old or above.
- Normal working time should not exceed 48 hours per week. With a six-day working week, the duration of daily work is determined by the internal work regulations approved by the employer after prior consultation with the representatives of the workers, in compliance with the established working week duration.

Primary Supplier

In the process of developing the list of approved primary suppliers, the PC Team (Construction) or PO Team (Operation) in coordination with the ES Team and the Main Unit will require the primary suppliers to insert their commitment in meeting the following requirements:

- Prohibit utilization of child or forced labor, especially within the production lines of material/equipment that will support the project and take immediate steps to remedy cases of child or forced labor.

- Identify the potential serious safety risks within the production of material/equipment that will support the project and provide relevant procedures and mitigation measures to prevent the risks to their workers, and immediate steps for any incidents or accidents that occur.

6 STAKEHOLDER ENGAGEMENT, INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM

6.1 Stakeholder Engagement

Stakeholder engagement is intended to ensure that there is two-way communication between PLN and stakeholders, especially affected people, communities, and workers. PLN will disclose relevant investments information and stakeholders will be able to communicate their opinions and concerns and be sure PLN will address them.

As part of this ESMF, a stakeholder engagement framework (SEF) has been developed by PLN as a separate document. This document will guide investments in identifying and engaging with all relevant stakeholders.

Key stakeholders for GREFi Project were categorized as follows:

- PLN Internal Institution, including headquarter and unit levels.
- Governments, including national and subnational governments.
- Communities in target locations, including direct and indirect projects affected people (PAP).
- Marginalized/vulnerable group within communities in target locations.
- Interested parties, including development partners, NGOs, and private sectors, communities from neighboring villages, academics, media, and others.

A detailed stakeholder analysis and plan can be found in SEF, which will be implemented in conjunction with the ESMF.

6.2 Information Disclosure

Stakeholder engagement is most effective when PLN initiates it at an early stage of the project development process as an integral part of early project decisions and the assessment, management, and monitoring of the project's environmental and social risks and impacts. PLN should disclose the following information as early as possible (since the feasibility study stage and pre-construction phase) and in a time frame that enables meaningful consultations with stakeholders on project design:

- The purpose, nature, and scale of the project;
- The duration of proposed project activities;
- Potential risks and impacts of the project on local communities, and the proposals for mitigating these, highlighting potential risks and impacts that might disproportionately affect vulnerable and disadvantaged groups, and describing the differentiated measures taken to avoid and minimize these;
- Potential risk and impacts that stakeholders including CSOs and parties who may not be directly affected by, but have some interests in, the project, whose actions may affect the project performance and cause reputational risks to the PLN;
- The proposed stakeholder engagement process highlights the ways in which stakeholders can participate;
- The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarized, and reported; and
- The process and means by which grievances can be raised and will be addressed.

The information will be published and disclosed in the local language(s) and in a manner that is accessible and culturally appropriate, taking into account any vulnerable people (for example ethnic groups or displaced persons). For projects with potentially significant adverse social or environmental impacts, disclosure should occur early in the environmental and social appraisal process.

6.3 Grievance Redress Mechanism

As part of the stakeholder engagement process, the Grievance Redress Mechanism for interested parties and project-affected people is an integral part of the SEF. Within the SEF document, a Grievance Mechanism Form has been prepared to be used if the stakeholders are willing to raise any concerns and opinions.

PLN must identify and describe the responsibilities of all parties (PLN, contractor or other relevant third parties) and competent authorities in implementing the stakeholder engagement process. PLN must also identify the roles and responsibilities of individual positions within these organizations. Each investment should have a dedicated liaison officer to coordinate, record and manage the stakeholder engagement process including managing grievance process. The corporate safeguard team guides the appointment of this officer as early as possible in the project lifecycle.

6.4 Indigenous Peoples Engagement

Among direct stakeholders, Indigenous People groups require specific considerations to enable their full participation in stakeholder engagement activities. This IPs engagement has been included in SEF. In addition, the Indigenous Peoples Policy Framework (IPPF) has also been prepared to ensure that all RE sub-project's proposed to be guaranteed for financing are developed in a manner that fosters full respect for IPs identity, dignity, human rights, livelihood systems and cultural uniqueness as defined by the IPs themselves. The IPPF is an integral part of this ESMF document. See Annex G of ESMF for applying the IPPF.

7 MONITORING AND REPORTING

Individual Project Investment Monitoring

Environmental and social monitoring requirements for each project investment will be defined in the E&S Impact Assessment (in the ESIA/AMDAL/RKL-RPL, and/or ESMP/UKL-UPL) and the gap filling measures of the ESDD reports. Monitoring and reporting are expected to focus on the significant risks and the associated mitigation measures that the project investment E&S management program requires. The ES impact assessment and the ESDD should define what needs to be monitored, when monitoring must be conducted, where monitoring will take place, who will be responsible for monitoring, and who will review monitoring results to determine if any changes are needed to mitigation.

Monitoring for individual projects will be overseen at the UIP level. The monitoring team will comprise the PLN ES (K3L) team, responsible for environmental issues, and the land, permitting, and communication team, handling social concerns. While plans are in place to establish a dedicated ESG & safeguard team, the timing for its implementation remains uncertain at the time of drafting this document.

Overall Project Monitoring and Evaluation

The ES management performance of project investments will be monitored periodically by PLN's Division/Sub-Division/Main Unit that is responsible for each project stage (for example units responsible for the planning, construction, and operation) under the oversight and coordination of the PLN ES team (TEK Division) assigned to GREFi. The Main Unit responsible for monitoring will include representatives from the Environmental and Occupational Health and Safety (OHS), Permitting and Land, Asset and Public, Communication, Stakeholder Management teams of the unit, and/or other relevant teams as applicable. The Main Unit with support of the PLN ES (TEK Division) and PC/PO teams from PLN Headquarters will conduct periodic monitoring on the ES performance of the contractor in construction and operation, supervisor engineer (if assigned in the project). The frequency of ES monitoring will be commensurate to the level of risk of the project investment. Projects with high to substantial risk will be monitored more frequently than projects of moderate to low risks. The monitoring frequency is defined in the ESDD reports.

Reporting

The ESCP defines the required ES information that PLN will report to the World Bank on the project investments. PLN will submit six monthly reports on the ES performance of the project to the World Bank throughout project implementation, commencing after the Effective Date. The report should be submitted to the Bank no later than one month after the end of each reporting period. As for incidents and accidents reporting, PLN should promptly notify the Bank of any incident or fatality accident related to the Project no later than 48 hours after learning of the incident or accident.

It is important to note that reports should include information on performance and compliance with all requirements of the ESCP, which should include requirements relevant to each ESS as outlined in this ESMF.

For each project investment, PLN will establish internal reporting requirements to ensure sufficient information is available to prepare the six-monthly reports for the World Bank. This includes for contractors and consultants to have appropriate requirements in their contracts to ensure PLN has sufficient information to submit the reports to the World Bank.

8 INSTITUTIONAL ARRANGEMENT

8.1 Arrangement and The Responsibilities of The Agencies

PLN's headquarter organization consists of Directorates, Sub Directorate, Units (*Satuan*), Corporate Secretariat, and Divisions. Main Units, Centers, Implementation Units, and Servicing Units are linked with various Directorates and Divisions in the Headquarter organization. The detailed roles and responsibilities of each part and function of PLN organizational structure is stipulated in Director Regulation of PT PLN (PERSERO) No. 0306.P/DIR/2023 regarding the Organization and Work Structure of PT PLN (PERSERO).

Under the PLN's current organizational structure, multiple diverse divisions are responsible for aspects of E&S management individually. TEK Division is the main channel for the Bank on the E&S management will provide E&S expertise for project planning, while Main Unit (UIP, UIW) will be responsible for implementing E&S requirements, including monitoring of E&S performance. During implementation, the Main Unit will report information on E&S performance to TEK Division, which will be responsible for reporting the project E&S performance to the World Bank.

TEK Division under the Transition and System Planning Directorate will take the lead in the overall ESMF implementation. The TEK Division will be supported by many other divisions, and Units s. Many of these organizations are shown in Table 8.1. These organizations will also support the PLN's ESMS implementation.

PLN Indigenous People Planning Framework has recently adopted its Environmental and Social Management System (ESMS) including 16 E&S Management Guidelines (MGs) in line with the Bank's Core Principles and the ESF. The GREFi Environmental and Social Management Framework (ESMF) and Stakeholder Engagement Framework (SEF) including other relevant framework documents are in line with the ESMS, with additional eligibility criteria and assessment requirements to address environmental and social risks specific to GREFi.

PLN has experience in applying many of the requirements in the ESMS and the MGs as they implemented projects funded by the Bank, the ADB and other IFIs, however, communication and cooperation between divisions need to be strengthened, SOPs need to be reviewed and expanded, and the capacity of all relevant PLN staff need to be strengthened. ESMS roadmap has been prepared to help the PLN address such gaps, of which the implementation will be supported under ISLE-2 IPF TA as well as the ongoing ISLE TA, ISLE-1, and ISLE-2 PforRs and GreFi project. To implement and evaluate the ESMS, PLN through the Board of Directors issued a Decree No. 0067.K/DIR/2024 regarding The Establishment of The Preparation and Implementation Teams for the PLN ESMS. However, the ESMF will apply throughout the GREFi project and will not be replaced by the ESMS, although ESMF may be updated in line with the updated ESMS, which requires clearance by the Bank.

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Table 8.1 PLN Organization as per ESMS

<i>PLN Division/Sub-Division/Main Unit</i>	<i>Function for ESMS Implementation</i>	<i>Responsibilities</i>	<i>Required Capacities</i>
■ TEK Division, with support from K3L Division.	Environment and Social (ES) Team	■ Identifies or confirms roles, responsibilities, and required capacities of other divisions and units in PLN that considered relevant in the ESMS process of foreign-funded projects, particularly PP Team, PC Team, and PO Team; ■ Arranges disclosure of the ESMS and held training on ESMS process to ensure standardized understanding by all relevant divisions and units; ■ Coordinates with abovementioned divisions or units to ensure that the ESMS is being followed accordingly; ■ Reviews and provides feedback on documents, reports, records, or any other deliverables produced by PLN or external resources in relation with ESMS implementation; ■ Validates documents, reports, records, and deliverables prior to approval from PP/PC/PO Team; ■ Works with PP Team to develop TORs of Impact Assessment and ESMP Development and determines robust evaluation criteria for selection and hiring of external E&S consultant; ■ Coordinates reporting on ESMS implementation done by all teams; ■ Advises PC and PO Team in monitoring and reviewing E&S Management Plans implementation; ■ Leads the management review process of the ESMS implementation (and E&S Management Plans implementation, specifically for project construction and operation)	■ Deep understanding on the ESMS document and E&S requirements in the internationally- applicable standards for E&S, e.g., World Bank's ESS, IFC PS, IFC EHS Standards, ADB Standards, etc.; ■ Understand PLN organizational structure, roles and responsibilities of each division and unit based on PerDir 54/2022 and KepDir 067/2024; ■ Ability to screen and propose relevant training materials for ESMS in the training modules; ■ Ability to conduct gap analyses of produced documents, reports, records, or any other deliverables against the ESMS principles and internationally- applicable standards.
■ Various New Renewable Energy ("MEB") Division;	Project Planning (PP) Team	■ Develops project plan (activities, resources, timeline, budget, etc.) that includes ESMS process and its relation with the overall Project Design; ■ Works with Financing Team on budgets for E&S planning;	■ Understand the ESMS process flow at pre-construction stage, e.g., Project Screening, Risk Categorization, Impact Assessment, Management Plan, etc.;

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<i>PLN Division/Sub-Division/Main Unit</i>	<i>Function for ESMS Implementation</i>	<i>Responsibilities</i>	<i>Required Capacities</i>
■ Geothermal (“MPB”) Division. ■ Engineering and Procurement Planning (“MEP”) Division; ■ Generation Strategic Planning (“RSK”) Division; ■ Distribution Strategic Planning (“RSD”) Division; ■ Transmission Strategic Planning (“RST”) Division.		■ Works with ES Team to develop TORs of Impact Assessment and ESMP Development and determines robust evaluation criteria for selection and hiring of external E&S consultant; ■ Works with Procurement Team to include the TORs of Impact Assessment and ESMP Development in the Tender Document for hiring external E&S consultant and to do evaluation of the candidates and approve the selection; ■ Manages the services conducted by design and Impact Assessment consultants; ■ Establishes/appoints Project Screening and Risk Categorization Team; ■ Establishes/appoints Impact Assessment Team; ■ Ensure (and finances) E&S studies carried out at the planning and pre-construction stages; such as, Pre-Feasibility Study, Feasibility Study, Impact Assessment, etc.; ■ Determines E&S information that need to be covered in Pre-Feasibility Study and Feasibility Study, conducted by Main Units; ■ Reviews deliverables of the E&S studies and approve them once validated by the ES Team; ■ Decides if additional or another round of E&S studies need to be done; ■ Updates Project Design with action items prescribed in PLN’s E&S Management Plan (ESMP); ■ Provides PC and/or PO Team on the results of Impact Assessment and E&S Management Plans Development.	■ Able to take account the risk identified in project screening and categorization in decision making process on how the project should be undertaken or worse, to be dropped from the list.
■ Construction Sumatera, Kalimantan, dan Sulawesi (“MKS”) Division;	Project Construction (PC) Team	■ Reviews results of Impact Assessment and E&S Management Plans applicable for construction stage provided by PP Team and approves it; ■ Works with Financing Team on budgets for E&S Management Plans implementation in construction stage;	■ Understand the ESMS process flow at construction stage, e.g., implementation and review of E&S Management Plans, etc.;

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<i>PLN Division/Sub-Division/Main Unit</i>	<i>Function for ESMS Implementation</i>	<i>Responsibilities</i>	<i>Required Capacities</i>
■ Construction Java, Madura, Bali, Maluku, Papua and Nusa Tenggara ("MKJ") Division. ■ Project Management Office ('PMO') Division		■ Works with Procurement Team to include the E&S Management Plans in the Tender Document for hiring construction contractors and to do evaluation of the candidates and approve the selection; ■ Works with ES Team to determines robust evaluation criteria for selection and hiring of construction contractor; ■ Develops project construction plan following Project Design and E&S Management Plan and supervises performance of Main Units and construction contractors in doing the construction activities; ■ Supports coordination between ES Team, Main Units, and construction contractors during construction stage; ■ Provides direction and budget as required to Main Unit involved in construction to ensure implementation of Project's ESMP at the construction stage; ■ Establishes a Monitoring and Evaluation Team that include representative of the ES Team and conduct a regular monitoring for the overall project construction process, including E&S Management Plans implementation.	■ Able to support coordination between Main Units and other divisions on ESMS implementation during construction; ■ Able to give direction to contractor on PLN's E&S Management Plans; ■ Able to evaluate appropriateness of contractor's detailed E&S Management Plans for construction.
■ Distribution for Java, Madura, and Bali ('ODJ') Division; ■ Distribution for Sumatera and Kalimantan ('ODS') Division; ■ Distribution for Sulawesi, Maluku, Papua, and Nusa Tenggara ('ODM') Division;	Project Operation (PO) Team	■ Reviews results of Impact Assessment and E&S Management Plans applicable for operation stage provided by PP Team and approves it; ■ Works with Financing Team on budgets for E&S Management Plans implementation in operation stage; ■ Works with Procurement Team to include the E&S terms and conditions in the Tender Document for hiring contractors for operation stage and to do evaluation of the candidates and approve the selection; ■ Works with ES Team to determines robust evaluation criteria for selection and hiring of contractor for operation stage; ■ Coordinates with Main Unit handling the project on implementation of E&S Management Plans related with operation stage;	■ Understand the ESMS process flow at operation stage, e.g., implementation and review of E&S Management Plans, etc.; ■ Able to support coordination between Main Units and other divisions on ESMS implementation during operation;

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<i>PLN Division/Sub-Division/Main Unit</i>	<i>Function for ESMS Implementation</i>	<i>Responsibilities</i>	<i>Required Capacities</i>
■ Operation of Generation and Independent Power Producer (OKI) Division; ■ Portfolio Management ('PFM') Division.		■ Supports coordination between ES Team and Main Units during operational stage; ■ Takes decision or gives direction to Main Units to provide maximum effort possible to implement PLN's E&S Management Plans; ■ Collects and reviews reports, records, or other documentations from Main Units related with E&S Management Plans implementation and evaluate it together with ES Team on its appropriateness; ■ Assigns Main Units to obtain external resources when needed; ■ Establishes a Monitoring and Evaluation Team that include representative of the ES Team to conduct a regular monitoring for the overall project operational process, including E&S Management Plans implementation.	
■ Procurement of Generator and IPP ('IPP') Division; ■ Procurement of Transmission, Main Power House and Materials ('MPT') Division; ■ Procurement Planning and Execution Manager of each Main Units.	Procurement Team	■ Ensure that TORs developed by PP, PC, and PO Team to hire third-party consultant/contractor to conduct Pre-Feasibility and Feasibility Studies, Screening and Categorization, Impact Assessment, E&S Management Plans development, and execute construction work are included in Tender Document; ■ In procurement of construction contractor (and supply chain vendors when directly handled by PLN), incorporate ability and commitment to follow PLN's E&S Management Plans that relevant to their scope of work as qualification component in bidding; ■ Ensure that commitment to follow PLN's applicable E&S terms and conditions is included in contractual agreement with the contractor; ■ Works with PP, PC, and PO Teams in evaluating bidders to select consultant, contractor, or supplier needed; ■ Conduct time to time coordination with the PP Team, PC Team, Main Units, and ES Team as necessary on the procurement process.	■ Understand the importance for ESMS in procurement and contractual process; ■ Knowledge in legal aspect in relation with contractual and procurement process; ■ Negotiation skill with contractors on contractual clauses.

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<i>PLN Division/Sub-Division/Main Unit</i>	<i>Function for ESMS Implementation</i>	<i>Responsibilities</i>	<i>Required Capacities</i>
■ Talent Development Division; ■ Training Centre (Pusat Pendidikan dan Latihan).	Human Resource Development (HRD) Team	■ Work with Safeguards Team, and other teams as needed, to develop and present E&S training programs, and to provide advice on trainers and trainees. ■ In coordination with ES Team to identify if such trainings are available in the existing syllabus of PLN or instead have to be developed; ■ Identify trainers from internal PLN organization or from external source that qualified to deliver the training modules relevant for respective team; ■ Ensure that each training modules already include mechanism to evaluate capacity and competency for training participants; ■ As much as possible, provide an online training module to allow easier access with online system to trace and provide reminder on the training progress for each role; ■ With Safeguards Team, develops a training program to introduce the ESMS to PLN management and supervisory personnel, including its refresher training; ■ If PLN reorganizes its structure, to trace new divisions, sub-divisions, or units that is suitable to replace previous one in its ESMS role.	■ Able to coordinate development of training modules or update them as necessary ■ Able to find internal and external resources with certain expertise needed; ■ Able to develop evaluation system that is acceptable with regards to each modules expectation but at the same time comparable with general PLN evaluation process; ■ Skill on web-based media to provide online training system equipped with proper reminders and recording.
■ Budget ("ANG") Division	Finance Team	■ Provide options on possible funding scheme during or prior to Project Screening and Categorization to allow the IA Sub-Team set up the project criteria accordingly; ■ Include activities needed to implement ESMS in the budgeting of the project. ■ Working with safeguards team and with PP, PC, and PO Teams to develop budgets for E&S planning and E&S aspects of construction and operation.	■ Understand the overall ESMS process and have understanding on budget for the typical assessment needed for ESMS implementation, such as Impact Assessment process, baseline survey, etc..
■ Representative of Main Unit	PP's Impact Assessment Sub-Team (can be	■ Conducts project screening and categorization to all of project candidates based on the ESMS;	■ Have experience in developing or involved in an impact assessment and familiar with

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<i>PLN Division/Sub-Division/Main Unit</i>	<i>Function for ESMS Implementation</i>	<i>Responsibilities</i>	<i>Required Capacities</i>
■ Representative of PP Team ■ Representative of PC Team ■ Representative of PO Team	supported by third-party E&S consultant)	■ Consult with ES Team on adequacy of undertaken process of project screening and categorization; ■ Present result of the project screening and categorization process to the PP Team once the result validated by the ES Team; ■ Conduct follow-up or correction actions related with project screening and categorization process, if any, as per direction from PP Team and/or ES Team. ■ Develop Term of Reference (ToR) for Impact Assessment needed for the projects based on their respective categories from the categorization process; ■ Determine if the Impact Assessment could be managed by the team itself or need support from external third-party consultant (for example, for comprehensive Impact Assessment). For the latter case, the team will coordinate with Procurement Team to make contract with experienced third-party consultant to conduct the Impact Assessment; ■ Supervise consultants involved in the IA process; ■ Support (by provision of data, access to do baseline survey, access for stakeholder interview, etc.) and monitors Impact Assessment works conducted by the third-party consultant; ■ Determine (or in case third-party consultant is involved, gives input) action plan to manage or mitigate identified risk and impact (ESMP); ■ Consult with ES Team on adequacy of undertaken process of Impact Assessment; ■ Present result of the Impact Assessment and ESMP development process to the PP Team once the result validated by the ES Team; ■ Conduct follow-up or correction actions related with Impact Assessment and ESMP development, if any, as per direction from PP Team and/or ES Team.	its general process and development of action plan; ■ Familiar with International E&S standards; ■ Have experience in reviewing baseline study results; ■ Have ability to identify action plan to be taken to mitigate risk and impact; ■ Able to coordinate with wider PLN divisions in determining resources to implement the ESMP.

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■ Development Main Unit (<i>Unit Induk Pembangunan</i>); ■ Tanjung Jati B Generation Main Unit (<i>Unit Induk Pembangkitan Tanjung Jati B</i>); ■ Java, Madura and Bali Load Controller Center Main Unit (<i>Unit Induk Pusat Pengatur Beban Jawa, Madura dan Bali</i>); ■ Sumatera Load Control Centre Main Unit (<i>Unit Induk Pusat Pengatur Beban Sumatera</i>); ■ Transmission Main Unit (<i>Unit Induk Transmisi</i>);	Main Unit	■ Works with PP Team and ES Team to conduct Pre-Feasibility or Feasibility Study (or stand-alone studies to supplement the KKP)¹³ covering E&S-related information; ■ Participates in teams established by PP Team in Project Screening and Categorization and Impact Assessment; ■ Oversees daily activities of contractor for selected construction and operation ■ If needed, procures additional support from consultant or contractor to support them in implementing the E&S Management Plans; ■ Review contractor's E&S Management Plans if any; ■ Monitor daily implementation of PLN's E&S Management Plans and contractor's ESMP in construction and operation stage through field inspection, audit, etc.; ■ Provides timely updates on implementation of ESMS during construction and operation to PC Team or PO Team.	■ Understand the ESMS process flow at all project stage; ■ Have experience in developing a Pre-Feasibility and Feasibility Study; ■ Able to include E&S-related parameters in the Pre-Feasibility and Feasibility Study; ■ Familiar with International E&S standard; ■ Have knowledge and resourceful to conduct, review, analyze, and evaluate activities in alignment with ESMS principles.

¹³ See **Section Error! Reference source not found..**

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<i>PLN Division/Sub-Division/Main Unit</i>	<i>Function for ESMS Implementation</i>	<i>Responsibilities</i>	<i>Required Capacities</i>
■ Main Unit for Electrical Load Distribution and Regulation (<i>Unit Induk Penyaluran dan Pengatur Beban</i>); ■ Distribution Main Unit (<i>Unit Induk Distribusi</i>); ■ Area Main Unit (<i>Unit Induk Wilayah</i>)			

8.2 Institutional Capacity Building

A separate Technical Assistance and Capacity building support will be provided by the World Bank under separate projects outside of GREFi with an assessment of training needs will be conducted to identify key areas where additional capacity is needed in order to implement the PLN ESMS that is under development. Pending completion of this assessment and of the capacity-building program, training will be provided for PLN staff assigned to investments supported by the GREFi Project. In general, relevant PLN staff and consultants are considered to be familiar with and are able to implement Indonesian legal and regulatory requirements but are less knowledgeable of international standards (including World Bank ESSs) and GIIP. Therefore, PLN's Talent Development Division, in collaboration with PLN TEK Division and PLN University and with support from the World Bank and consultants, will develop and provide training on World Bank ESSs to managers and staff who will be responsible for E&S planning and management of GREFi investments. At the time the PLN team for E&S planning and management is assigned, the senior manager on the team will work with the World Bank E&S specialists to identify what training is needed to ensure personnel have the requisite skills and knowledge.

During the process of screening and impact assessment, PLN may identify areas where capacity building within PLN and/or contractors are needed before investments can be considered eligible. If capacity building is considered necessary, that would be part of the World Bank evaluation of the investment.

8.3 Training

To implement the ESMF in full force, training should be conducted to appoint PLN staff which are related to and responsible in ESMF cycle. Training will be on two levels, as follows.

Basic Training

Basic training on the ESMF will be provided to PLN managers with responsibility for the GREFi and its investments, up to and including the EVP level. The training will focus on roles and responsibilities for E&S planning and management and will cover the requirements of the ESSs at a high level. It may also be required for contractor managers.

Technical Training

Technical training will be provided to PLN and/or contractor E&S specialists with responsibility for planning E&S requirements and managing E&S performance. PLN TEK Division and Talent Development Division will work with World Bank E&S specialists to identify training needs for each investment.

The themes for specialized E&S training may include, but not be limited to, the following topics, with emphasis on requirements of the ESSs that are different from, or go beyond, the requirements of Indonesian law:

- Requirements of the ESSs, ESCP, and the investment ESMP
- Labor management, including worker grievance management
- Code of conduct for workers
- Greenhouse gas estimation and climate change impacts on projects
- Community health and safety, including GBV/SEA prevention and response
- Land acquisition and resettlement
- livelihood restoration for economically displaced communities and households
- Biodiversity protection
- Indigenous peoples
- stakeholder engagement and external grievance management
- Other context-specific issues, such as conflict mediation, boundary disputes, etc. where skill and resource requirements may be tailored to the complexity of these issues of the investment.

9 INDICATIVE BUDGET

The indicative budget for applying the key processes of the ESMF is provided in Table 9.1. The World Bank will be responsible for financing the ESDDs and supplemental studies for future tranches, while the PLN will be responsible for financing activities other than the development of the ESDDs and supplemental studies. The financing for the ESMF activities may be provided from other sources with support of the World Bank, which will be identified during project implementation.

Table 9.1 Indicative Budget for Applying the ESMF

Task/Activity	Indicative Budget (USD)
Pre-screening of Investments	TBD
Environmental and Social Due Diligence (ESDD) • Document Reviews • Site Visits	20,000
Supplemental Studies such as: • Critical Habitat Assessment (CHA) • Indigenous people assessment • Land Due Diligence	25,000 per study
CAP / Gap Filling Measures	TBD as estimated in CAP
Monitoring and Reporting	TBD
Capacity Building and training for ESMF	20,000

ANNEXES

Annex A Geographical E&S Characteristics

Annex B ESDD TOR

Annex C ESIA and ESMP Outline

Annex D EHSS MANAGEMENT GUIDELINE

Annex E Stakeholder Engagement Framework

Annex F Land Acquisition and Resettlement Policy Framework

Annex G Indigenous Peoples Planning Framework

Annex H Forced Labor Declaration

Annex A Geographical E&S Characteristics

The Grid and Renewable Energy Financing Facility (GREFi) project aims to support Renewable Energy-enabling projects, and particularly Power Transmission infrastructure in Indonesia. The project has the potential to supported project that located in 25 provinces in Indonesia, including Aceh, Sumatera Utara, Riau, Kepulauan Riau, Sumatera Barat, Sumatera Selatan, Lampung, Kalimantan Barat, Kalimantan Tengah, Kalimantan Timur, Kalimantan Utara, Banten, Jawa Barat, Jawa Tengah, Jawa Timur, Bali, Nusa Tenggara Timur (NTT), Sulawesi Tengah, Sulawesi Selatan, Sulawesi Tenggara, Sulawesi Barat, Sulawesi Utara, Maluku, Papua, and Papua Barat. However, any development project in these regions must take into account the potential environmental and social risks and impacts, including deforestation, land-use change, and conflicts over land use. These risks could adversely affect the biodiversity of the region and the livelihoods of local communities. Therefore, it is essential to implement these projects sustainably and responsibly, mitigating the potential risks and impacts associated with them.

Sumatera Island is one of the largest islands in Indonesia, home to a rich diversity of ecosystems, including rainforests, wetlands, and coastal areas, as well as a variety of wildlife such as elephants, tigers, and orangutans. It also has a diverse human population, with indigenous communities living in rural areas like suku Anak Dalam. These communities have their own unique cultures, traditions, and livelihoods that are closely tied to the natural resources of the island.

Kalimantan Island has a large forest cover, making it a significant biodiversity hotspot. The island is home to various species, including the endangered Bornean orangutan and proboscis monkey, as well as numerous endemic species. Kalimantan also has a diverse range of ethnic and cultural groups, each with its own unique traditions and livelihoods.

Java Island, the most populous island in Indonesia, is also one of the most important economic centers in the country. It has a high level of biodiversity and is home to a variety of endangered species, including the Javan rhinoceros and Javan gibbons. However, the island has also experienced significant environmental degradation, including deforestation, pollution, and land subsidence.

Sulawesi Island is known for its unique biodiversity and is one of the world's biodiversity hotspots. It is home to a vast range of flora and fauna, including many endemic species such as the Sulawesi bear cuscus, Sulawesi dwarf buffalo, and Sulawesi black macaque. The island also has diverse ecosystems, including coral reefs, mangrove forests, and rainforests. The communities living on Sulawesi Island are also diverse, with many different ethnic groups and languages spoken.

The Eastern Islands, which include Maluku and Nusa Tenggara Timur (NTT), have similar characteristics in terms of biodiversity and natural habitats, as well as ethnic, cultural, and livelihoods diversity of local populations. These islands are home to rich biodiversity, diverse natural habitats and ecosystems, and cultural diversity. Maluku comprises eight major islands and at least ten island groups, while NTT has many islands. These islands are located in the Wallacea biogeographical region, which includes many endemic species.

Papua Island, also known as New Guinea, is the largest island in Indonesia and the second-largest island in the world. Papua Island has a unique biodiversity with many endemic species, such as birds of paradise, tree kangaroos, and cassowaries. It is also home to one of the world's largest tropical rainforest after the Amazon. The island is divided into two provinces, Papua and West Papua, which have distinct social and cultural characteristics. The indigenous population has a deep connection to the land and forests, with many relying on traditional subsistence practices for their livelihoods. The forests on Papua Island are also critical for mitigating climate change, as they act as carbon sinks by absorbing and storing carbon dioxide from the atmosphere.

The environmental and social characteristics of the Program area, including the description of natural habitats and populations, are describe below for each province.

Table A - 1 Environmental and Social Characteristics of Maluku, NTT, Papua, and Papua Barat Provinces

Environmental and Social Characteristics	Maluku Province	Nusa Tenggara Timur (NTT) Province	Papua Province	Papua Barat Province
Geographic distribution	Maluku comprises 8 major islands, with Seram Island as the largest, and at least 10 smaller islands groups	NTT comprises of many small islands	Papua Province covers an area of approximately 319,036 square kilometers and is located in the easternmost part of Indonesia, sharing a land border with Papua New Guinea	Papua Barat Province covers an area of approximately 114,566 square kilometers and is located on the western half of the island of New Guinea, sharing a land border with Papua Province to the east
Population (Source: Indonesia Population Census 2020)	Total population in Maluku is 1,848,923 people with 50.6% male and 49.4% female. The growth rate from 2010-2020 is 1.82% and population density of 39.41 people/sq.km In Maluku, majority of local population are Tobelo and Galela sub-ethnic groups who migrated from North Halmahera following past natural disasters.	Total population in NTT is 5,325,566 people with 50% male and 50% female. The growth rate from 2010-2020 is 1.25% and population density of 111 people/sq.km	Total population is 3,381,896, Gender distribution is 1,742,498 male (51.5%) and 1,639,398 female (48.5%). Growth rate from 2010-2020 is 2.07% and Population density: 9.51 people per square kilometer	Total population: 1,168,768 Gender distribution: 596,708 male (51.1%) and 572,060 female (48.9%) Growth rate from 2010-2020: 3.51% Population density: 14.79 people per square kilometer
Main economic activities	The main economic activities in Maluku are agriculture, fisheries, and mining	The main economic activities in NTT are agriculture, fisheries, and tourism	The main economic activities in Papua are mining, agriculture, and forestry	The main economic activities in Papua Barat are mining, agriculture, and fisheries
Topography	The topography of Maluku is a mountainous and hilly topography, except on the east coast in the southeast arm which is generally a flooded area.	Nusa Tenggara Timur have a splintered topography of volcanic mountains that reach an elevation of 2,382 metres at Mount Mandasawu on Flores and 2,427 metres at Mount Mutis on western Timor. The mountain peaks are lower on the islands in the north-eastern part of the province. Coral atolls and reefs border	Papua province is the largest province in Indonesia, covering the western half of the island of New Guinea. The province is mountainous, with the Jayawijaya Mountains being the highest range in Indonesia, with the highest peak being Puncak Jaya (Carstensz Pyramid) at 4,884 meters above sea level. The	Papua Barat province is located in the western part of the island of New Guinea. The province is mountainous, with the Arfak Mountains and Wandammen Mountains being the highest ranges, reaching up to 2,955 meters and 2,274 meters

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Environmental and Social Characteristics	Maluku Province	Nusa Tenggara Timur (NTT) Province	Papua Province	Papua Barat Province
		much of the narrow coastal lowland.	province is also home to large areas of lowland and swamp forest, as well as some coastal areas.	above sea level, respectively. The province also has some lowland and swamp forest, as well as coastal areas.
Temperature and rainfall (sources dalam angka 2022)	Average temperature: 26,9-28,6°C Average rainfall: 15.4-586.5 mm per month Rainfall days: 5-26 days per month	Temperature range: 16-32,7°C rainfall: max 123,3 mm per day Rainfall days: 95-223 days per year	Average temperature: 26,5-28,6°C Average rainfall: 1772-3,872 mm per year Rainfall days: 117-212 days per year	Average temperature: 26,5-28,6°C Average rainfall: 1772-3,872 mm per year Rainfall days: 117-212 days per year
General description of natural habitats	Maluku province has a variety of natural habitats, including tropical rainforests, mangrove forests, and coral reefs. The province is also home to the Manusela National Park, which covers an area of 189,000 hectares and contains a diverse range of flora and fauna, including endemic bird species.	The types of forest in the province of Nusa Tenggara Timur are rain forest and brackish forest. This type of rain forest is found on the tops of mountain peaks with a wet climate while a brackish forest is located on the coast. There are few perennial streams and no major rivers ¹⁴ .	Papua province is located on the island of New Guinea and is one of the most biodiverse regions on earth. The province has a range of natural habitats, including tropical rainforests, alpine grasslands, and mangrove forests. The province is home to the Lorentz National Park, which is a UNESCO World Heritage Site and contains a diverse range of flora and fauna, including endemic species such as the tree kangaroo.	Papua Barat province is also located on the island of New Guinea and has a range of natural habitats, including tropical rainforests, mangrove forests, and coral reefs. The province is home to the Cendrawasih Bay National Park, which covers an area of 1.5 million hectares and is known for its rich marine biodiversity.
Native animals and plants	Animals: Salmon-crested cockatoo, Seram scrubfowl, Moluccan king parrot, Moluccan flying fox, painted snipe, Wallace's standard wing bird of paradise Plants: Nutmeg, cloves, sago palm, ebony, ironwood, cinnamon, tualang tree	Native Animals: Flores giant rat, Timor deer, Komodo dragon, Flores hawk-eagle, Timor sparrowhawk, Olive-headed lorikeet, Native Plants: Flame tree, Jatropha curcas, Tamarind tree, Candlenut tree,	Animals: Cassowary, tree kangaroo, bird of paradise, cuscus, possum, wild boar Plants: Orchids, pitcher plants, pandanus, sago palm, casuarina, eucalyptus, palm trees	Animals: Western crowned pigeon, Wilson's bird of paradise, bowerbird, palm cockatoo, crocodile, cuscus Plants: Rattan, ebony, sago palm, casuarina, pandanus, orchids, ferns

¹⁴ East Nusa Tenggara Encyclopedia, accessed on 1 July 2022

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Environmental and Social Characteristics	Maluku Province	Nusa Tenggara Timur (NTT) Province	Papua Province	Papua Barat Province
Presence of Conservation Area	There is a conservation forest called Manusela with an area of 190,500 Ha, located at Seram Island	There are a couple (4) of conservation areas named: Manupeu Tanah Daru at Sumba Island (90,000 Ha); Laiwangi Wanggamet at Sumba Island (132,000 Ha); Komodo National Park (189,000 Ha, include Komodo Island and Rinca Island); and Kelimutu at Flores Island (167,300 Ha), with 476,300 Ha of total area.	Lorentz National Park: 2,350,000 hectares Wasur National Park: 413,000 hectares	Teluk Cenderawasih National Park: 1,453,500 hectares
Presence of Endangered Species	Seram cockatoo, Moluccan masked owl, and the ivory pygmy goose.	Komodo Dragon at Komodo Island, Rinca Island, Flores Island, Gili Motang Island, and Gili Dasami Island	Papuan taipan, Vogelkop bowerbird, and the Papuan tree kangaroo.	Papuan taipan, Vogelkop bowerbird, and the Papuan tree kangaroo.
Indigenous people (if any)	There are Ips communities in Buru and Seram including in Sub-district (Kecamatan/Kec.) Waeapo (Wailua, Mual, Bihuku, etc.) and Namlea (Rana and Wahidi) in Buru, and Kec. Kairatu (Waemali, Alune, Rambatu) in Seram.	There are Ips communities such as in Alor (Maran Abui, Klon) and in Flores Timur.	Papua province is home to various indigenous groups, including the Dani, Asmat, and Yali.	Papua Barat province is home to various indigenous groups, including the Kuri, Arfak, and Biak

Table A - 2 Environmental and Social Characteristics of Aceh, Sumatera Utara, Riau, and Kepulauan Riau Provinces

Environmental and Social Characteristics	Aceh	Sumatera Utara	Riau	Kepulauan Riau
Geographic distribution	located on the northern tip of the island of Sumatra, bordered by the Indian Ocean to the west and the Strait of Malacca to the north	located in the northern part of the island of Sumatra, bordered by the Malacca Strait to the west and the province of Aceh to the north	located in the central eastern part of Sumatra island, bordered by the Strait of Malacca to the east.	A province located on a series of islands off the eastern coast of Sumatra, and includes islands such as Batam and Bintan

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Environmental and Social Characteristics	Aceh	Sumatera Utara	Riau	Kepulauan Riau
Population (Source: Indonesia Population Census 2020)	Total population: 5,498,389 Male population: 2,766,634 Female population: 2,731,755 Growth rate (2010-2020): 1.71% Population density: 98.69 people/km ²	Total population: 14,064,455 Male population: 7,076,296 Female population: 6,988,159 Growth rate (2010-2020): 1.56% Population density: 121.35 people/km ²	Total population: 6,051,304 Male population: 3,088,134 Female population: 2,963,170 Growth rate (2010-2020): 2.25% Population density: 99.24 people/km ²	Total population: 1,919,357 Male population: 1,012,006 Female population: 907,351 Growth rate (2010-2020): 3.47% Population density: 170.95 people/km ²
Main economic activities	Agriculture, fisheries, and mining industries are the main economic activities in Aceh.	Agriculture and mining are the main economic activities in Sumatera Utara	Agriculture, forestry, and palm oil industries are the main economic activities in Riau.	Fisheries, trade, and services industries are the main economic activities in Kepulauan Riau
Topography	Aceh is located on the northern tip of Sumatra and has a varied topography with mountainous regions, coastal areas, and river valleys. The highest peak in Aceh is Mount Leuser, which is part of the Leuser Mountain Range	The topography of Sumatera Utara is mostly mountainous, with several peaks reaching heights of over 2,000 meters. The province is also home to several large lakes, including Lake Toba, the largest volcanic lake in the world	Riau is a lowland province located on the eastern coast of Sumatra. The topography is characterized by flat, swampy areas and coastal plains	Kepulauan Riau is an archipelago province consisting of hundreds of islands. The topography is characterized by coastal areas and hilly terrain
Temperature and rainfall (sources dalam angka 2022)	Average temperature: 26.5-28.6°C Average rainfall: 1772-3,872 mm per year Rainfall days: 117-212 days per year	Average temperature: 19.9-29.6°C Rainfall intensity: 10.5-660.4 mm per month Rainfall days: 2-25 days per month	Temperature range: 22.1-33.4°C Rainfall intensity: 31-431 mm per month Rainfall days: 5-20 days per month	Temperature range: 20-36.8°C Average rainfall: 2,132-3,968 mm per year Rainfall days: 154-225 days per year
General description of natural habitats	Aceh is home to the Gunung Leuser National Park, which is one of the last places on earth where Sumatran orangutans, tigers, rhinoceroses, and elephants coexist in the wild.	Sumatera Utara is home to the Bukit Barisan Selatan National Park, which contains some of the last remaining lowland rainforests on the island of Sumatra.	Riau is home to the Teso Nilo National Park, which is a critical habitat for Sumatran elephants and tigers.	Kepulauan Riau is an archipelago located in the western part of Indonesia. Its natural habitats include mangrove forests, coral reefs, and sandy beaches.
Native animals and plants	Animals: Sumatran elephant, Sumatran tiger, Sumatran orangutan, Malayan	Animals: Sumatran tiger, Sumatran elephant, Sumatran	Animals: Sumatran tiger, Sumatran elephant, Malayan	Animals: dugong, green sea turtle, hawksbill sea turtle,

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Environmental and Social Characteristics	Aceh	Sumatera Utara	Riau	Kepulauan Riau
	sun bear, helmeted hornbill Plants: Rafflesia arnoldii (world's largest flower), pitcher plant, tropical hardwoods like meranti and ramin	orangutan, Malayan tapir, clouded leopard Plants: Rafflesia arnoldii, Amorphophallus titanum (corpse flower), tropical hardwoods like meranti and ramin	tapir, clouded leopard, sun bear Plants: Rafflesia arnoldii, tropical hardwoods like meranti and ramin, rattan palms	coconut crab, saltwater crocodile Plants: mangroves, sea grapes, pandan, coconut palms
Presence of Conservation Area	Gunung Leuser National Park Alas Purwo National Park	Batang Gadis National Park Gunung Leuser National Park Bukit Barisan Selatan National Park -	Bukit Tigapuluh National Park Berbak National Park – Tesso Nilo National Park	Tanjung Putri Mangrove Forest Nature Reserve – Bintan Island Mangrove Forest Nature Reserve
Presence of Endangered Species	Sumatran orangutan Sumatran tiger Sumatran rhinoceros Sumatran elephant	Sumatran orangutan Sumatran tiger Sumatran rhinoceros Sumatran elephant	Sumatran orangutan Sumatran tiger Sumatran rhinoceros Sumatran elephant	Hawksbill turtle Green turtle Olive ridley turtle Leatherback turtle
Indigenous people		Suku gayo	Suku laut, Suku Sakai	Suku Laut

Table A - 3 Environmental and Social Characteristics of Sumatera Barat, Sumatera Selatan, and Lampung Provinces

Environmental and Social Characteristics	Sumatera Barat	Sumatera Selatan	Lampung
Geographic distribution	located in the western part of the island of Sumatra, bordered by the Indian Ocean to the west.	Located in the southern part of the island of Sumatra, bordered by the Indian Ocean to the west and the province of Bengkulu to the south.	Located on the southern tip of Sumatra Island, bordered by the Sunda Strait to the west and the province of Bengkulu to the north.
Population (Source: Indonesia Population Census 2020)	Total population: 5,500,163 Male population: 2,759,191 Female population: 2,740,972 Growth rate (2010-2020): 1.27% Population density: 146.35 people/km ²	Total population: 8,719,401 Male population: 4,412,520 Female population: 4,306,881 Growth rate (2010-2020): 1.47% Population density: 157.06 people/km ²	Total population: 8,536,351 Male population: 4,300,787 Female population: 4,235,564 Growth rate (2010-2020): 1.68% Population density: 238.98 people/km ²

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Environmental and Social Characteristics	Sumatera Barat	Sumatera Selatan	Lampung
Main economic activities	Agriculture and mining industries are the main economic activities in Sumatera Barat.	Agriculture and mining industries are the main economic activities in Sumatera Selatan.	Agriculture and forestry industries are the main economic activities in Lampung.
Topography	Sumatera Barat is located on the west coast of Sumatra and has a varied topography, including mountains, highlands, and coastal areas. The highest peak in the province is Mount Kerinci, which is also the highest volcano in Indonesia	The topography of Sumatera Selatan is characterized by lowlands and coastal plains. The province is also home to several mountain ranges, including the Bukit Barisan Range	Lampung is located on the southern tip of Sumatra and has a varied topography, including mountains, hills, and coastal areas. The highest peak in Lampung is Mount Pesagi, which is part of the Bukit Barisan Range.
Temperature and rainfall (<i>sources dalam angka 2022</i>)	Temperature range: 19.4-35.1°C Rainfall intensity: 5,332 mm per year Rainfall days: 257 days per year	Average temperature: 29.1 C Rainfall intensity: 2598 mm per year Rainfall days: 235 days per year	Average temperature: 27.1°C Rainfall intensity: 33.4 – 384.2 mm per month Rainfall days: 7-21 days per month
General description of natural habitats	Sumatera Barat is home to the Kerinci Seblat National Park, which is the largest national park on the island of Sumatra. The park is known for its high levels of biodiversity and is home to numerous endangered species, including the Sumatran tiger, elephant, and rhinoceros.	Sumatera Selatan is home to the Bukit Barisan Selatan National Park, which is a UNESCO World Heritage Site. The park contains some of the last remaining lowland rainforests on the island of Sumatra.	Lampung is home to the Way Kambas National Park, which is a critical habitat for the Sumatran elephant and rhinoceros.
Native animals and plants	Animals: Sumatran tiger, Sumatran elephant, Malayan tapir, clouded leopard, banded langur Plants: Rafflesia arnoldii, Amorphophallus titanum, tropical hardwoods like meranti and ramin	Animals: Sumatran tiger, Sumatran elephant, Malayan tapir, clouded leopard, banded langur Plants: Rafflesia arnoldii, Amorphophallus titanum, tropical hardwoods like meranti and ramin	Animals: Sumatran tiger, Sumatran elephant, Malayan tapir, clouded leopard, banded langur Plants: Rafflesia arnoldii, Amorphophallus titanum, tropical hardwoods like meranti and ramin
Presence of Conservation Area	Kerinci Seblat National Park Gunung Leuser National Park	Bukit Barisan Selatan National Park Kerinci Seblat National Park Sembilang National Park	Bukit Barisan Selatan National Park Way Kambas National Park
Presence of Endangered Species	Sumatran orangutan Sumatran tiger Sumatran rhinoceros	Sumatran orangutan Sumatran tiger Sumatran rhinoceros	Sumatran orangutan Sumatran tiger Sumatran rhinoceros

Environmental and Social Characteristics	Sumatera Barat	Sumatera Selatan	Lampung
	Sumatran elephant	Sumatran elephant	Sumatran elephant
Indigenous people (if any)	Suku Mentawai		

Table A - 4 Environmental and Social Characteristics of Kalimantan Barat, Kalimantan Tengah, Kalimantan Timur and Kalimantan Utara Provinces

Environmental and Social Characteristics	Kalimantan Barat	Kalimantan Tengah	Kalimantan Timur	Kalimantan Utara
Geographic distribution	located on the western side of the island of Borneo, bordering Malaysia to the north and the South China Sea to the west.	Located in the central part of the island of Borneo, bordered by the provinces of West and East Kalimantan to the north and south, respectively	located on the eastern side of the island of Borneo, bordered by the Makassar Strait to the east and the provinces of North and Central Kalimantan to the north and west, respectively.	Located in the northeastern part of the island of Borneo, bordered by the Malaysian state of Sabah to the north and the Sulawesi Sea to the east.
Population (Source: Indonesia Population Census 2020)	Total population: 5,437,228 Male population: 2,744,456 Female population: 2,692,772 Growth rate (2010-2020): 1.71% Population density: 31.23 people/km ²	Total population: 2,683,296 Male population: 1,365,624 Female population: 1,317,672 Growth rate (2010-2020): 1.68% Population density: 6.11 people/km ²	Total population: 3,782,581 Male population: 1,971,372 Female population: 1,811,209 Growth rate (2010-2020): 2.21% Population density: 13.89 people/km ²	Total population: 807,284 Male population: 418,771 Female population: 388,513 Growth rate (2010-2020): 4.13% Population density: 4.33 people/km ²
Main economic activities	Agriculture, forestry, and mining industries are the main economic activities in Kalimantan Barat.	Agriculture and mining industries are the main economic activities in Kalimantan Tengah	Mining and petroleum industries are the main economic activities in Kalimantan Timur.	The main economic activities in Kalimantan Utara are mining, agriculture, forestry, and fisheries.
Topography	The topography of Kalimantan Barat is characterized by lowlands and hilly terrain. The province is also home to several large rivers, including the Kapuas River, the longest river in Indonesia.	Kalimantan Tengah is located in the central part of Borneo and has a varied topography, including mountains, highlands, and lowlands. The highest peak in the province is Mount Tangkiling, which is part of the Schwaner Mountains	The topography of Kalimantan Timur is characterized by mountainous terrain, including the Apokayan Highlands and the Muller Range. The province is also home to several large rivers, including the Mahakam River	Kalimantan Utara is located on the northern part of Borneo and has a varied topography, including mountainous areas and lowlands. The highest peak in the province is Mount Kelam, which is

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Environmental and Social Characteristics	Kalimantan Barat	Kalimantan Tengah	Kalimantan Timur	Kalimantan Utara
				part of the Kelam Range
Temperature and rainfall (sources dalam angka 2022)	Average temperature: 27°C Rainfall: 2,918.20 mm per year Rainfall days: 208 days per year	Average temperature: 27.3°C rainfall: 2908.2 mm per year Rainfall days: 256 days per year	Temperature ranges between 23.2°C to 35.8°C. Rainfall intensity: 133.4 – 376,5 mm per month Rainy days: max 23 days per month	Temperature: average : 27.4 C Rainfall intensity: 2878 mm per year. Rainy days: 252 days per year.
General description of natural habitats	Kalimantan Barat is home to the Gunung Palung National Park, which is one of the last remaining habitats for the Bornean orangutan.	Kalimantan Tengah is home to the Tanjung Puting National Park, which is known for its population of wild orangutans.	Kalimantan Timur is home to the Kutai National Park, which contains some of the last remaining lowland rainforests on the island of Borneo.	Kalimantan Utara is home to the Kayan Mentarang National Park, which is one of the largest national parks in Indonesia. Its habitats include lowland and montane rainforests, as well as peat swamps and mangroves
Native animals and plants	Animals: Bornean orangutan, Bornean pygmy elephant, proboscis monkey, sun bear, clouded leopard Plants: rattan palms, tropical hardwoods like merbau and teak, pitcher plants	Animals: Bornean orangutan, Bornean pygmy elephant, proboscis monkey, sun bear, clouded leopard Plants: rattan palms, tropical hardwoods like merbau and teak, pitcher plants	Animals: Bornean orangutan, Bornean pygmy elephant, proboscis monkey, sun bear, clouded leopard Plants: rattan palms, tropical hardwoods like merbau and teak, pitcher plants	Animals: Bornean orangutan, Bornean pygmy elephant, proboscis monkey, sun bear, clouded leopard Plants: rattan palms, tropical hardwoods like merbau and teak, pitcher plants
Presence of Conservation Area	Betung Kerihun National Park Danau Sentarum National Park Gunung Palung National Park Mount Sebangau National Park Bukit Baka Bukit Raya National Park	Bukit Raya National Park Sabangau National Park Sebangau National Park Tanjung Puting National Park	Kutai National Park Kayan Mentarang National Park Betung Kerihun National Park	Kayan Mentarang National Park Betung Kerihun National Park
Presence of Endangered Species	Bornean orangutan Bornean elephant Bornean clouded leopard	Bornean orangutan Bornean elephant Bornean clouded leopard	Bornean orangutan Bornean elephant Bornean clouded leopard	Bornean orangutan Bornean elephant Bornean clouded leopard

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Environmental and Social Characteristics	Kalimantan Barat	Kalimantan Tengah	Kalimantan Timur	Kalimantan Utara
	Bornean bay cat	Bornean bay cat	Bornean bay cat	Bornean bay cat
Indigenous people (if any)	Suku Dayak	Suku Dayak	Suku Dayak	Suku Dayak

Table A - 5 Environmental and Social Characteristics of Banten, Jawa Barat, Jawa Tengah, Jawa Timur Provinces

Environmental and Social Characteristics	Banten	Jawa Barat	Jawa Tengah	Jawa Timur
Geographic distribution	located on the western tip of the island of Java, bordered by Jakarta to the east.	Located on the western part of the island of Java, bordered by the Indian Ocean to the south and the province of Central Java to the east.	Located in the central part of the island of Java, bordered by the provinces of West and East Java to the west and east, respectively.	Located on the eastern part of the island of Java, bordered by the Bali Strait to the east.
Population (Source: Indonesia Population Census 2020)	Total population: 13,126,935 Male: 6,610,109 Female: 6,516,826 Growth rate 2010-2020: 1.68% Population density: 1,125 people/km ²	Total population: 49,046,778 Male: 24,511,363 Female: 24,535,415 Growth rate 2010-2020: 1.45% Population density: 1,418 people/km ²	Total population: 35,568,413 Male: 17,739,320 Female: 17,829,093 Growth rate 2010-2020: 1.15% Population density: 1,063 people/km ²	Total population: 41,850,296 Male: 20,928,510 Female: 20,921,786 Growth rate 2010-2020: 1.14% Population density: 1,186 people/km ²
Main economic activities	Banten's main economic activities include industry, trade, and services.	The economy of Jawa Barat is diverse, with agriculture, industry, and services all playing significant roles.	Jawa Tengah's main economic activities are agriculture, industry, and services.	The economy of Jawa Timur is dominated by industry, followed by agriculture and services.
Topography	Banten is located on the western coast of Java and has a varied topography, including lowlands, hilly areas, and coastal plains. The highest peak in the province is Mount Karang, which is part of the Kendeng Mountains	located in the western part of Java island and has a varied topography consisting of mountains, hills, and plains. The northern part of the province is dominated by the mountainous area of the Puncak region, while the southern part is characterized by lowland and coastal areas.	Located in the central part of Java island and has a diverse topography consisting of mountains, hills, and plains. The northern part of the province is dominated by the mountainous area of the Dieng Plateau, while the southern part is characterized by lowland and coastal areas.	Located in the eastern part of Java island and has a varied topography consisting of mountains, hills, and plains. The northern part of the province is dominated by the mountainous area of the Tengger and Bromo regions, while the southern

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Environmental and Social Characteristics	Banten	Jawa Barat	Jawa Tengah	Jawa Timur
				part is characterized by lowland and coastal areas.
Temperature and rainfall (sources dalam angka 2022)	Average temperature: 29.3°C Average rainfall: 2977 mm per year Rainfall days: 211 days per year	Average temperature: 24,9-26,2°C Average rainfall: 1772-3,786.60 mm per year Rainfall days: 262 days per year	Average temperature: 26,5-28,9°C rainfall: max 4929 mm per year Rainfall days: max 233 days per year	Average temperature: 27.1°C Average rainfall: 210.5 mm per month Rainfall days: 13.5 days per month
General description of natural habitats	Banten is home to the Ujung Kulon National Park, which is a UNESCO World Heritage Site. The park contains the largest remaining population of the critically endangered Javan rhinoceros.	Jawa Barat is home to the Gunung Halimun Salak National Park, which is a critical habitat for the Javan gibbon and leopard.	Jawa Tengah is home to the Karimunjawa National Park, which is a group of islands located off the coast of Central Java. The park's habitats include coral reefs, mangrove forests, and sandy beaches.	Jawa Timur is home to the Baluran National Park, which contains a variety of habitats, including savannas, mangroves, and forests.
Native animals and plants	Animals: Javan leopard, Javan rhinoceros, Javan gibbon, green sea turtle, hawksbill sea turtle Plants: Javanese teak, bamboo, pandan, rattan palms	Animals: Javan leopard, Javan rhinoceros, Javan gibbon, green sea turtle, hawksbill sea turtle Plants: Javanese teak, bamboo, pandan, rattan palms	Animals: Javan langur, Javan lutung, Javan leopard, Javan hawk-eagle, Javan rhinoceros (critically endangered), Javan slow loris, Javanese flying squirrel, Javanese banded pitta, Javan scops owl, and Javanese kingfisher. Plants: Teak, ebony, jackfruit, durian, banana, coconut, and clove.	Animals: Javan lutung, Javan hawk-eagle, Javanese kingfisher, green peafowl, banteng, Javan rusa deer, Javan leopard, Javan slow loris, and Javan scops owl. Plants: Teak, mahogany, candlenut, coconut, durian, banana, and coffee.
Presence of Conservation Area	Mount Halimun Salak National Park Ujung Kulon National Park: Gunung Leuser National Park	Mount Halimun Salak National Park Gunung Gede Pangrango National Park	Karimunjawa National Park Gunung Merbabu National Park	Baluran National Park, Alas Purwo National Park, Meru Betiri National Park and Bromo Tengger Semeru National Park
Presence of Endangered Species	Javan rhinoceros Javan leopard	Javan rhinoceros Javan leopard	Javan rhinoceros Javan leopard	Javan rhinoceros Javan leopard

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Environmental and Social Characteristics	Banten	Jawa Barat	Jawa Tengah	Jawa Timur
	Javan gibbon Javan hawk-eagle	Javan gibbon Javan hawk-eagle	Javan gibbon Javan hawk-eagle	Javan gibbon Javan hawk-eagle
Indigenous people (if any)	Suku Baduy			

Table A - 6 Environmental and Social Characteristics of Bali, Sulawesi Tengah, and Sulawesi Selatan Provinces

Environmental and Social Characteristics	Bali	Sulawesi Tengah	Sulawesi Selatan
Geographic distribution	located on an island in the westernmost end of the Lesser Sunda Islands, between the islands of Java and Lombok.	Located on the central part of the island of Sulawesi, bordered by the provinces of West and South Sulawesi to the west and south, respectively.	Located on the southern part of the island of Sulawesi, bordered by the Flores Sea to the east.
Population (Source: Indonesia Population Census 2020)	Total population: 4,318,993 Male: 2,147,901 Female: 2,171,092 Growth rate 2010-2020: 1.68% Population density: 766 people/km ²	Total population: 3,084,156 Male: 1,542,004 Female: 1,542,152 Growth rate 2010-2020: 1.19% Population density: 61 people/km ²	Total population: 8,041,262 Male: 4,025,522 Female: 4,015,740 Growth rate 2010-2020: 1.16% Population density: 170 people/km ²
Main economic activities	Bali's economy is primarily based on tourism, with the sector accounting for around 80% of the province's GDP.	The main economic activities in Sulawesi Tengah are agriculture, mining, and fisheries.	The main economic activities in Sulawesi Selatan are agriculture, fisheries, and mining.
Topography	located in the eastern part of Indonesia and is a small island with a varied topography consisting of mountains, hills, and plains. The northern part of the island is dominated by the mountainous area of Mount Agung, while the southern part is characterized by lowland and coastal areas.	Located in the central part of Sulawesi island and has a varied topography consisting of mountains, hills, and plains. The northern part of the province is dominated by the mountainous area of the Lore Lindu National Park, while the southern part is characterized by lowland and coastal areas.	Located in the southern part of Sulawesi island and has a varied topography consisting of mountains, hills, and plains. The northern part of the province is dominated by the mountainous area of the Tana Toraja region, while the southern part is characterized by lowland and coastal areas.
Temperature and rainfall	Average temperature: 28,7-30,8°C	Average temperature: 19,2-28,7°C	Average temperature: 28.5°C

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Environmental and Social Characteristics	Bali	Sulawesi Tengah	Sulawesi Selatan
<i>(sources dalam angka 2022)</i>	rainfall: 0.5 – 856 mm per month Rainfall days: 1-30 days per month	rainfall: 16.2-413.9 mm per month Rainfall days: 9-22 days per month	Rainfall: 4690 mm per year Rainfall days: 291 days per year
General description of natural habitats	Bali is home to the West Bali National Park, which contains a variety of habitats, including coral reefs, savannas, and monsoon forests.	Sulawesi Tengah is known for its diverse landscapes, from lowlands to highlands, mountains, and forests. The province has a tropical rainforest climate, with high temperatures and humidity throughout the year. The natural habitats in the province include rainforests, mangrove forests, coastal areas, coral reefs, and volcanic mountains. Sulawesi Tengah is also home to several endemic plant and animal species, such as the babirusa, tarsier, and anoa.	Sulawesi Selatan is a province located in the southern part of Sulawesi island. The province has a diverse topography, ranging from mountainous regions to lowlands, and is surrounded by the Makassar Strait and Flores Sea. The natural habitats in the province include rainforests, mangrove forests, coral reefs, and coastal areas. Sulawesi Selatan is also home to several endemic animal and plant species, such as the maleo bird, anoa, and tarsier.
Native animals and plants	Animals: Bali myna, Bali starling, Javan lutung, Bali spiny rat, Bali black giant squirrel, Bali ground-dove, and Bali temple pit viper. Plants: Coconut, clove, coffee, bamboo, banana, and mango.	Animals: Sulawesi bear cuscus, Sulawesi dwarf cuscus, Sulawesi hornbill, Sulawesi crested macaque, Sulawesi palm civet, Sulawesi warty pig, and Sulawesi tree kangaroo. Plants: Clove, coconut, nutmeg, cocoa, and rubber.	Animals: Sulawesi bear cuscus, Sulawesi dwarf cuscus, Sulawesi hornbill, Sulawesi crested macaque, Sulawesi palm civet, Sulawesi warty pig, and Sulawesi tree kangaroo. Plants: Clove, coconut, nutmeg, cocoa, and rubber.
Presence of Conservation Area	West Bali National Park , and Taman Ayun Temple Park	Lore Lindu National Park	Bantimurung-Bulusaraung National Park, Rawa Aopa Watumohai National Park, Takabonerate Marine National Park, and Taka Bone Rate National Park
Presence of Endangered Species	Bali myna Green turtle Hawksbill turtle Olive ridley turtle	Anoa (Dwarf buffalo) (Bubalus depressicornis) Babirusa (Babyrousa celebensis) Bear cuscus (Ailurops ursinus) Celebes crested macaque (Macaca nigra) Celebes dwarf kingfisher (Ceyx fallax)	Babirusa (Babyrousa celebensis) Celebes crested macaque (Macaca nigra) Sulawesi hornbill (Rhabdoterrhinus exarhatus) Sulawesi palm civet (Macrogalidia musschenbroekii)

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Environmental and Social Characteristics	Bali	Sulawesi Tengah	Sulawesi Selatan
		Maleo (Macrocephalon maleo) Sulawesi hornbill (Rhabdotorrhinus exarhatus)	
Indigenous people (if any)	Suku Baliaga	Suku Pamona	

Table A - 7 Environmental and Social Characteristics of Sulawesi Tenggara, Sulawesi Barat, and Sulawesi Utara Provinces

Environmental and Social Characteristics	Sulawesi Tenggara	Sulawesi Barat	Sulawesi Utara
Geographic distribution	located on the southeastern part of the island of Sulawesi, bordered by the Banda Sea to the north and the Flores Sea to the south.	Located on the western part of the island of Sulawesi, bordered by the provinces of South and Central	province located in the northern part of the island of Sulawesi in Indonesia. It is bordered by the Celebes Sea to the north, Gorontalo to the east, Central Sulawesi to the south, and the Molucca Sea to the west.
Population (Source: Indonesia Population Census 2020)	Total population: 2,892,296 Male: 1,448,362 Female: 1,443,934 Growth rate 2010-2020: 1.36% Population density: 83 people/km ²	Total population: 1,568,554 Male: 786,953 Female: 781,601 Growth rate 2010-2020: 1.27% Population density: 46 people/km ²	Total population: 2,707,551 Male: 1,356,636 Female: 1,350,915 Growth rate 2010-2020: 1.35% Population density: 111 people/km ²
Main economic activities	The main economic activities in Sulawesi Tenggara are agriculture, fisheries, and mining.	The main economic activities in Sulawesi Barat are agriculture, fisheries, and forestry.	The main economic activities in Sulawesi Utara are agriculture, fisheries, and tourism.
Topography	located in the southeastern part of Sulawesi island and has a varied topography consisting of mountains, hills, and plains. The northern part of the province is dominated by the mountainous area of the Wakatobi Islands, while the southern part is characterized by lowland and coastal areas.	Located on the western side of Sulawesi island and has a diverse topography. The province is dominated by mountains, with the highest peak being Mount Karampuang at 3,676 meters.	Located on the northern side of Sulawesi island and has a more coastal topography. The province is dominated by two large peninsulas, the Minahasa Peninsula and the Sangihe-Talaud Islands. The Minahasa Peninsula has a mountainous terrain with several active volcanoes, while the Sangihe-Talaud Islands are mostly mountainous with some lowland areas.

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Environmental and Social Characteristics	Sulawesi Tenggara	Sulawesi Barat	Sulawesi Utara
Temperature and rainfall <i>(sources dalam angka 2022)</i>	Average temperature: 25.8-29°C Average rainfall: 188.5-230.6 mm per month Rainfall days: 235-242 days per year	Average temperature: 27.7°C rainfall: 2270 mm per year Rainfall days: 10-25 days per monthj	Average temperature: 24,4-28,2°C Average rainfall: 2220-4672 mm per year Rainfall days: 195-257 days per year
General description of natural habitats	Sulawesi Tenggara is located on the southeastern peninsula of Sulawesi island. The province has a tropical climate, with high temperatures and humidity throughout the year. The natural habitats in the province include rainforests, mangrove forests, savannas, and coral reefs. Sulawesi Tenggara is also home to several endemic animal and plant species, such as the babirusa, tarsier, and maleo bird.	Sulawesi Barat is a province located on the western side of Sulawesi island. The province has a tropical climate, with high temperatures and humidity throughout the year. The natural habitats in the province include rainforests, mangrove forests, coastal areas, coral reefs, and mountainous regions. Sulawesi Barat is also home to several endemic animal and plant species, such as the anoa, tarsier, and maleo bird.	Sulawesi Utara is a province located in the northern part of Sulawesi island. The province has a tropical climate, with high temperatures and humidity throughout the year. The natural habitats in the province include rainforests, mangrove forests, coastal areas, coral reefs, and volcanic mountains. Sulawesi Utara is also home to several endemic animal and plant species, such as the tarsier, anoa, and babirusa.
Native animals and plants	Animals: Tarsier, Sulawesi bear cuscus, Sulawesi dwarf cuscus, Sulawesi hornbill, Sulawesi crested macaque, Sulawesi palm civet, and Sulawesi warty pig. Plants: Clove, coconut, nutmeg, cocoa, and rubber.	Animals: Sulawesi bear cuscus, Sulawesi dwarf cuscus, Sulawesi hornbill, Sulawesi crested macaque, Sulawesi palm civet, Sulawesi warty pig, and Sulawesi tarsier. Plants: Clove, coconut, nutmeg, cocoa, and rubber.	Animals: Babirusa, tarsier, spectral tarsier, Sulawesi dwarf cuscus, Sulawesi hornbill, and Sulawesi macaque. Plants: Clove, coconut, nutmeg, cocoa, and rubber
Presence of Conservation Area	Wakatobi National Park Buton Forest Park, and Kakenauwe Protected Forest (	Batudaka Nature Reserve, Dampal Selatan Nature Reserve, Tanggeasinua Nature Reserve, and Tambora Mountain Nature Reserve	Tangkoko Batuangus Nature Reserve, Dumoga Bone National Park, and Tarsius Spectrum Wildlife Reserve
Presence of Endangered Species	Babirusa (<i>Babirusa celebensis</i>) Celebes crested macaque (<i>Macaca nigra</i>) Green sea turtle (<i>Chelonia mydas</i>) Hawksbill turtle (<i>Eretmochelys imbricata</i>)	Anoa (Dwarf buffalo) (<i>Bubalus depressicornis</i>) Babirusa (<i>Babirusa celebensis</i>) Celebes crested macaque (<i>Macaca nigra</i>) Celebes dwarf kingfisher (<i>Ceyx fallax</i>)	Anoa (Dwarf buffalo) (<i>Bubalus depressicornis</i>) Babirusa (<i>Babirusa celebensis</i>) Celebes crested macaque (<i>Macaca nigra</i>) Celebes dwarf kingfisher (<i>Ceyx fallax</i>)

Environmental and Social Characteristics	Sulawesi Tenggara	Sulawesi Barat	Sulawesi Utara
	Olive ridley turtle (<i>Lepidochelys olivacea</i>)	Maleo (<i>Macrocephalon maleo</i>) Sulawesi hornbill (<i>Rhabdotorrhinus exarhatus</i>)	Green sea turtle (<i>Chelonia mydas</i>) Hawksbill turtle (<i>Eretmochelys imbricata</i>) Olive ridley turtle (<i>Lepidochelys olivacea</i>)
Indigenous people (if any)			

Protected Areas and Key Biodiversity Areas in Indonesia

Indonesia, with its rich biodiversity and natural resources, is home to a large number of protected areas and key biodiversity areas that are crucial to the survival of many species. According to the International Union for Conservation of Nature (IUCN), there are 614 terrestrial protected areas and 495 key biodiversity areas in Indonesia, as identified on the Indonesia Protected Area Map and Indonesia Key Biodiversity Areas Map shown below. It is essential to have a comprehensive understanding of the location and extent of these areas to ensure that any development or infrastructure projects do not pose environmental and social risks that could harm these protected areas and the species within them. Proper mitigation measures can only be put in place if the information about the location and extent of these areas is readily available and utilized in the planning process.

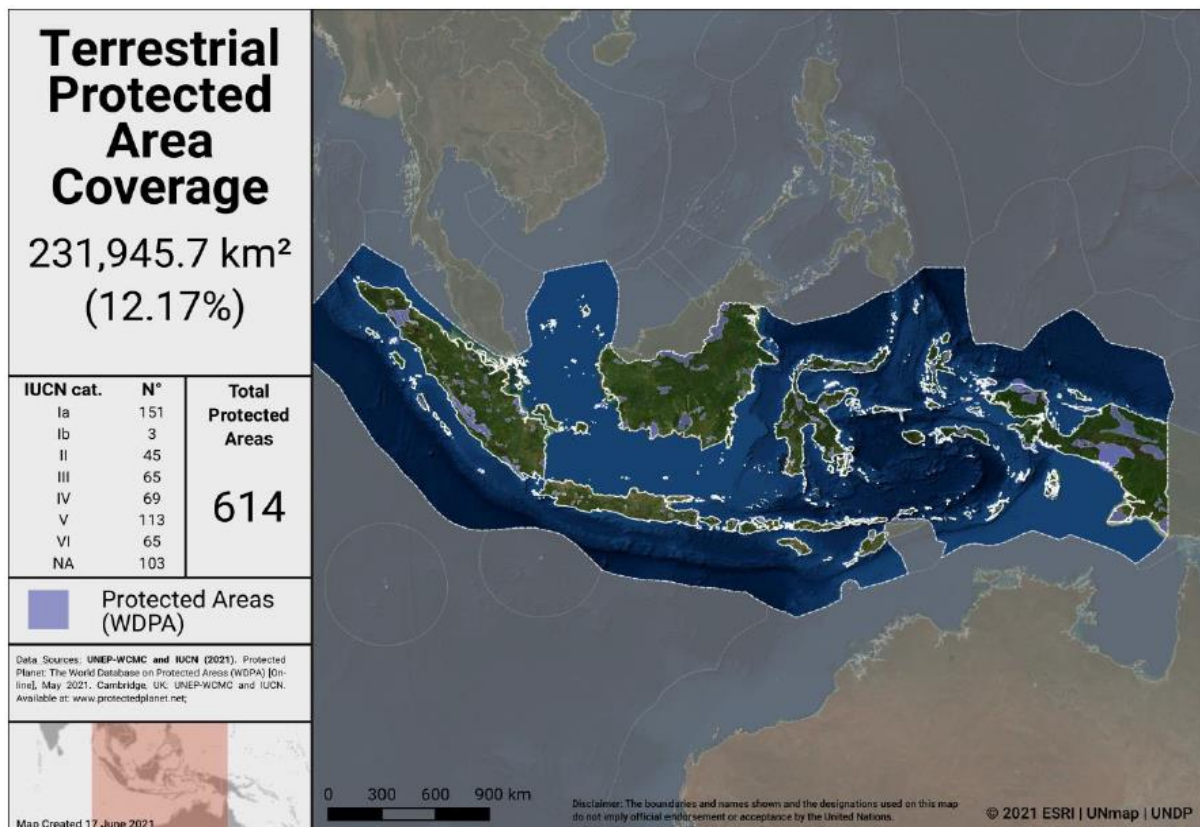


Figure A-0-1 Indonesia Protected Areas Map (Convention on Biological Diversity, 2021)

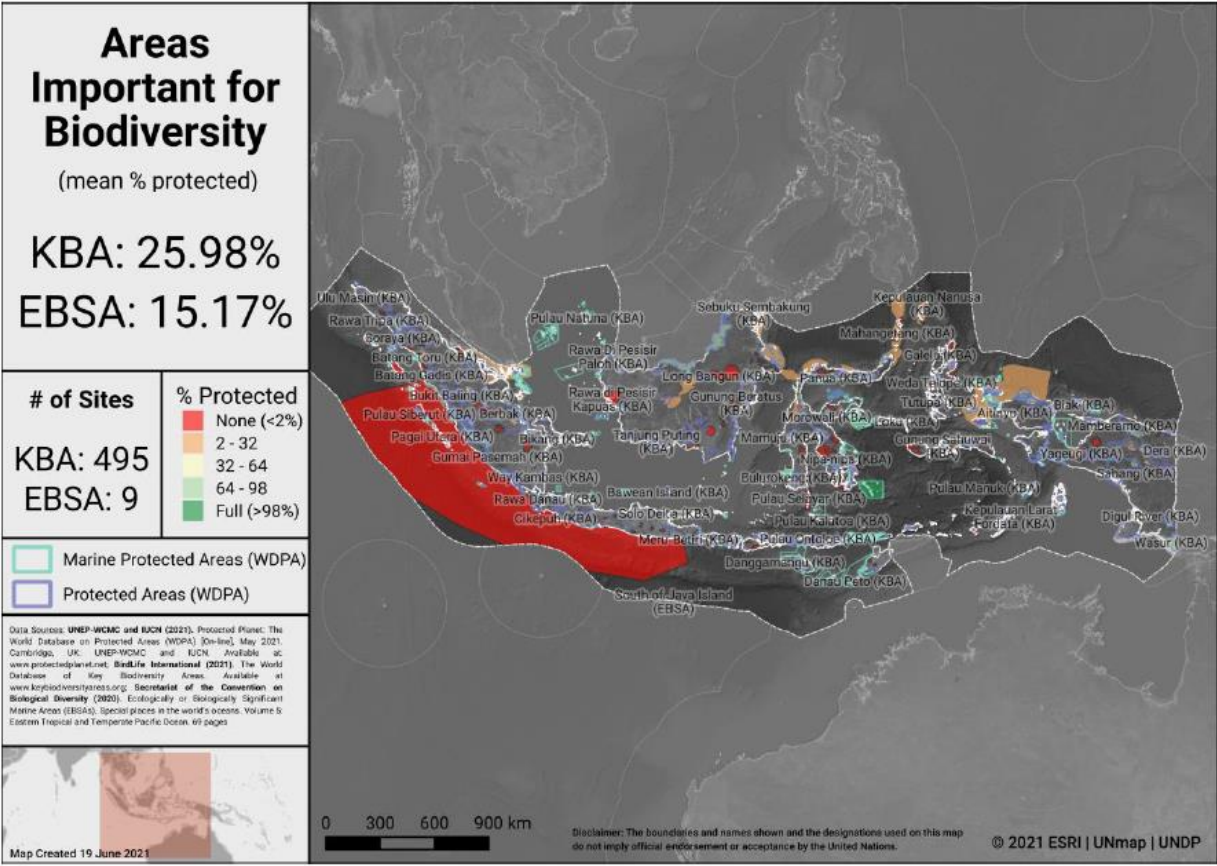


Figure A-0-2 Indonesia Key Biodiversity Areas Map (Convention on Biological Diversity, 2021)

Customary Land in Indonesia

Indonesia is a country with diverse cultures and traditions, including the concept of customary land. The Badan Registrasi Wilayah Adat Indonesia has mapped out 58 Customary Land in Bali Nusa, 13 Customary Land in Jawa, 399 Customary Land in Kalimantan, 11 Customary Land in Maluku, 39 Customary Land in Papua, 145 Customary Land in Sulawesi, and 200 Customary Land in Sumatera. Understanding the location and extent of these areas is essential in managing any project that may affect them. Proper mitigation of environmental and social risks associated with a project can be ensured when the information on customary lands is taken into account. Therefore, mapping and identifying customary land areas is crucial for sustainable development and respecting the rights of indigenous communities.



Figure A-0-3 Customary Land in Indonesia Map (BRWA. 2020)

Annex B ESDD TOR

Environmental & Social Due Diligence Guideline

In case where investments which are already under operation or construction are proposed for financing by the World Bank, a systematic Environmental and Social Due Diligence (ESDD) process is required to assess the way environmental and social risks and impacts are mitigated and identify gaps that may exist in achieving the objective of the Bank's applicable Environmental and Social Standards. In the context of the GREFi project, where investments are in advanced stage, an ESDD process needs to be conducted and Corrective Action Plan (CAP) be developed to the satisfaction of the World Bank before the signing of the guaranteed financing transactions, to ensure that subprojects meet the objective of the applicable Standards.

Objective:

The ESDD aims to evaluate investments that meet the eligibility criteria as outlined in section 5.2 above. As for environmental aspects, the eligibility criteria focus on the prevention of significant conversion or degradation of critical or natural habitat, compliance with biodiversity management plans, avoidance of impacts on key biodiversity areas and international treaties, and consideration of natural disasters. As for social aspects, the eligibility criteria focus on avoidance of significant land acquisition and resettlement impacts, protection of cultural heritage, adherence to labor and working condition standards, and meaningful consultations with and avoidance of significant impact on Indigenous Peoples and other vulnerable people.

Key E&S Topics:

The following topics will need to be addressed, at minimum:

Environmental Due Diligence Criteria/Topics Include:

1. Biodiversity Impacts: Identify whether the construction activities and projects are located in Key Biodiversity Areas (KBAs) of international significance and assess if they have significant transboundary impacts or impacts on biodiversity values (habitat, species) protected by international treaties and agreements to which Indonesia is a party. This will be undertaken through overlaying the transmission line (TL) alignments with key biodiversity area (KBA) maps publicly accessible through Integrated Biodiversity Assessment Tool (IBAT) to identify sections of the TL overlapping with KBA.
2. Critical and Natural Habitat Impact: Evaluate whether the construction activities conducted by the projects have caused or will cause significant conversion or degradation of critical or natural habitat. The evaluation will be undertaken based on review of the Indonesian EIA and EMP (i.e., Andal & RKL-RPL, UKL-UPL or similar) and forestry permits that the project may have, IBAT overlapping as well as site visits. If a critical habitat assessment (CHA) is deemed necessary, it shall be conducted for the areas of concern within the TL footprint; a dedicated biodiversity specialist or an ecologist will be engaged to undertake such assessment. The methodology for CHA is provided as sub-Annex 1 to this guideline.
3. Biodiversity Management: Determine if the construction activities in natural habitats are being managed in accordance with a Biodiversity Management Plan / mitigation measure consistent with international standards such as the World Bank's Environmental and Social Framework (ESF) ADB's SPS, and IFC PSs. On case of indication of critical habitat, and no available baseline information to make a judgement call, investment will not be considered for financing.
4. Pollution Prevention: Evaluate whether the projects are implementing measures to prevent pollution that are materially consistent with international standards such as the World Bank's Environmental and Social Framework (ESF), World Bank's ESF, ADB's SPS, IFC PSs, and the World Bank Group Environmental, Health and Safety Guidelines. This will be conducted through desk-top review and site visits to selected sections of the TL already completed or under construction.

5. Natural Disaster Considerations: Review the design of the projects and assess if they have considered potential natural disasters, ensuring they are sufficient to prevent significant adverse impacts caused by such events. This will be conducted through desk-top review and discussion with the personnel of PLN's UIPs.
6. Associated Facilities: Associated facilities related to PLN's operations are currently not covered by Indonesia's AMDAL (Environmental Impact Assessment) regulations. This gap means these facilities do not undergo comprehensive environmental & social assessment and may lack adequate environmental protection and sustainability measures. To address the gap where associated facilities related to PLN's operations are not covered by Indonesia's AMDAL (Environmental Impact Assessment) regulations, key steps include: reviewing current AMDAL regulations, conducting a comprehensive environmental & social risk assessment, developing gap filling measures to include associated facilities, providing training, establishing monitoring mechanisms, and ensuring transparency through public consultation.

Social Due Diligence Criteria/Topics Include

7. Land Acquisition and resettlement: Assess, including through interview with local people, land acquisition and resettlement impacts and processes (planned, ongoing or completed) to determine the extent of Physical or Economic displacement and if it was managed in accordance with ESS5 objectives. Whether or not compensation had overall been paid according to the DPPT; the current state of livelihoods; and if any affected people face long-term impressment risks, will be assessed based on the interview of selected affected people and community meetings; and if there exist significant grievances on land acquisition and resettlement processes that had been conducted will be assessed. Particular attention will be paid to impacts on vulnerable people, and severely affected people including those who needed to resettle. Differences between the PLN's documentation on land acquisition and resettlement processes and observations on the ground will be highlighted and assessed. Since impacts need to be assessed retroactively, the due diligence will be conducted flexibly based on the information that is collected on the ground that may require collection of new data.
8. Cultural Heritage: Evaluate whether the activities have caused significant impacts on cultural heritage sites registered in government data or recognized by indigenous peoples (IP) or non-IP local communities as having significant value to them. Determine if specific cultural heritage surveys have been undertaken with informed community participation.
9. Labor and Working Conditions: Review whether labor and working conditions of the construction and operation are being and will be managed in accordance with international standards, such as the World Bank's ESF, World Bank's ESF, ADB's SPS, and IFC PSS. Consider if these conditions can be managed in accordance with Environmental and Social Standard 2 (ESS 2) and a Labor Management Framework (LMF), based on the assessment of material gaps that are evident in either the contractual obligations or their implementation. Verify that workers have written contracts with appropriate terms and conditions required by law and international standards and confirm the absence of child or forced labor under the projects and/or supply chain workforce. Particular attention should be paid to the workers hired by the third party (e.g. subcontractor, employment agencies, etc.). In the case of projects where construction is completed, review contractual obligations for compliance and reporting during the construction process and the field reports and records.
10. Health and Safety Management: Evaluate whether the construction and operation of the transmission lines are implementing measures to prevent and report occupational and community health and safety incidents that are materially consistent with international standards such as the World Bank's Environmental and Social Framework (ESF), World Bank's ESF, ADB's SPS, IFC PSS, and the World Bank Group Environmental, Health and Safety Guidelines. Particular attention will be paid to if existing H&S plans cover local communities; and if local community members are informed of the H&S risks and familiar with emergency plans and if appropriate Emergency Response Plans are in place that consider risks to surrounding communities.
11. Indigenous Peoples: Determine if the activities have acquired IP's traditional territories, physically relocated IP communities, caused significant impacts on IP's cultural heritage, or significant impacts on access to natural resources for IP communities. Assess, also, if meaningful consultation had been conducted with affected IP communities prior to the start of

constructions, leading to their broad support to the project. Assess if impacts that occurred to the IP communities had been mitigated and addressed in a culturally appropriate and demographically inclusive manner.

12. Assess if any significant grievances remain to be addressed and review plans for their resolution with respect to legacy issues that may remain current.

Methodology

Specifically, the ESDD process will be conducted based on the following steps:

1. Meeting with key informants: Meet key informants both in the PLN's HQs as well as relevant offices in regions that implement the investments subject to the ESDD process to inform the prospective ESDD to be conducted, discuss the ESDD implementation arrangements including the scheduling of the site visit, request for relevant documents that need to be reviewed, and seek any information relevant for the ESDD process such as the E&S assessment conducted, challenges in implementing investments related to E&S including any complaints from local communities or external stakeholders, budget allocation for E&S mitigation, assignment of E&S staff, Associated Facilities (AF) that may need to be assessed; and so on. Key informants should be met from time to time throughout the ESDD process to collect additional information as and when needed.
2. Document review: Conduct a preliminary review of available documents relevant to the investment, including but not limited to: Environmental Impact Assessments (e.g. AMDAL, UKL/UPL, TPST), biodiversity management plans, land acquisition and resettlement plans/ DPPT, Occupational Health and Safety (OHS) plan, and any other relevant documents. Where the investments are funded by international financing institutions, Environmental and Social Impact Assessments (ESIA), Indigenous Peoples Plan (IPP), Stakeholder Engagement Plan (SEP) may also be developed and provide useful information. In addition, the progress reports prepared by the Supervising Engineer may provide useful information on E&S risk management, including any delay that may be caused by E&S issues. Locations of environmentally sensitive areas such as protected areas, key biodiversity areas, national parks, etc., should be identified and overlayed against the investment's zone of impact. Social media and other open-source information may also provide useful information including any incidents or complaints that may occur to the investment. Document review should be completed to the extent possible before the site visit, however, some documents may only be available on site in PLN's regional offices. It is important to engage with investment E&S persons before the site visit so they can share as many documents before the site visit as possible or make documents available during the site visit if documents cannot be shared beforehand.
3. Site Visits: Visit each investment, including the AF, and collect and review any documents that cannot be collected before the site visit. Meet the investment E&S staff, communication/ community liaison/ external relations staff, technical staff in charge of project implementation and supervision, and all other relevant investment staff to discuss the implementation of E&S management plans and challenges they face in their implementation. Meet with local community members including but not limited to those whose land had been acquired, and hear their recollections of how the investment engaged with them during the preparation phase including but not limited to consultation meetings of E&S assessment reports; their knowledge and experience of investment grievance mechanisms; how E&S impact had been mitigated; gaps they find in impact mitigation; and negative E&S impacts that remain to be addressed. Collect evidence of the implementation of mitigation measures to the extent possible (incl. land purchase agreements, compensation payment receipts, trees planted, etc.). Reconstruct the original E&S footprint before the investment to the extent possible and evaluate the extent to which mitigation measures applied have successfully mitigated impacts and restored if not improved the pre-investment E&S conditions. Identify any significant impacts, such as loss of assets and livelihoods that remain unmitigated for vulnerable groups, significant degradation or loss of critical habitat and natural resources, etc. Collect any positive impacts of the investment including the employment generated, benefits shared, environmental protection or rehabilitation carried out, etc. Overall, the objective is to assess if significant gaps remain to be addressed with potentially major negative impacts to the investment, including grievances, rather than reconstructing impacts and mitigation measures applied.

The information expected to be made available during the site visit includes, but not limited to:

- Environmental and Social Management Plans for the project, including semi-annual RKL/RPL monitoring reports and Biodiversity Management Plan.
- Forestry-borrow-to-use permit (IPPKH) for the project and associated semi-annual reporting on the fulfilments of the IPPKH's conditions.
- Construction planning documents or feasibility studies identifying whether natural disasters have been incorporated into the design of transmission lines and towers.
- Records of Stakeholder engagement and public disclosure processes
- Land Acquisition Records
- Implementation contracts with the constructors, including their OHS management Plans and back-to-back covenants with E&S processes.
- Safety incident records and safety reporting during construction.
- Grievance records and resolutions, status of any outstanding grievances.
- Results of any cultural heritage surveys, any information concerning tower location adjustments for CH items.
- Information concerning measures for Indigenous Peoples and Adat status of land.
- Other items identified through the desktop review.

4. Reporting and Deliverables

The report shall review information gathered from desktop review, site visit and external information publicly available. As this is an audit process, with the primary objective of determining the bank's exposure to risk and to inform investment decisions, a summary assessment will be made against the following criteria. A summary of the assessment criteria is presented in Table 1 below.

Table 1 Assessment Criteria

ID	Status	Description
1	Compliant	The project complies with Standards and guidelines for this evaluation criteria, (there may be ongoing issues, but there is evidence that the ESMS is being implemented and they are being dealt with appropriately).
2	Partially compliant	The processes employed locally are, in general compliant with WB ESS's, but may lack some details that are not considered critical risks for investment.
3	Data Deficient	There are indications that appropriate measures have been taken and are included in the project ESMS. However, there is not enough available information to confirm compliance.
4	Indeterminant	There is not enough information to assess these criteria.
5	Non-compliant	It is clear that this issue has not been dealt with appropriately

The report shall clearly identify Gaps against the 11 criteria listed above and advise:

- Where possible, gap filling measures / actions that can address certain gaps, including estimated budget cost to fulfill the gaps;
- Supplementary information that may be forthcoming beyond the timeframe of the reporting timetable, including those information gaps that are identified during the site visit that may be ameliorated.
- Supplementary studies that will better inform matters of project compliance that were not included in the original (National) E&S processes;
- Gaps that may be ameliorated by retrospective action;
- Items that may be either not resolved for the first tranche of financing and may remain as legacy issues in the future.

Structure of ESDD Report

1. Objectives
 - a. Objectives
 - b. Methodology
 - i. Refer to methodology prepared
 - ii. Refer to CHA ToR
 - c. Scope of due diligence
 - i. Include ESDD and CHA
2. Key salient characteristics of the sections
 - a. Project description (including summary of technical design features)
 - b. Environmental and social baseline
3. Compliance with the national legislation and status
 - a. EIA status and environmental permit status
 - b. Forest permit
 - c. Construction and operation permit status
 - d. Construction status and expected date of ownership transfer
 - e. Good project practices in preparation, construction and implementation conducted by PLN
4. Social due diligence
 - a. Land Acquisition
 - b. Cultural Heritage
 - c. Labor and Working Condition
 - d. Health and Safety
 - e. Indigenous Peoples
 - f. Grievance Resolution
5. Environmental due diligence
 - a. Provide general observation per each subchapter and then section specific (if there are specific conclusions). Provide relevant conclusion and measures from EIA and other documents.
 - b. Provide relevant conclusion or analysis from AMDALs and other documents/permits
 - c. Evaluate whether the projects are implementing measures that are materially consistent with the World Bank's Environmental and Social Framework (ESF).
 - d. Critical and Natural Habitats identification (this includes CHA conclusions)
 - e. Biodiversity Impacts and management (II)
 - f. Pollution Prevention and Mitigation
 - g. Natural Disaster Considerations
6. Identified Gaps and Gap Filling Measures:
 - a. The ESDD report will summarize identified gaps and provide the gap filling measures actions per section to meet the requirements set in the methodology for ESDD.
 - b. The ESDD report will recommend GREFi financing for each segment based on professional judgment, sample visits, CHA, and a review of national documents.
 - c. Gap Filling Measures may be conditional pending the implementation of additional measures and may also be negative in cases where current impacts cannot be properly mitigated.
 - d. Focus will be on identifying gaps and providing advice on:
 - i. Measures/actions to address certain gaps.
 - ii. Supplementary information beyond the reporting timetable needed for decision making.
 - iii. Supplementary studies informing project compliance that were not included on the national ES process.

- iv. Gaps that can be ameliorated by retrospective action.
 - v. Items not resolved for the first tranche of financing, and which may remain as legacy issues in future.
7. Corrective Action Plan (CAP): Based on the findings of the ESDD, a time-bound and fully-budgeted CAP (in tabular format as shown in the table below) will be developed to close material gaps with the Applicable Standards. The CAP may include:
- List of key findings/gaps from the ESDD with the Applicable Standards;
 - Recommended action plan that will address the findings/gaps. If certain evidence/documentation will be requires, those items will be mentioned in the CAP;
 - Reasonable time frame on how such recommended action plan should be completed;
 - Parties in charge to execute the recommended action plan (can be person, position, team, as accurate as possible);
 - Estimate budged needed to complete the recommended action plan timely. Cost may include expense needed to involve a third-party to study/provide suggestion/execute the action item.
8. Consolidated Matrix (Executive Summary):
- a. A consolidated matrix will serve as an executive summary, briefly covering baseline conditions, construction status, KBA crossings, government forest crossings, environmental permits, forest permits, delineation of borrowed forest area status, watershed rehabilitation status, status of ESIA/AMDALs, and status of ESMP and monitoring reports. Consolidated matrix will also present gaps and include gap filling measures for measures.
9. Annexes
- a. Include maps, permits, detailed findings, consultations, CHA, etc.

Table Corrective Action Plan CAP

No.	Key Findings/gaps	Recommended Action Plan	Time-frame	Parties in Charge	Estimated Budget
1.					
2.					

Sub-Annex 1 Critical Habitat Assessment (CHA) Methodology based on ESS6

1. **Identify an Area of Analysis (AoA) for CHA** based on a desktop analysis of overlaying the investment footprint (e.g. Transmission Line alignments – tower coordinates) against Key Biodiversity Areas (KBAs) of the IBAT (Integrated Biodiversity Assessment Tool). The AoA should include the full extent of the project area of impact for direct and indirect impacts, and cumulative impacts to biodiversity when these are significant.
2. **Generate a list of species** of biodiversity importance using primary and secondary data (such as national red lists and the IBAT).
3. **Screen species to shortlist.** Screen species based on relevance and Likelihood of Occurrence (LOO) to develop a shortlist of targeted species of biodiversity importance. LOO assessment is done based on habitats requirements and distribution range:
 - Incorporates expert knowledge on status of habitats, species ecology and secondary data
 - Suggested categories for screening:

Table 2 Screening Category for CHA

LOO	Approach
Unlikely	Screen out of further analysis
Not present	Screen out of further analysis
Present	Analysis continues to CH determination
Possible	Analysis continues to CH determination

- It is important to ensure that threatened, restricted range and migratory species are screened.
4. **Critical habitat determination:** Ecological assessment to determine CH status based on ESS6 guidelines:

Guidance for CHA Determination	
(i) Protected areas and the reasons for which they are designated can provide important indicators of potential critical habitat	A review of protected areas needs to be incorporated into an assessment of critical habitat
(ii) ESS6 footnote states for species listed on both the global (IUCN) and national/regional red lists, the assessment of net reduction (project impact) will be based on the national/regional population	This implies following a precautionary approach and placing the emphasis on the lesser (national) population when applying the following guidelines
(iii) By definition, Critically Endangered (CR) species face an extremely high risk of extinction and their continued survival in the wild is in a critical state	If a surviving population of a CR species is present, the habitat should be considered to have significant importance under ESS6 Criterion (a) ¹⁵
(iv) Where a significant proportion ¹⁶ of the national/regional/global population of a species has a likely presence within the AoA, the habitat has significant importance under ESS6 criteria (a), (b) or (c) ¹⁷	Requires an understanding of species ecology, local abundance and estimate of population size, and prevailing habitat conditions (i.e. primary data)
(v) ESS6 criterion (b) can be achieved for restricted-range species where the AoA overlaps a significant proportion ¹⁸ of a species' distribution range	This is acceptable when the AoA includes habitat that supports the restricted-range species, which is addressed in step screening of species
(vi) ESS6 criteria (d) and (e) are assessed on a case-by-case basis using specialist input and reliable data sources	Consideration is given to the presence of conservation initiatives and protected areas, and the reasons for which they are designated. Requires understanding of ecological functions

5. Identify Net Gain (NG) requirements and risks. Identify CH features that are impacted and require Net Gain outcomes and the feasibility thereof:

- CHA must identify those features that require NG and assess the feasibility it can be achieved
- CHA must flag those features where NG is not possible, is technically challenging or is costly to achieve
- To be effective, such issues must be flagged early in the project cycle

ESS6 states: “18. *Certain residual adverse impacts cannot be offset, particularly if the affected area is unique and irreplaceable from a biodiversity standpoint. In such cases, the Borrower will not undertake the project unless it is redesigned to avoid the need for such offset, and to meet the requirement of this ESS*”.

¹⁵ **23. Critical habitat criteria.** Critical habitat is defined as areas with high biodiversity importance or value, including:

- habitat of significant importance to Critically Endangered or Endangered species, as listed in the IUCN Red List of threatened species or equivalent national approaches;
- habitat of significant importance to endemic or restricted-range species;
- habitat supporting globally or nationally significant concentrations of migratory or congregatory species;
- highly threatened or unique ecosystems;
- ecological functions or characteristics that are needed to maintain the viability of the biodiversity values described above in (a) to (d).

¹⁶ +/- 1% has been used as a measure of significance when piloting this method but can be adjusted to suite other projects

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Annex C ESIA and ESMP Outline

1. SUBPROJECT/INVESTMENT ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND MANAGEMENT PLAN (ESIA-ESMP) TEMPLATE

The ESIA-ESMP should cover all activities relating to infrastructure investments including sourcing aggregates, disposal of waste, management of contractors and their workforce, health and safety of workers and the community, hazardous substances management, biodiversity, social community activities, water use and management, stakeholder engagement, etc., for each PLN typical investments as follows:

- Battery Energy Storage Systems (BESS);
- Transmission lines, and
- Transmission Substations.

An ESMP consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. PLN will (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements, including who will be responsible for implementation.

Based on Appendix 1 of TOR Impact Assessment of PLN's ESMS 2023, The sample of outline of an ESIA Report is provided in table below:

Chapter Number	Contents Heading	Explanatory Note
	Cover Pages	Title page, acknowledgements, revision history, authors and contributors, table of contents (including lists of figures, tables, and maps)
1	Executive Summary	• Summary of the entire ESIA report.
2	Introduction	• Presentation of the Project Proponent / Project developer • Presentation of the Environmental and Social Experts
3	Policy, Legal and Institutional Framework	• Corporate Environmental and Social Policies and Legal Framework, including existing laws and rules, other related environmental law and rules, International Conventions, Treaties and Agreements, and international standards, guidelines • Institutional Framework • Project's Environmental and Social Standards
4	Project Description and Alternative Selection	• Project Background • Project Location, overview map and site layout maps • Comparison and Selection of Alternatives • Description of the Selected Alternative
5	Description of the Surrounding Environment	• Setting the Study Limits • Methodology and Objectives • Physical Components including bathymetric maps, geology maps, environmental quality data and climate data • Biological Components including biodiversity maps, including key biodiversity areas • Socio-Economic Components including population distribution, livelihood information • Cultural Components including maps with location of cultural, historical, and religious importance • Visual Components
6	Stakeholder Identification, Mapping and Engagement	• The ESIA should include an identification and mapping of stakeholder based on the expectations, concerns, influence levels and interest levels. The identified stakeholder should be engaged as part of the ESIA process to determine any key concerns or inputs into the Project construction and operation. A Stakeholder Engagement Plan and External Grievance Redressal Mechanism should be developed for continued engagement of stakeholders across the Project life cycle.
7	Impact and Risk Assessment and Mitigation Measures	• Impact Assessment Methodology • Identify potential physical, biological, social, socio-economic, cultural, and visual impacts
8	Cumulative Impact Assessment	• Methodology and Approach • Cumulative Impact Assessment

Guideline Template (Before Formatting)

9	Environmental and social Management plan (for construction and operation)	• Governing Parameters • Monitoring Program • Reporting Requirements • Management sub-plans • Overall budget
10	Public Consultation and Disclosure	• Purpose of consultation undertaken for Project • Methodology and approach • Summary of consultation • Summary of main comments received and how comments considered during ESIA process • Minutes of meetings
11	Conclusions and Recommendations	• Presents the main conclusions of the ESIA Report and recommendations for future actions.
Annex		• These will include technical annexes with details of specific technical surveys, and other required information.

In the Impact and Risk Assessment and Mitigation Measures, please provide information accordance with the mitigation hierarchy that avoid or reduce potentially adverse environmental and social impacts to acceptable levels. The ESMP will include compensatory measures, if applicable. Specifically, this section will include:

- identifies and summarizes all potential adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement) without implementation of mitigation measures; while there should be emphasis on more significant potential impacts, all impacts should be covered;
- describes—with technical details—each mitigation measure, including the type of impact to which it relates and the conditions under which it is required (e.g., continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures, as appropriate;
- estimates any potential environmental and social impacts of these measures; and
- takes into account, and is consistent with, other stand-alone mitigation plans required for the project (e.g., for involuntary resettlement, indigenous peoples, or cultural heritage as relevant).

Environmental and Social Management Plan (ESMP)

Based on Appendix 1 of TOR Impact Assessment of PLN's ESMS 2023, ESMP is prepared to define the environmentally and technically acceptable cost-effective mitigation strategies that prevent, reduce, control and finally compensate for negative impacts (and where appropriate enhance positive ones). Developing and agreeing mitigation measures is seen as an iterative activity requiring close collaboration between the PLN and ESIA consultant.

The ESMP will detail the specific actions that are required to implement the agreed controls and mitigation measures as set out in the ESIA. Each ESMP, provided with at least 3 KPIs in order to help easily monitor the performance during construction, will be prepared in line with regulatory requirements.

The ESMP will include goals and objectives, legal requirements, responsibilities, timings, monitoring measures and a clearly set out audit and review program. The aim of the audit and review programme will be to ensure compliance (e.g., by contractors) with the project compliance matrix.

For each activity or operation that could give rise to an impact, the ESIA will input the following information for incorporation into the ESMP:

- A comprehensive listing of the mitigation measures that the proponent committed to in the ESIA;
- Designation of responsibility for ensuring full implementation of that action;
- Effectiveness of mitigation options and their consequential implications for residual risks;
- The parameters that will be monitored to track how effectively actions and mitigation are implemented; and
- The timing for implementation of the actions to ensure that the objectives of mitigation are fully met.

Individual Management Plans aside of the ESIA and the ESMP may be required:

1. Stakeholder Engagement Plan (SEP)
2. Community Grievance Mechanism (CGM)

Guideline Template (Before Formatting)

3. Livelihood Restoration Action Plan (LRAP)
4. Labor Management Plan (LMP)
5. Occupational Health and Safety Management Plan (OHSMP)
6. Etc.

The impact mitigation measures will be included in the environmental and social mitigation plan matrix, following the below template as a minimum:

Management Plan for Subproject/Investment Pre-Construction – Construction and Operational Stage Templates

Potential Environmental /Social Impact	Proposed Mitigation Measures	Responsibility for Implementation of Mitigation Measures	Success Indicator(s)	Location of mitigation measure(s)	Period for Implementation of Mitigation Measures	Mitigation Measures Implementation Costs Estimation (and who bears it)
Pre-Construction						
....						
Construction						
...						
Operation...						

- a. describes residual impacts that will occur even with implementation of mitigation measures;
- b. describes how impacts will be monitored and the process by which implementation of mitigation measures will be evaluated and modified in case impacts are greater or different than expected;
- c. Identification of monitoring plan and reporting activities. This will include identifying monitoring objectives and the type of monitoring, with linkages to the impacts assessed in the environmental and social assessment and the mitigation measures described in the mitigation plan matrix. Specifically, this section will include:
 - a specific description, and technical details, of monitoring measures, including the parameters to be measured, methods to be used, sampling locations, frequency of measurements, detection limits (where appropriate), and definition of thresholds that will signal the need for corrective actions; and
 - monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate mitigation measures, and (ii) furnish information on the progress and results of mitigation; (iii) identify if impacts are greater than or different than predicted; (iv) evaluate and modify mitigation measures as needed. The monitoring plan will be concluded in a matrix, following the below template as a minimum:

Monitoring Plan for Subproject/Investment Pre-Construction – Construction and Operational Stage

[illegible]

- d. Implementation arrangements: This section will provide a specific description of institutional arrangements, identifying which party is responsible for carrying out the mitigation and monitoring measures (e.g., for operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting, and staff training).
- e. Capacity building plan: To strengthen institutional environmental and social management capability, the ESMP should recommend measures to establish or expand the capacity of the parties responsible, the training of staff and any additional measures that may be necessary to support implementation of mitigation measures and any other recommendations of the environmental and social assessment.

Annex D EHSS Management Guideline

1. SOCIAL RISK MANAGEMENT GUIDELINE

Social risk during the pre-construction, construction, operation, and decommissioning of all investments are typical one to another. Social risks specific primarily include the following:

- Resettlement/displacement
- Indigenous peoples
- Cultural Heritage
- Community health, safety, and welfare, including nuisance impacts such as noise or dust as well as impacts on community health and welfare from labor influx, especially in remote areas.

Each type of these risks and its mitigations are covered in Stakeholder Engagement Framework (SEF), Land Acquisition and Involuntary Resettlement Policy Framework (LARPF), and Indigenous People Planning Framework (IPPF) which are integral part of this ESMF document.

Monitoring these social risks is a crucial aspect to ensure that the Project activity does not have any adverse social impacts on the affected communities. The monitoring plan that includes regular assessments of the affected communities' is also included in the respective document above.

2. EHS MANAGEMENT GUIDELINE FOR SUBPROJECT/INVESTMENT TECHNOLOGY SPECIFIC

The EHS Management Guidelines for the Technology-Specific Subproject outline a comprehensive framework to ensure the highest standards of Environmental, Health, and Safety (EHS) practices are adhered to throughout the project's lifecycle. This section serves as a reference for PLN personnel, providing clear directives on risk assessment, regulatory compliance, and best practices tailored specifically to the technological aspects of the investment (e.g., transmission and distribution lines).

It provides guidelines for specific technologies encountered during the implementation process in the field (pre-construction, construction, operation). The aim is to ensure that the seamless integration of cutting-edge technology aligns with responsible EHS management. For detailed general management guidelines, please refer to PLN's ESMS Management Guideline 2023. These guidelines are aligning with applicable Indonesian national regulations, as well as IFC International Standards and best practices.

TRANSMISSION LINES

a. Environmental Risk

Environmental issues during the construction phase of power transmission and distribution projects specific to this industry sector include the following:

- Terrestrial habitat alteration
- Aquatic habitat alteration
- Electric and magnetic fields
- Hazardous materials

Terrestrial Habitat Alteration

The construction and maintenance of transmission line rights-of-way, particularly when passing through forested areas, can lead to changes and disruptions in terrestrial habitats. This may have various impacts, including affecting avian species and increasing the risk of forest fires.

Construction of right of way

During the construction of right-of-way, the transformation of habitats can occur, influenced by factors such as the existing vegetation, topography, and the height of the installed transmission lines. Examples of habitat alteration resulting from these activities include the fragmentation of forested habitats, loss of wildlife habitat, including nesting sites, the establishment of non-native invasive plant species, as well as visual and auditory disturbances caused by machinery, construction workers, transmission towers, and related equipment.

To minimize and control impacts on terrestrial habitats during the construction of transmission line rights-of-way, several recommended measures can be implemented:

- **Site selection:** Whenever possible, choose the alignment of transmission and distribution rights-of-way, access roads, lines, towers, and substations in a way that avoids critical habitats. Utilize existing utility and transport corridors for transmission and transmission substation and make use of existing roads and tracks for access roads. This approach helps minimize the need for land clearing and reduces disturbance to important habitats.
- **Elevated installation:** Install transmission lines above existing vegetation whenever feasible. This approach eliminates the need for extensive land clearing and helps preserve the natural integrity of the terrestrial habitats. By placing the transmission lines above the vegetation, the impacts on wildlife and their habitats are reduced.
- **Timing considerations:** Avoid construction activities during sensitive seasons or times of the day, particularly the breeding season for wildlife. By planning construction schedules to align with the least disruptive periods, the potential impacts on breeding, nesting, and other critical life stages of species can be minimized.
- **Native plant revegetation:** After construction activities are completed, undertake the restoration of disturbed areas by replanting with native plant species. This practice helps to reestablish natural habitats, promotes biodiversity, and provides food and shelter for local wildlife populations.
- **Invasive species management:** Implement routine vegetation maintenance practices that include the removal of invasive plant species along the transmission line right-of-way. By controlling and removing invasive species, the integrity and functionality of the terrestrial habitats can be preserved, ensuring a more favourable environment for native plants and wildlife.

Right-of-Way Maintenance

Regular maintenance of vegetation within transmission line rights-of-way is crucial to prevent disruptions to power lines and towers. Unchecked growth can lead to power outages, forest fires, equipment corrosion, and restricted access. Effective maintenance involves using mechanical methods, manual clearing, and selective herbicide use while considering wildlife and habitat impacts. Striking a

balance between vegetation control and ecological preservation is important to avoid excessive vegetation removal and the proliferation of invasive species. By implementing proper maintenance practices, transmission line operators can ensure grid reliability, minimize environmental impacts, and promote long-term sustainability.

Recommended measures to prevent and control impacts from right-of-way vegetation maintenance include:

- Implementation of an integrated vegetation management approach (IVM). The selective removal of tall-growing tree species and the encouragement of low-growing grasses and shrubs is the common approach to vegetation management in transmission line rights-of-way. Alternative vegetation management techniques should be selected based on environmental and site considerations including potential impacts to non-target, endangered and threatened species;
- Removal of invasive plant species, whenever possible, cultivating native plant species;
- Scheduling activities to avoid breeding and nesting seasons for any critically endangered or endangered wildlife species;
- Observing manufacturer machinery and equipment guidelines, procedures with regard to noise, and oil spill prevention and emergency response;
- Avoiding clearing in riparian areas;
- Avoiding use of machinery in the vicinity of watercourse

Forest Fires

If underlying growth is left unchecked, or slash from routine maintenance is left to accumulate within right-of-way boundaries, sufficient fuel can accumulate that may promote forest fires.

Recommended measures to prevent and control risk of forest fire include:

- Monitoring right-of-way vegetation according to fire risk;
- Removing blowdown and other high-hazard fuel accumulations;
- Time thinning, slashing, and other maintenance activities to avoid forest fire seasons;
- Disposal of maintenance slash by truck or controlled burning. Controlled burning should adhere to applicable burning regulations, fire suppression equipment requirements, and typically must be monitored by a fire watcher;
- Planting and managing fire resistant species (e.g. hardwoods) within, and adjacent to, rights-of-way;
- Establishing a network of fuel breaks of less flammable materials or cleared land to slow progress of fires and allow firefighting access.

Avian and Bat Collisions and Electrocutions

The presence of tall transmission towers, distribution poles, and the electricity carried by power lines can pose significant risks to birds and bats, both through collisions and electrocutions. Birds can collide with power lines in large numbers if the lines are located within their daily flyways or migration corridors, especially during low light conditions such as dense fog or when they are traveling at night. These collisions not only endanger the birds and bats but can also lead to power outages and fires. It is crucial to address these risks to protect the avian and bat populations and ensure the reliable functioning of the power infrastructure.

To minimize avian and bat collisions and electrocutions, the following preventive and control measures are recommended:

- Aligning transmission corridors in a way that avoids critical habitats, such as nesting grounds, heronries, rookeries, bat foraging corridors, and migration corridors.
- Maintaining a spacing of 1.5 meters (60 inches) between energized components and grounded hardware. Alternatively, if spacing is not feasible, covering energized parts and hardware.

- Retrofitting existing transmission or distribution systems by implementing measures such as installing elevated perches, insulating jumper loops, placing obstructive perch deterrents (e.g., insulated “V’s”), changing the location of conductors, or using raptor hoods.
- Considering the installation of underground transmission and distribution lines in sensitive areas, particularly critical natural habitats.
- Installing visibility enhancement objects like marker balls, bird deterrents, or diverters.

Aquatic Habitat Alteration

The construction of power transmission and distribution lines, as well as the associated access roads and facilities, may have adverse effects on aquatic habitats. These activities can disrupt watercourses and wetlands, leading to the removal of riparian vegetation. Furthermore, sediment and erosion from construction and stormwater runoff can increase turbidity in surface watercourses.

To prevent and control impacts on aquatic habitats, the following measures are recommended:

- Site power transmission towers and substations away from critical aquatic habitats, including watercourses, wetlands, riparian areas, fish spawning habitats, and critical fish over-wintering habitats.
- When road crossings over watercourses are unavoidable, utilize methods that maintain fish access, such as clear span bridges, open-bottom culverts, or other approved techniques.
- Minimize the clearing and disruption of riparian vegetation, which plays a crucial role in maintaining the health of aquatic ecosystems.

Electric and Magnetic Fields

Electric and magnetic fields (EMF) are emitted by electrical devices, including power lines and equipment. Electric fields are produced by voltage, while magnetic fields result from the flow of electric current. EMF exposure is a subject of concern, although there is no empirical data demonstrating adverse health effects from typical EMF levels. However, limited concern still exists.

Mitigation measures for EMF exposures include:

- Evaluating public exposure against reference levels set by the International Commission on Non-Ionizing Radiation Protection (ICNIRP), ensuring average and peak exposure levels remain below recommendations.
- Siting new facilities to minimize public exposure, avoiding installation of high voltage equipment near residential areas or places with high human occupancy.
- Implementing engineering techniques to reduce EMF, such as shielding with specific metal alloys, burying transmission lines, increasing the height of transmission towers, and modifying conductor size, spacing, and configuration.

Hazardous Materials

Hazardous materials in this sector include insulating oils / gases (e.g. Polychlorinated Biphenyls [PCB] and sulfur hexafluoride [SF₆], and fuels, in addition to chemicals or products for wood preservation for poles and associated wood construction material. The use of herbicides for right-of-way vegetation maintenance is discussed in the above section on ‘Right-of-Way Maintenance

Insulating Oils and Fuels

In power transmission and distribution systems, highly refined mineral insulating oils are commonly used to cool transformers and provide electrical insulation. These oils are mainly present in electrical substations and maintenance shops. Alternatively, sulfur hexafluoride (SF₆) can be used as a gas insulator, but its high global warming potential (GWP) makes it necessary to minimize its usage. When SF₆ is employed for applications involving high voltages (>350 KV), equipment with a low leakage-rate (<99 percent) should be utilized. Additionally, liquid petroleum fuels may be used and stored in transmission and distribution projects. Recommendations for spill prevention, emergency response, clean-up, and contaminated soil remediation are covered in the General Environmental, Health, and Safety (EHS) Guidelines. The use of polychlorinated biphenyls (PCBs) as dielectric fluids has been

largely discontinued due to their potential harmful effects on human health and the environment. Recommendations for the management of PCB include:

- Replacing existing transformers and other electrical equipment containing PCB, and ensuring appropriate storage, decontamination, and disposal of contaminated units;
- Prior to final disposal, retired transformers and equipment containing PCB should be stored on a concrete pad with curbs sufficient to contain the liquid contents of these containers should they be spilled or leaked. The storage area should also have a roof to prevent precipitation from collecting in the storage area. Disposal should involve facilities capable of safely transporting and disposing of hazardous waste containing PCB;
- Surrounding soil exposed to PCB leakage from equipment should be assessed, and appropriate removal and / or remediation measures should be implemented, as addressed in the section on contaminated soil in the General EHS Guidelines.

Wood Preservatives

Wooden utility poles are commonly treated with pesticide preservatives to protect against insects, bacteria, fungi, and rot. The most frequently used preservatives for power poles include creosote, pentachlorophenol (PCP), and chromated copper arsenate (CCA). However, the use of these preservatives is being restricted in certain countries due to their environmental toxicity. While in use, utility poles may leach preservatives into the surrounding soils and groundwater, with the highest levels found directly adjacent to the poles. Environmental impacts are most significant at wood treatment facilities if proper management practices are not followed. To mitigate these effects, poles should be pretreated at appropriate facilities to ensure chemical fixation and prevent leaching, as well as to prevent the formation of surface residues along the right-of-way.

Recommended measures to prevent and control the impacts of wood preservatives at the point of use include:

- Evaluating the cost and benefit of using alternative pole materials (e.g. steel, concrete, and fiberglass);
- Consider use of alternative preservatives (e.g. copper azote);
- Undertake appropriate disposal of used poles. Landfill facilities should be capable of handling wastes that may have chemical leaching properties. Disposal through incineration or through recycling should consider associated air emissions and secondary product residues of preservative chemicals.

Environmental Monitoring

The power transmission and distribution sector does not typically give rise to significant air emissions or effluents. Where dust or potentially contaminated water runoff exists, site operations should comply with relevant national regulations and international standards.

Environmental monitoring programs for this sector should be implemented to address all activities that have been identified to have potentially significant impacts on the environment during normal operations and upset conditions. Environmental monitoring activities should be based on direct or indirect indicators of emissions, effluents, and resource use applicable to the particular project. Monitoring frequency should be sufficient to provide representative data for the parameter being monitored.

Monitoring should be conducted by trained individuals following monitoring and record-keeping procedures and using properly calibrated and maintained equipment. Monitoring data should be analyzed and reviewed at regular intervals and compared with operating standards so that any necessary corrective actions can be taken.

Relevant Regulations

Air and Noise

- Government Regulation No 22 of 2021 on Implementation of Environmental Protection and Management;

- Minister of Environment Decree No 48/MENLH/11/1996 on Noise Standards;
- Minister of Environment Decree No 50/MENLH/11/1996 on Ambient Odors; and
- Minister of Environment Decree No KEP-49/MENLH/11/1996 on Vibration Level Standards.

Water

- Government Regulation No 22 of 2021 on Implementation of Environmental Protection and Management;
- Regulation of the Minister of Health concerning Regulations for Implementing Government Regulation Number 66 of 2014 concerning Environmental Health
- Law 17/2019 on Water Resources as amended by Law No.11 of 2020 on Job Creation

Waste

- Law 18/2008 on Waste Management
- Law 19/2009 on Ratification of the Stockholm Convention on Persistent Organic Pollutants
- GR 6/1995 on Protection of Plants
- GR 74/2001 on Management of Hazardous and Toxic Material
- GR 27/2020 on Management of Specific Waste
- MOEF Regulation 14/2021 on Waste Management at a Waste Bank
- MOEF Regulation 6/2021 on Procedures and Requirements for Management of Hazardous and Toxic Waste

Biodiversity

Biodiversity Conservation and Sustainable Management of Living Natural Resources

- Law 5/1990 on Conservation of Living Natural Resources and their Ecosystems
- Law 41/1999 on Forestry as amended by Omnibus Law
- Law 27/2007 on Management of Coastal Areas and Small Islands as amended by Omnibus Law
- Law 18/2013 on Prevention and Eradication of Forest Destruction as amended by the Omnibus Law
- Law 32/2014 on Maritime Affairs as amended by Omnibus Law
- GR 6/2007 concerning Forest Management
- GR 42/2008 concerning Water Resources Management
- GR 64/2010 on Disaster Mitigation in Coastal Areas and Small Islands
- Minister of Marine Affairs and Fisheries 31/2020 on Management of Conservation Areas
- GR 23/2021 on Management of Forestry
- GR 26/2021 on Management of Agriculture
- MOEF Regulation 8/2021 on Administration of Forest and Forest Management Plan, Utilization of Protected Forest and Production Forest
- MOEF Regulation 9/2021 on Administration of Social Forest
- GR 23/2021 on Management of Forestry

B. Occupational Health and Safety Risk

Most occupational health and safety issues during the construction, operation, maintenance, and decommissioning of electric power distribution projects are common to those of large industrial facilities. These impacts include, among others, exposure to physical hazards from use of heavy equipment and

cranes; trip and fall hazards; exposure to dust and noise; falling objects; work in confined spaces; exposure to hazardous materials; and exposure to electrical hazards from the use of tools and machinery.

Occupational health and safety hazards specific to electric power transmission and distribution projects primarily include:

- Live power lines
- Working at height
- Electric and magnetic fields
- Exposure to chemicals

Live Power Lines

Workers may be exposed to occupational hazards from contact with live power lines during construction, maintenance, and operation activities. Prevention and control measures associated with live power lines include:

- Only allowing trained and certified workers to install, maintain, or repair electrical equipment;
- Deactivating and properly grounding live power distribution lines before work is performed on, or in close proximity, to the lines;
- Ensuring that live-wire work is conducted by trained workers with strict adherence to specific safety and insulation standards. Qualified or trained employees working on transmission or distribution systems should be able to achieve the following
 - Distinguish live parts from other parts of the electrical system
 - Determine the voltage of live parts
 - Understand the minimum approach distances outlined for specific live line voltages
 - Ensure proper use of special safety equipment and procedures when working near or on exposed energized parts of an electrical system
- Workers should not approach an exposed energized or conductive part even if properly trained unless:
 - The worker is properly insulated from the energized part with gloves or other approved insulation; or,
 - The energized part is properly insulated from the worker and any other conductive object; or,
 - The worker is properly isolated and insulated from any other conductive object (live-line work).
- Where maintenance and operation is required within minimum setback distances, specific training, safety measures, personal safety devices, and other precautions should be defined in a health and safety plan.
- Workers not directly associated with power transmission and distribution activities who are operating around power lines or power substations should adhere to local legislation, standards, and guidelines relating to minimum approach distances for excavations, tools, vehicles, pruning, and other activities;
- Minimum hot stick distances may only be reduced provided that the distance remaining is greater than the distance between the energized part and a grounded surface.

Working at height on poles and structures

Workers may be exposed to occupational hazards when working at elevation during construction, maintenance, and operation activities. Prevention and control measures for working at height include:

- Testing structures for integrity prior to undertaking work;
- Implementation of a fall protection program that includes training in climbing techniques and use of fall protection measures; inspection, maintenance, and replacement of fall protection equipment; and rescue of fall-arrested workers, among others;
- Establishment of criteria for use of 100 percent fall protection (typically when working over 2 meters above the working surface, but sometimes extended to 7 meters, depending on the activity). The fall protection system should be appropriate for the tower structure and necessary movements, including ascent, descent, and moving from point to point;
- Installation of fixtures on tower components to facilitate the use of fall protection systems;

- Provision of an adequate work-positioning device system for workers. Connectors on positioning systems should be compatible with the tower components to which they are attached;
- Hoisting equipment should be properly rated and maintained and hoist operators properly trained;
- Safety belts should be of not less than 16 millimeters (mm) (5/8 inch) two-in-one nylon or material of equivalent strength. Rope safety belts should be replaced before signs of aging or fraying of fibers become evident;
- When operating power tools at height, workers should use a second (backup) safety strap;
- Signs and other obstructions should be removed from poles or structures prior to undertaking work;
- An approved tool bag should be used for raising or lowering tools or materials to workers on structures.

Electric and magnetic fields

Electric utility workers typically have a higher exposure to EMF than the general public due to working in proximity to electric power lines. Occupational EMF exposure should be prevented or minimized through the preparation and implementation of an EMF safety program including the following components:

- Identification of potential exposure levels in the workplace, including surveys of exposure levels in new projects and the use of personal monitors during working activities;
- Training of workers in the identification of occupational EMF levels and hazards;
- Establishment and identification of safety zones to differentiate between work areas with expected elevated EMF levels compared to those acceptable for public exposure, limiting access to properly trained workers;
- Implementation of action plans to address potential or confirmed exposure levels that exceed reference occupational exposure levels developed by international organizations such as the International Commission on Non-Ionizing Radiation Protection (ICNIRP), and the Institute of Electrical and Electronics Engineers (IEEE) Personal exposure monitoring equipment should be set to warn of exposure levels that are below occupational exposure reference levels (e.g. 50 percent). Action plans to address occupational exposure may include limiting exposure time through work rotation, increasing the distance between the source and the worker, when feasible, or the use of shielding materials

Exposure to chemicals

Occupational exposures to chemicals in this sector primarily include handling of pesticides (herbicides) used for right-of-way maintenance, and exposure to PCB in transformers and other electrical components.

Pesticides

Potential exposures to pesticides include dermal contact and inhalation during their storage, preparation and application. The effect of such impacts may be increased by climatic conditions such as wind, which may increase the chance of unintended drift, or high temperatures, which may deter the use of personal protective equipment (PPE). Recommendations specific to the use of pesticides include:

- Train personnel to apply pesticides and ensure that personnel have received the necessary certifications, or equivalent training where such certifications are not required;
- Respect post-treatment intervals to avoid operator exposure during reentry to crops with residues of pesticides;
- Ensure hygiene practices are followed (in accordance to FAO and PMP) to avoid exposure of family members to pesticides residues.

PCBs

Maintenance shops and other facilities, and activities may involve potential contact with PCB or PCB-contaminated machinery. Recommendations for chemical exposure, including PCB, are addressed in the EHS General Guidelines

Occupational Health and Safety Performance

Occupational health and safety performance should be evaluated against national and internationally published (if applicable) incident statistics if they are available. Typical methods to assess an organization's performance include:

- Recording all incidents that occur over the course of project implementation.
- Recording near-miss (also known as near-hit) data during a project in order to identify trends and implement improvements.
- Carrying out workplace and worker auditing to assess the effectiveness of risk management systems and workplace safety culture.
- Conducting worker consultation and feedback via questionnaires or periodic safety meetings.
- Comparing organizational data with released industry-specific data, if available.

Accident and Fatality Rates

Project management should aim to reduce the number of accidents among project workers (whether directly employed or subcontracted) to zero, especially accidents that could result in lost work time, different levels of disability, or even fatalities. Accident rates may be benchmarked against the performance of similar facilities in this sector in developed countries through consultation with published sources.

Occupational Health and Safety Monitoring

The working environment should be continually monitored for occupational hazards relevant to the specific project. Monitoring should be designed and implemented by accredited professionals as part of an occupational health and safety-monitoring program. Facilities should also maintain a record of occupational accidents and diseases, as well as dangerous occurrences and accidents.

Relevant National Regulations

- The Constitution
- The Human Rights Law
- Law 7/1984 on Ratification of the Convention on the Elimination of all Forms of Discrimination
 - Against Women
- Law 1/1970 on Work Safety
- Law 8/2016 on Persons with Disabilities
- Law 4/1979 on Child Welfare
- ILO conventions ratification: (i) Law 20/1999 on Ratification of ILO Convention No.138 concerning Minimum Age for Admission to Employment, (ii) Law 1 of 2000 on Ratification of ILO Convention No.182 concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor, (iii) Law 18/1956 on Ratification of the International Labor Organization Convention No.98 concerning the Right to Organize and Collective Bargaining
- Law 23/2002 on Child Protection as last amended by GR in lieu of Law 1/2016
- Law 21/2000 on Labor Unions
- Law 2/2004 on Industrial Relations Dispute Settlement
- MOM Regulation 5 of 2018 on Occupational Health and Safety in a Workplace Environment
- MOM Regulation 03/MEN/1998 on Procedures to Report and Investigate Accidents
- Minister of Manpower and Transmigration Regulation Per.01/MEN/1980 on Occupational Health and Safety in the Construction of Buildings
- Minister of Manpower and Transmigration Decree 224/MEN/2003 on Employer's Duties to Female Employees Working Between 11 pm and 7 am
- MOM Decree KEP-235/MEN/2003 on the Types of Work that Jeopardize the Health, Safety and Moral of Children
- MOM Circulars: SE-04/Men/1988 on Implementation of Prohibition of Discrimination Towards Female Employees, SE.04/M/Bw/1996 on Prohibition on Discrimination Towards Female Employees in Company Regulations or Collective Labor Agreement

- GR 34/2021 on Utilization of Foreign Manpower, and MoM Regulation 8 of 2021 on Implementation
- GR 35/2021 on Employment Agreement for a Specified Period of Time, Outsourcing, Working Time and Rest Time and Termination of Employment
- Government Regulation No. 50 of 2012 on Implementation of Occupational Health and Safety Management System
- Law No. 11 of 2020 on Omnibus law
- Government Regulation No. 35 of 2021 on Certain Time Employment Agreements, Outsourcing, Working Time and Rest Time, and Termination of Employment
- GR 36/2021 regarding Wages
- GR 37/2021 regarding Implementation of a Job Loss Security Program
- GR 78/2021 on Special Protection of Children
- MPWH Regulation 10/2021 on Guidelines on Construction Safety System Management

C. Community, Health, and Safety (CHS) Risk

Community health and safety impacts during the construction and decommissioning of transmission and distribution power lines are common to those of most large industrial facilities. These impacts include, among others, dust, noise, and vibration from construction vehicle transit, and communicable diseases associated with the influx of temporary construction labour. The operation of live power distribution lines and substations may generate the following industry-specific impacts:

- Electrocution
- Electromagnetic interference
- Visual amenity
- Noise and Ozone
- Aircraft Navigation Safety

Electrocution

Hazards most directly related to power transmission and distribution lines and facilities occur as a result of electrocution from direct contact with high-voltage electricity or from contact with tools, vehicles, ladders, or other devices that are in contact with high-voltage electricity. Recommended techniques to prevent these hazards include:

- Use of signs, barriers (e.g. locks on doors, use of gates, use of steel posts surrounding transmission towers, particularly in urban areas), and education / public outreach to prevent public contact with potentially dangerous equipment;
- Grounding conducting objects (e.g. fences or other metallic structures) installed near power lines, to prevent shock.

Electromagnetic interference

The corona of overhead transmission line conductors and high frequency currents of overhead transmission lines may result in the creation of radio noise. Typically, transmission line rights-of way and conductor bundles are created to ensure radio reception at the outside limits remains normal. However, periods of rain, sleet or freezing rain sharply increases the streaming corona on conductors and may affect radio reception in residential areas near transmission lines.

Visual Amenity

Power transmission and distribution are necessary to transport energy from power facilities to residential communities but may be visually intrusive and undesirable to local residents. To mitigate the visual impact of power distribution projects, the following mitigation measures should be implemented.

- Extensive public consultation during the planning of power line and power line right-of-way locations;
- Accurate assessment of changes in property values due to power line proximity;

- Siting power lines, and designing substations, with due consideration to landscape views and important environmental and community features;
- Location of high-voltage transmission and distribution lines in less populated areas, where possible;
- Burying transmission or distribution lines when power must be transported through dense residential or commercial areas.

Noise and Ozone

Noise in the form of buzzing or humming can often be heard around transformers or high voltage power lines producing corona. Ozone, a colorless gas with a pungent odor, may also be produced. Neither the noise nor ozone produced by power distribution lines or transformers carries any known health risks.

The acoustic noise produced by transmission lines is greater with high voltage power lines (400-800 kilo volts [kV]) and even greater with ultra-high voltage lines (1000 kV and higher)⁴⁰. Noise from transmission lines reaches its maximum during periods of precipitation, including rain, sleet, snow or hail, or as the result of fog. The sound of rain typically masks the increase in noise produced by the transmission lines, but during other forms of precipitation (e.g. snow and sleet) and fog, the noise from overhead power lines can be troubling to nearby residents.

Measures to mitigate this impact may be addressed during project planning stages to locate rights-of-way away from human receptors, to the extent possible. Use of noise barriers or noise cancelling acoustic devices should be considered as necessary.

Aircraft Navigation Safety

Power transmission towers, if located near an airport or known flight paths, can impact aircraft safety directly through collision or indirectly through radar interference. Aircraft collision impacts may be mitigated by:

- Avoiding the siting of transmission lines and towers close to airports and outside of known flight path envelopes;
- Consultation with regulatory air traffic authorities prior to installation;
- Adherence to regional or national air traffic safety regulations;
- Use of buried lines when installation is required in flight sensitive areas.

CHS Monitoring

Monitoring community health and safety hazards during a project is crucial to ensure that the project does not have negative impacts on the health and well-being of the surrounding community. Monitoring can also help identify potential hazards and allow for the implementation of mitigation measures before harm occurs. The monitoring should be conducted throughout the project's lifecycle, from the planning and design phase to the construction and operation phases.

The monitoring program may also need to include a range of indicators such as air and water quality, noise pollution, vibration, and/or traffic congestion. In general, monitoring of such environmental parameters should be necessary only when there is some indication that a risk or impact exists, which can be through the ESIA, through community complaints, through routine observations by project personnel, or through other means. Additionally, regular health and safety assessments may need to be conducted if there is any suggestion there is some risk to community health and safety. If monitoring is needed, community members should be involved in the monitoring process to ensure that their concerns and observations are taken into account.

Relevant National Regulations

- The Constitution
- Law 22/2009 on Road Traffic as amended by Omnibus Law
- Government Regulation No 22 of 2021 on Implementation of Environmental Protection and Management;

Guideline Template (Before Formatting)

- Law 36/2009 on Health as amended by Omnibus Law
- Law 4/1984 on Infectious Disease
- PR 59/2017 on Implementation on Achieving Sustainable Development Goals
- GR 66/2014 on Environmental Health
- MOH Decree 876/MENKES/SK/VIII/2001 on Technical Guidelines for Analysis of Environmental Health Impact
- Government Regulation 30/2021 on Road Transportation
- MOEF Regulation 6/2021 concerning Procedures and Requirements for the Management of Hazardous and Toxic Wastes
- Law Number 40 of 2007 concerning Limited Liability Companies, Corporate Social Responsibility (CSR))
- Law No. 11 of 2020 on Omnibus law

Relevant International Standards

- IFC Environmental, Health, and Safety General Guidelines
- IFC Environmental, Health, and Safety Guidelines for Electric Power Transmission and Distribution

OHS GENERAL GUIDELINES

These guidelines are part of the general EHS Guidelines produced by the World Bank in 2007, which cover environmental, community health and safety, and OHS aspects. The purpose of this appendix is to provide a summary of the guidelines tailored specifically for the implementation of OHS measures in the GREFi project. It serves as a reference for OHS practices in the project, highlighting key recommendations and considerations. However, readers are strongly encouraged to read the complete document of the World Bank EHS General Guidelines for a comprehensive understanding of all aspects covered. In addition, specific risks pertaining to Occupational Health and Safety (OHS) for each technology have been discussed in Annex C, Section 3 of the guidelines.

Communication and Training

OHS Training

- Provisions should be made to provide OHS orientation training to all new employees to ensure they are apprised of the basic site rules of work at / on the site and of personal protection and preventing injury to fellow employees.
- Training should consist of basic hazard awareness, site- specific hazards, safe work practices, and emergency procedures for fire, evacuation, and natural disaster, as appropriate. Any site-specific hazard or color coding in use should be thoroughly reviewed as part of orientation training.

Visitor Orientation

- If visitors to the site can gain access to areas where hazardous conditions or substances may be present, a visitor orientation and control program should be established to ensure visitors do not enter hazard areas unescorted.

New Task Employee and Contractor Training

The employer should ensure that workers and contractors, prior to commencement of new assignments, have received adequate training and information enabling them to understand work hazards and to protect their health from hazardous ambient factors that may be present.

The training should adequately cover:

- Knowledge of materials, equipment, and tools
- Known hazards in the operations and how they are controlled
- Potential risks to health
- Precautions to prevent exposure
- Hygiene requirements
- Wearing and use of protective equipment and clothing
- Appropriate response to operation extremes, incidents and accidents

Basic OHS Training

- A basic occupational training program and specialty courses should be provided, as needed, to ensure that workers are oriented to the specific hazards of individual work assignments. Training should generally be provided to management, supervisors, workers, and occasional visitors to areas of risk and hazards.
- Workers with rescue and first-aid duties should receive dedicated training so as not to inadvertently aggravate exposures and health hazards to themselves or their co- workers. Training would include the risks of becoming infected with blood-borne pathogens through contact with bodily fluids and tissue.

- Through appropriate contract specifications and monitoring, the employer should ensure that service providers, as well as contracted and subcontracted labor, are trained adequately before assignments begin.

Area Signage

- Hazardous areas (electrical rooms, compressor rooms, etc), installations, materials, safety measures, and emergency exits, etc. should be marked appropriately.
- Signage should be in accordance with international standards and be well known to, and easily understood by workers, visitors and the general public as appropriate.

Labeling of Equipment

- All vessels that may contain substances that are hazardous as a result of chemical or toxicological properties, or temperature or pressure, should be labeled as to the contents and hazard, or appropriately color coded.
- Similarly, piping systems that contain hazardous substances should be labeled with the direction of flow and contents of the pipe, or color coded whenever the pipe passing through a wall or floor is interrupted by a valve or junction device.

Communicate Hazard Codes

- Copies of the hazard coding system should be posted outside the facility at emergency entrance doors and fire emergency connection systems where they are likely to come to the attention of emergency services personnel.
- Information regarding the types of hazardous materials stored, handled or used at the facility, including typical maximum inventories and storage locations, should be shared proactively with emergency services and security personnel to expedite emergency response when needed.
- Representatives of local emergency and security services should be invited to participate in periodic (annual) orientation tours and site inspections to ensure familiarity with potential hazards present.

Physical Hazards

Physical hazards represent the potential for accident or injury or illness due to repetitive exposure to mechanical action or work activity. Single exposure to physical hazards may result in a wide range of injuries, from minor and medical aid only, to disabling, catastrophic, and/or fatal. Multiple exposures over prolonged periods can result in disabling injuries of comparable significance and consequence.

Rotating and Moving Equipment

Injury or death can occur from being trapped, entangled, or struck by machinery parts due to unexpected starting of equipment or unobvious movement during operations. Recommended protective measures include:

- Designing machines to eliminate trap hazards and ensuring that extremities are kept out of harm's way under normal operating conditions. Examples of proper design considerations include two-hand operated machines to prevent amputations, or the availability of emergency stops dedicated to the machine and placed in strategic locations. Where a machine or equipment has an exposed moving part or exposed pinch point that may endanger the safety of any worker, the machine or equipment should be equipped with, and protected by, a guard or other device that prevents access to the moving part or pinch point. Guards should be designed and installed in conformance with appropriate machine safety standards.⁶⁴
- Turning off, disconnecting, isolating, and de-energizing (Locked Out and Tagged Out) machinery with exposed or guarded moving parts, or in which energy can be stored (e.g. compressed air, electrical components) during servicing or maintenance, in conformance with a standard such as CSA Z460 Lockout or equivalent ISO or ANSI standard.
- Designing and installing equipment, where feasible, to enable routine service, such as lubrication, without removal of the guarding devices or mechanisms.

Noise

- No employee should be exposed to a noise level greater than 85 dB(A) for a duration of more than 8 hours per day without hearing protection. In addition, no unprotected ear should be exposed to a peak sound pressure level (instantaneous) of more than 140 dB(C).
- The use of hearing protection should be enforced actively when the equivalent sound level over 8 hours reaches 85 dB(A), the peak sound levels reach 140 dB(C), or the average maximum sound level reaches 110dB(A). Hearing protective devices provided should be capable of reducing sound levels at the ear to at least 85 dB(A).
- Although hearing protection is preferred for any period of noise exposure in excess of 85 dB(A), an equivalent level of protection can be obtained, but less easily managed, by limiting the duration of noise exposure. For every 3 dB(A) increase in sound levels, the 'allowed' exposure period or duration should be reduced by 50 percent.
- Prior to the issuance of hearing protective devices as the final control mechanism, use of acoustic insulating materials, isolation of the noise source, and other engineering controls should be investigated and implemented, where feasible
- Periodic medical hearing checks should be performed on workers exposed to high noise levels.

Vibration

Exposure to hand-arm vibration from equipment such as hand and power tools, or whole-body vibrations from surfaces on which the worker stands or sits, should be controlled through choice of equipment, installation of vibration dampening pads or devices, and limiting the duration of exposure. Limits for vibration and action values, (i.e. the level of exposure at which remediation should be initiated) are provided by the ACGIH. Exposure levels should be checked on the basis of daily exposure time and data provided by equipment manufacturers.

Electrical

Exposed or faulty electrical devices, such as circuit breakers panels, cables, cords and hand tools, can pose a serious risk to workers. Overhead wires can be struck by metal devices, such as poles or ladders, and by vehicles with metal booms. Vehicles or grounded metal objects brought into proximity with overhead wires can result in arcing between the wires and the object, without actual contact. Recommended actions include:

- Marking all energized electrical devices and lines with warning signs.
- Locking out (de-charging and leaving open with a controlled locking device) and tagging out (warning sign placed on the lock) devices during service or maintenance.
- Checking all electrical cords, cables, and hand power tools for frayed or exposed cords and following manufacturer recommendations for maximum permitted operating voltage of the portable hand tools.
- Double insulating / grounding all electrical equipment used in environments that are, or may become, wet; using equipment with ground fault interrupter (GFI) protected circuits.
- Protecting power cords and extension cords against damage from traffic by shielding or suspending above traffic areas
- Appropriate labeling of service rooms housing high voltage equipment ('electrical hazard') and where entry is controlled or prohibited.
- Establishing "No Approach" zones around or under high voltage power lines
- Rubber tired construction or other vehicles that come into direct contact with, or arcing between, high voltage wires may need to be taken out of service for periods of 48 hours and have the tires replaced to prevent catastrophic tire and wheel assembly failure, potentially causing serious injury or death.
- Conducting detailed identification and marking of all buried electrical wiring prior to any excavation work

Eye Hazards

Solid particles from a wide variety of industrial operations, and / or a liquid chemical spray may strike a worker in the eye causing an eye injury or permanent blindness. Recommended measures include:

- Use of machine guards or splash shields and/or face and eye protection devices, such as safety glasses with side shields, goggles, and/or a full-face shield. Specific Safe Operating Procedures (SOPs) may be required for use of sanding and grinding tools and/or when working around liquid chemicals. Frequent checks of these types of equipment prior to use to ensure mechanical integrity is also good practice. Machine and equipment guarding should conform to standards published by organizations such as CSA, ANSI and ISO.
- Moving areas where the discharge of solid fragments, liquid, or gaseous emissions can reasonably be predicted (e.g. discharge of sparks from a metal cutting station, pressure relief valve discharge) away from places expected to be occupied or transited by workers or visitors. Where machine or work fragments could present a hazard to transient workers or passers-by, extra area guarding or proximity restricting systems should be implemented, or PPE required for transients and visitors.
- Provisions should be made for persons who have to wear prescription glasses either through the use over glasses or prescription hardened glasses.

Welding / Hot Work

Welding creates an extremely bright and intense light that may seriously injure a worker's eyesight. In extreme cases, blindness may result. Additionally, welding may produce noxious fumes to which prolonged exposure can cause serious chronic diseases. Recommended measures include:

- Provision of proper eye protection such as welder goggles and/or a full-face eye shield for all personnel involved in, or assisting, welding operations. Additional methods may include the use of welding barrier screens around the specific work station (a solid piece of light metal, canvas,

or plywood designed to block welding light from others). Devices to extract and remove noxious fumes at the source may also be required.

- Special hot work and fire prevention precautions and Standard Operating Procedures (SOPs) should be implemented if welding or hot cutting is undertaken outside established welding workstations, including 'Hot Work Permits, stand-by fire extinguishers, stand-by fire watch, and maintaining the fire watch for up to one hour after welding or hot cutting has terminated. Special procedures are required for hot work on tanks or vessels that contain flammable materials.

Industrial Vehicle Driving and Site Traffic

Poorly trained or inexperienced industrial vehicle drivers have increased the risk of accident with other vehicles, pedestrians, and equipment. Industrial vehicles and delivery vehicles, as well as private vehicles on-site, also represent potential collision scenarios. Industrial vehicle driving and site traffic safety practices include:

- Training and licensing industrial vehicle operators in the safe operation of specialized vehicles such as forklifts, including safe loading/unloading, load limits.
- Ensuring drivers undergo medical surveillance.
- Ensuring moving equipment with restricted rear visibility is outfitted with audible back-up alarms.
- Establishing rights-of-way, site speed limits, vehicle inspection requirements, operating rules and procedures (e.g. prohibiting operation of forklifts with forks in down position), and control of traffic patterns or direction.
- Restricting the circulation of delivery and private vehicles to defined routes and areas, giving preference to 'one-way' circulation, where appropriate.

Working Environment Temperature

Exposure to hot or cold working conditions in indoor or outdoor environments can result temperature stress-related injury or death. Use of personal protective equipment (PPE) to protect against other occupational hazards can accentuate and aggravate heat-related illnesses. Extreme temperatures in permanent work environments should be avoided through implementation of engineering controls and ventilation. Where this is not possible, such as during short-term outdoor work, temperature-related stress management procedures should be implemented which include:

- Monitoring weather forecasts for outdoor work to provide advance warning of extreme weather and scheduling work accordingly.
- Adjustment of work and rest periods according to temperature stress management procedures provided by ACGIH, depending on the temperature and workloads.
- Providing temporary shelters to protect against the elements during working activities or for use as rest areas.
- Use of protective clothing.
- Providing easy access to adequate hydration such as drinking water or electrolyte drinks, and avoiding consumption of alcoholic beverages.

Ergonomics, Repetitive Motion, Manual Handling

Injuries due to ergonomic factors, such as repetitive motion, over- exertion, and manual handling, take prolonged and repeated exposures to develop, and typically require periods of weeks to months for recovery. These OHS problems should be minimized or eliminated to maintain a productive workplace. Controls may include:

- Facility and workstation design with 5th to 95th percentile operational and maintenance workers in mind

- Use of mechanical assists to eliminate or reduce exertions required to lift materials, hold tools and work objects, and requiring multi-person lifts if weights exceed thresholds.
- Selecting and designing tools that reduce force requirements and holding times and improve postures.
- Providing user adjustable workstations.
- Incorporating rest and stretch breaks into work processes and conducting job rotation.
- Implementing quality control and maintenance programs that reduce unnecessary forces and exertions.
- Taking into consideration additional special conditions such as left-handed persons.

Working at Heights

Fall prevention and protection measures should be implemented whenever a worker is exposed to the hazard of falling more than two meters; into operating machinery; into water or other liquid; into hazardous substances; or through an opening in a work surface. Fall prevention / protection measures may also be warranted on a case-specific basis when there are risks of falling from lesser heights. Fall prevention may include:

- Installation of guardrails with mid-rails and toe boards at the edge of any fall hazard area.
- Proper use of ladders and scaffolds by trained employees
- Use of fall prevention devices, including safety belt and lanyard travel limiting devices to prevent access to fall hazard area, or fall protection devices such as full body harnesses used in conjunction with shock absorbing lanyards or self-retracting inertial fall arrest devices attached to fixed anchor point or horizontal lifelines.
- Appropriate training in use, serviceability, and integrity of the necessary PPE.
- Inclusion of rescue and/or recovery plans, and equipment to respond to workers after an arrested fall.

Illumination

Work area light intensity should be adequate for the general purpose of the location and type of activity, and should be supplemented with dedicated workstation illumination, as needed. Controls should include:

- Use of energy efficient light sources with minimum heat emission.
- Undertaking measures to eliminate glare / reflections and flickering of lights.
- Taking precautions to minimize and control optical radiation including direct sunlight. Exposure to high intensity UV and IR radiation and high intensity visible light should also be controlled.
- Controlling laser hazards in accordance with equipment specifications, certifications, and recognized safety standards. The lowest feasible class Laser should be applied to minimize risks.

Chemical Hazard

Chemical hazards represent potential for illness or injury due to single acute exposure or chronic repetitive exposure to toxic, corrosive, sensitizing or oxidative substances. They also represent a risk of uncontrolled reaction, including the risk of fire and explosion, if incompatible chemicals are inadvertently mixed. Chemical hazards can most effectively be prevented through a hierarchical approach that includes:

- Replacement of the hazardous substance with a less hazardous substitute.
- Implementation of engineering and administrative control measures to avoid or minimize the release of hazardous substances into the work environment keeping the level of exposure below internationally established or recognized limits.
- Keeping the number of employees exposed, or likely to become exposed, to a minimum.
- Communicating chemical hazards to workers through labeling and marking according to national and internationally recognized requirements and standards, including the International Chemical Safety Cards (ICSC), Materials Safety Data Sheets (MSDS), or equivalent. Any means of written communication should be in an easily understood language and be readily available to exposed workers and first-aid personnel.
- Training workers in the use of the available information (such as MSDSs), safe work practices, and appropriate use of PPE.

Air Quality

Poor air quality due to the release of contaminants into the workplace can result in possible respiratory irritation, discomfort, or illness to workers. Employers should take appropriate measures to maintain air quality in the work area. These include:

- Maintaining levels of contaminant dusts, vapors, and gases in the work environment at concentrations below those recommended by the ACGIH68 as TWA-TLV's (threshold limit value)—concentrations to which most workers can be exposed repeatedly (8 hours/day, 40 hours/week, week-after-week), without sustaining adverse health effects.
- Developing and implementing work practices to minimize release of contaminants into the work environment including:
 - Direct piping of liquid and gaseous materials.
 - Minimized handling of dry powdered materials.
 - Enclosed operations.
 - Local exhaust ventilation at emission / release points.
 - Vacuum transfer of dry material rather than mechanical or pneumatic conveyance.
 - Indoor secure storage, and sealed containers rather than loose storage.
- Where ambient air contains several materials that have similar effects on the same body organs (additive effects), taking into account combined exposures using calculations recommended by the ACGIH.
- Where work shifts extend beyond eight (8) hours, calculating adjusted workplace exposure criteria recommended by the ACGIH.

Fire and Explosions

Fires and or explosions resulting from ignition of flammable materials or gases can lead to loss of property as well as possible injury or fatalities to project workers. Prevention and control strategies include:

- Storing flammables away from ignition sources and oxidizing materials. Further, flammables storage area should be:

- Remote from entry and exit points into buildings.
- Away from facility ventilation intakes or vents.
- Have natural or passive floor and ceiling level ventilation and explosion venting.
- Use spark-proof fixtures.
- Be equipped with fire extinguishing devices and self-closing doors and constructed of materials made to withstand flame impingement for a moderate period of time.
- Providing bonding and grounding of, and between, containers and additional mechanical floor level ventilation if materials are being, or could be, dispensed in the storage area.
- Where the flammable material is mainly comprised of dust, providing electrical grounding, spark detection, and, if needed, quenching systems.
- Defining and labeling fire hazards areas to warn of special rules (e.g. prohibition in use of smoking materials, cellular phones, or other potential spark generating equipment).
- Providing specific worker training in handling of flammable materials, and in fire prevention or suppression.

Corrosive, oxidizing, and reactive chemicals

Corrosive, oxidizing, and reactive chemicals present similar hazards and require similar control measures as flammable materials. However, the added hazard of these chemicals is that inadvertent mixing or intermixing may cause serious adverse reactions. This can lead to the release of flammable or toxic materials and gases and may lead directly to fires and explosions. These types of substances have the additional hazard of causing significant personal injury upon direct contact, regardless of any intermixing issues. The following controls should be observed in the work environment when handling such chemicals:

- Corrosive, oxidizing and reactive chemicals should be segregated from flammable materials and from other chemicals of incompatible class (acids vs. bases, oxidizers vs. reducers, water sensitive vs. water based, etc.), stored in ventilated areas and in containers with appropriate secondary containment to minimize intermixing during spills.
- Workers who are required to handle corrosive, oxidizing, or reactive chemicals should be provided with specialized training and provided with, and wear, appropriate PPE (gloves, apron, splash suits, face shield or goggles, etc.).
- Where corrosive, oxidizing, or reactive chemicals are used, handled, or stored, qualified first-aid should be ensured at all times. Appropriately equipped first-aid stations should be easily accessible throughout the place of work, and eye-wash stations and/or emergency showers should be provided close to all workstations where the recommended first-aid response is immediate flushing with water.

Asbestos Containing Materials (ACM)

The use of asbestos containing materials (ACM) should be avoided in new buildings or as a new material in remodeling or renovation activities. Existing facilities with ACM should develop an asbestos management plan which clearly identifies the locations where the ACM is present, its condition (e.g. whether it is in friable form with the potential to release fibers), procedures for monitoring its condition, procedures to access the locations where ACM is present to avoid damage, and training of staff who can potentially come into contact with the material to avoid damage and prevent exposure. The plan should be made available to all persons involved in operations and maintenance activities. Repair or removal and disposal of existing ACM in buildings should only be performed by specially trained personnel following host country requirements, or in their absence, internationally recognized procedures.

Biological Hazards

Biological agents represent potential for illness or injury due to single acute exposure or chronic repetitive exposure. Biological hazards can be prevented most effectively by implementing the following measures:

- If the nature of the activity permits, use of any harmful biological agents should be avoided and replaced with an agent that, under normal conditions of use, is not dangerous or less dangerous to workers. If use of harmful agents cannot be avoided, precautions should be taken to keep the risk of exposure as low as possible and maintained below internationally established and recognized exposure limits.
- Work processes, engineering, and administrative controls should be designed, maintained, and operated to avoid or minimize release of biological agents into the working environment. The number of employees exposed or likely to become exposed should be kept at a minimum.
- The employer should review and assess known and suspected presence of biological agents at the place of work and implement appropriate safety measures, monitoring, training, and training verification programs.
- Measures to eliminate and control hazards from known and suspected biological agents at the place of work should be designed, implemented, and maintained in close co-operation with the local health authorities and according to recognized international standards.

Biological agents should be classified into four groups:

- Group 1: Biological agents unlikely to cause human disease, and consequently only require controls similar to those required for hazardous or reactive chemical substances;
- Group 2: Biological agents that can cause human disease and are thereby likely to require additional controls, but are unlikely to spread to the community;
- Group 3: Biological agents that can cause severe human disease, present a serious hazard to workers, and may present a risk of spreading to the community, for which there usually is effective prophylaxis or treatment available and are thereby likely to require extensive additional controls;
- Group 4: Biological agents that can cause severe human disease, are a serious hazard to workers, and present a high risk of spreading to the community, for which there is usually no effective prophylaxis or treatment available and are thereby likely to require very extensive additional controls.

The employer should at all times encourage and enforce the highest level of hygiene and personal protection, especially for activities employing biological agents of Groups 3 and 4 above. Work involving agents in Groups 3 and 4 should be restricted only to those persons who have received specific verifiable training in working with and controlling such materials.

Areas used for the handling of Groups 3 and 4 biological agents should be designed to enable their full segregation and isolation in emergency circumstances, include independent ventilation systems, and be subject to SOPs requiring routine disinfection and sterilization of the work surfaces.

HVAC systems serving areas handling Groups 3 and 4 biological agents should be equipped with High Efficiency Particulate Air (HEPA) filtration systems. Equipment should readily enable their disinfection and sterilization and maintained and operated so as to prevent growth and spreading of disease agents, amplification of the biological agents, or breeding of vectors e.g. mosquitoes and flies of public health concern.

Radiological Hazards

Radiation exposure can lead to potential discomfort, injury or serious illness to workers. Prevention and control strategies include:

- Places of work involving occupational and/or natural exposure to ionizing radiation should be established and operated in accordance with recognized international safety standards and guidelines.
- Exposure to non-ionizing radiation (including static magnetic fields; sub-radio frequency magnetic fields; static electric fields; radio frequency and microwave radiation; light and near-infrared radiation; and ultraviolet radiation) should be controlled to internationally recommended limits.
- In the case of both ionizing and non-ionizing radiation, the preferred method for controlling exposure is shielding and limiting the radiation source. Personal protective equipment is supplemental only or for emergency use. Personal protective equipment for near-infrared, visible and ultraviolet range radiation can include appropriate sun block creams, with or without appropriate screening clothing.

Personal Protective Equipment (PPE)

Personal Protective Equipment (PPE) provides additional protection to workers exposed to workplace hazards in conjunction with other facility controls and safety systems.

PPE is considered to be a last resort that is above and beyond the other facility controls and provides the worker with an extra level of personal protection. Recommended measures for use of PPE in the workplace include:

- Active use of PPE if alternative technologies, work plans or procedures cannot eliminate, or sufficiently reduce, a hazard or exposure.
- Identification and provision of appropriate PPE that offers adequate protection to the worker, co-workers, and occasional visitors, without incurring unnecessary inconvenience to the individual.
- Proper maintenance of PPE, including cleaning when dirty and replacement when damaged or worn out. Proper use of PPE should be part of the recurrent training programs for employees.

Special Hazard Environments

Special hazard environments are work situations where all of the previously described hazards may exist under unique or especially hazardous circumstances. Accordingly, extra precautions or rigor in application of precautions is required.

Confined Space

A confined space is defined as a wholly or partially enclosed space not designed or intended for human occupancy and in which a hazardous atmosphere could develop as a result of the contents, location or construction of the confined space or due to work done in or around the confined space. A “permit-required” confined space is one that also contains physical or atmospheric hazards that could trap or engulf the person.

Confined spaces can occur in enclosed or open structures or locations. Serious injury or fatality can result from inadequate preparation to enter a confined space or in attempting a rescue from a confined space. Recommended management approaches include:

- Engineering measures should be implemented to eliminate, to the degree feasible, the existence and adverse character of confined spaces.
- Permit-required confined spaces should be provided with permanent safety measures for venting, monitoring, and rescue operations, to the extent possible. The area adjoining an access to a confined space should provide ample room for emergency and rescue operations.
- Access hatches should accommodate 90% of the worker population with adjustments for tools and protective clothing. The most current ISO and EN standards should be consulted for design specifications;
- Prior to entry into a permit-required confined space:
- Process or feed lines into the space should be disconnected or drained, and blanked and locked-out.
- Mechanical equipment in the space should be disconnected, de-energized, locked-out, and braced, as appropriate.
- The atmosphere within the confined space should be tested to assure the oxygen content is between 19.5 percent and 23 percent, and that the presence of any flammable gas or vapor does not exceed 25 percent of its respective Lower Explosive Limit (LEL).
- If the atmospheric conditions are not met, the confined space should be ventilated until the target safe atmosphere is achieved, or entry is only to be undertaken with appropriate and additional PPE.
- Safety precautions should include Self Contained Breathing Apparatus (SCBA), life lines, and safety watch workers stationed outside the confined space, with rescue and first aid equipment readily available.
- Before workers are required to enter a permit-required confined space, adequate and appropriate training in confined space hazard control, atmospheric testing, use of the necessary PPE, as well as the serviceability and integrity of the PPE should be verified. Further, adequate and appropriate rescue and / or recovery plans and equipment should be in place before the worker enters the confined space.

Lone and Isolated Workers

A lone and isolated worker is a worker out of verbal and line of sight communication with a supervisor, other workers, or other persons capable of providing aid and assistance, for continuous periods exceeding one hour. The worker is therefore at increased risk should an accident or injury occur.

- Where workers may be required to perform work under lone or isolated circumstances, Standard Operating Procedures (SOPs) should be developed and implemented to ensure all

PPE and safety measures are in place before the worker starts work. SOPs should establish, at a minimum, verbal contact with the worker at least once every hour, and ensure the worker has a capability for summoning emergency aid.

- If the worker is potentially exposed to highly toxic or corrosive chemicals, emergency eye-wash and shower facilities should be equipped with audible and visible alarms to summon aid whenever the eye-wash or shower is activated by the worker and without intervention by the worker

Monitoring

Occupational health and safety monitoring programs should verify the effectiveness of prevention and control strategies. The selected indicators should be representative of the most significant occupational, health, and safety hazards, and the implementation of prevention and control strategies. The occupational health and safety monitoring program should include:

- **Safety inspection, testing and calibration:** This should include regular inspection and testing of all safety features and hazard control measures focusing on engineering and personal protective features, work procedures, places of work, installations, equipment, and tools used. The inspection should verify that issued PPE continues to provide adequate protection and is being worn as required. All instruments installed or used for monitoring and recording of working environment parameters should be regularly tested and calibrated, and the respective records maintained.
- **Surveillance of the working environment:** Employers should document compliance using an appropriate combination of portable and stationary sampling and monitoring instruments. Monitoring and analyses should be conducted according to internationally recognized methods and standards. Monitoring methodology, locations, frequencies, and parameters should be established individually for each project following a review of the hazards. Generally, monitoring should be performed during commissioning of facilities or equipment and at the end of the defect and liability period, and otherwise repeated according to the monitoring plan.
- **Surveillance of workers health:** When extraordinary protective measures are required (for example, against biological agents Groups 3 and 4, and/or hazardous compounds), workers should be provided appropriate and relevant health surveillance prior to first exposure, and at regular intervals thereafter. The surveillance should, if deemed necessary, be continued after termination of the employment.
- **Training:** Training activities for employees and visitors should be adequately monitored and documented (curriculum, duration, and participants). Emergency exercises, including fire drills, should be documented adequately. Service providers and contractors should be contractually required to submit to the employer adequate training documentation before start of their assignment.

Accidents and Diseases monitoring

- The employer should establish procedures and systems for reporting and recording:
 - Occupational accidents and diseases
 - Dangerous occurrences and incidents

These systems should enable workers to report immediately to their immediate supervisor any situation they believe presents a serious danger to life or health.

- The systems and the employer should further enable and encourage workers to report to management all:
 - Occupational injuries and near misses
 - Suspected cases of occupational disease
 - Dangerous occurrences and incidents
- All reported occupational accidents, occupational diseases, dangerous occurrences, and incidents together with near misses should be investigated with the assistance of a person knowledgeable/competent in occupational safety. The investigation should:

- Establish what happened.
 - Determine the cause of what happened.
 - Identify measures necessary to prevent a recurrence.
- Occupational accidents and diseases should, at a minimum, be classified into the two main categories are divided into three sub-categories according to time of death or duration of the incapacity to work. The total work hours during the specified reporting period should be reported to the appropriate regulatory agency.

BATTERY ENERGY STORAGE SYSTEM (BESS)

Battery Energy Storage Systems (BESS) assume a pivotal role in ensuring the continuous stability of electricity supply to the community. By leveraging BESS, PLN can effectively store surplus energy during periods of electricity overproduction or when renewable sources. This stored energy can then be strategically released into the power grid as needed, serving as a valuable tool to mitigate fluctuations in the electricity supply.

A. Environmental Risk

Environmental issues during the construction and operation phase of BESS projects specific to this industry sector include the following:

Environmental Hazards Related to the Disposal of Used Batteries

Batteries, especially those used in energy storage systems, often contain hazardous materials. When these batteries reach the end of their life cycle and need to be disposed of, improper disposal can lead to environmental hazards, including soil and water contamination. Battery casings can degrade or be damaged from a variety of impacts. They can also rupture because of excessive temperatures generated from a change in chemical reaction from over-charging. If a battery casing is ruptured, the fluid or gel (electrolyte) inside can leak, resulting in toxic fumes, burns, corrosion or explosions.

Within the storage unit of the power plant, battery waste is generated due to the culmination of their life cycle or defects in the storage cells. It is crucial to handle battery waste with utmost care. Any form of leakage or spillage from batteries has the potential to cause soil and water pollution, posing health hazards for individuals working in the vicinity. Therefore, meticulous management of battery waste is essential to prevent environmental contamination and ensure the well-being of those in the surrounding areas.

Mitigation Measures:

- Batteries should be maintained properly so that any kind of leakage and spillage from batteries can be avoided.

Proper maintenance of batteries is crucial to prevent leakage or spillage, ensuring the longevity and safety of the battery system. Regular inspections play a fundamental role in this maintenance routine, involving visual assessments to identify any signs of damage, corrosion, or leakage. Battery casings should be closely monitored for cracks, bulges, or any abnormalities that may compromise their integrity.

Secure installation is paramount in preventing movement or vibration that could lead to damage. Confirming that batteries are securely and correctly seated in their designated locations, such as racks or containers, is essential. Additionally, maintaining suitable operating temperatures is crucial to prevent overheating, which can contribute to leakage. Temperature control systems should be in place to regulate the ambient temperature effectively.

Proper charging management is another key aspect of battery maintenance. Implementing procedures to avoid overcharging, which can lead to overheating and subsequent leakage, is vital. The use of charging systems equipped with built-in safeguards adds an extra layer of protection.

Regular cleaning of battery terminals and connectors is necessary to keep them free from corrosion. Any accumulated dirt or debris around the battery casing should be promptly removed. Adequate ventilation in the battery storage area is essential to dissipate heat and prevent the buildup of gases that could contribute to leakage.

Training personnel responsible for battery maintenance on proper procedures is crucial. Staff should be well-versed in identifying potential issues and reporting them promptly. Implementing secondary containment measures, such as trays or barriers, adds an extra layer of protection by capturing potential leaks and preventing their spread.

Maintaining detailed records of battery maintenance activities, including inspection dates, cleaning schedules, and any corrective actions taken, provides a comprehensive overview of the battery's condition. Adhering to the maintenance guidelines provided by the battery manufacturer and following recommended schedules for preventive maintenance tasks ensures that batteries are

cared for in line with industry best practices. By incorporating these practices into a comprehensive battery maintenance program, the risk of leakage or spillage is significantly reduced, contributing to the overall safety and reliability of the battery system.

- Batteries should be disposed off by depositing with the dealer, manufacturer, importer, assembler, registered recycler, reconditioner or at the designated collection centres.
- Batteries waste should be managed in compliance with the Batteries Management and Handling Procedure.

Environmental Monitoring

In the Battery Energy Storage System (BESS) sector, the generation of electricity from this activity typically has minimal associated air emissions or effluents. However, strict adherence to relevant environmental regulations and international standards is essential, particularly in scenarios where dust or potentially contaminated water runoff may be present. Adhering to these regulations during site operations is crucial to mitigate any potential environmental impacts.

To ensure environmental compliance and minimize the ecological footprint, comprehensive environmental monitoring programs within the BESS sector must be established. These programs should encompass all activities identified as having potentially significant impacts on the environment during both normal operations and upset conditions. The monitoring activities should be designed based on direct or indirect indicators of emissions, effluents, and resource usage specific to the project in question. The frequency of monitoring should be sufficient to provide representative data for the monitored parameters.

Qualified individuals, trained in environmental monitoring procedures, should conduct the monitoring activities using properly calibrated and well-maintained equipment. The collected monitoring data should be subject to regular analysis and review at defined intervals. These data sets should then be compared with established operating standards to identify any deviations, allowing for timely corrective actions to be implemented. This rigorous monitoring and review process ensures ongoing environmental compliance and proactive management of potential environmental impacts within the BESS sector.

Relevant Regulations

Air and Noise

- Government Regulation No 22 of 2021 on Implementation of Environmental Protection and Management;
- Minister of Environment Decree No 48/MENLH/11/1996 on Noise Standards;
- Minister of Environment Decree No KEP-49/MENLH/11/1996 on Vibration Level Standards.

Water

- Government Regulation No 22 of 2021 on Implementation of Environmental Protection and Management;

Waste

- Law 18/2008 on Waste Management
- Law 19/2009 on Ratification of the Stockholm Convention on Persistent Organic Pollutants
- GR 6/1995 on Protection of Plants
- GR 74/2001 on Management of Hazardous and Toxic Material
- GR 27/2020 on Management of Specific Waste
- MOEF Regulation 14/2021 on Waste Management at a Waste Bank
- MOEF Regulation 6/2021 on Procedures and Requirements for Management of Hazardous and Toxic Waste

- Ministry of Environment and Forestry Regulation 6 Year 2021 on Procedures and Requirements for Management of Hazardous and Toxic Waste.

Biodiversity

Biodiversity Conservation and Sustainable Management of Living Natural Resources

- Law 5/1990 on Conservation of Living Natural Resources and their Ecosystems
- Law 18/2013 on Prevention and Eradication of Forest Destruction as amended by the Omnibus Law
- GR 42/2008 concerning Water Resources Management
- GR 23/2021 on Management of Forestry
- MOEF Regulation 8/2021 on Administration of Forest and Forest Management Plan, Utilization of Protected Forest and Production Forest
- MOEF Regulation 9/2021 on Administration of Social Forest

B. Occupational Health and Safety Risk

Fire and Explosion Risks During Project Operation

The installation and operation of batteries involve the management of electrical energy, and in some cases, the use of materials that can pose fire and explosion risks. If not handled properly, the batteries can undergo thermal runaway, a potentially uncontrollable exothermic reaction leading to elevated temperatures, fire, and possibly explosions.

Thermal runaway is described as an uncontrolled exothermic reaction that increases cell temperature and can propagate between cells, particularly when a cell reaches elevated temperatures. Several factors can trigger thermal runaway, including mechanical and electrical breakdown, thermal failure, internal/external short circuiting, or electrochemical abuse, potentially leading to a fire.

Mitigation:

- During the design and planning phase of a BESS project, the layout of the battery containers becomes a critical consideration. It is essential to maximize the space between battery containers, with a minimum spacing of 4.5 meters. This spatial arrangement is crucial to mitigate the risk of thermal runaway propagation. If site constraints limit the space between containers, the installation of suitable firewalls is recommended to prevent the spread of thermal runaway. The consequences of ineffective management of thermal runaway exposure can pose risks for the project. Implementing effective risk management strategies and safety measures during the project's design and execution phases is essential to reduce the potential impact of thermal runaway incidents.
- Ensure to plan for emergencies together with the local fire services. It's important to create a detailed fire response plan and confirm that the local fire department is trained to handle electrochemical fires and has a response strategy in place. In case of a thermal runaway event, fire crews might focus on containing it rather than putting it out. During a thermal runaway, batteries can heat up rapidly, and firefighters will work to cool the areas around the battery to reduce radiant heat. This containment approach allows the battery to burn itself out without spreading to nearby containers. Since it can take several days for the batteries to cool down completely, having ample access to water sources on-site is crucial.
- Provision of fire detection and alarm system.
- Provision of well-maintained and adequate firefighting appliances.
- Training of workers in fire safety and emergency preparedness.

Occupational Health and Safety Monitoring

In the context of Battery Energy Storage Systems (BESS), consistent vigilance for occupational hazards specific to the project is imperative. Accredited professionals should spearhead the design and implementation of a robust occupational health and safety monitoring program tailored to the unique aspects of BESS activities. Additionally, facilities must diligently maintain records documenting occupational accidents, diseases, as well as any dangerous occurrences and accidents, forming an integral part of the occupational health and safety framework.

Relevant National Regulations

- Government Regulation No. 50 of 2012 on Implementation of Occupational Health and Safety Management System
- MPWH Regulation 10/2021 on Guidelines on Construction Safety System Management

C. Community, Health, and Safety (CHS) Risk

Community, Health, and Safety (CHS) risks associated with Battery Energy Storage Systems (BESS) involve potential impacts on the surrounding community, public health, and overall safety. These risks may include factors such as:

Health and Safety Concerns:

- Exposure of nearby residents and workers to potential hazards, including emissions, noise, or accidents.
- Risks associated with the handling, storage, and disposal of hazardous materials, especially in the case of battery-related incidents.

Mitigation strategies for these CHS risks may involve community engagement and education, implementation of effective emergency response plans, adherence to environmental and safety regulations, and the incorporation of technologies or measures to minimize noise, emissions, and other potential impacts on public health and safety. Regular monitoring and review of CHS aspects can contribute to the continuous improvement of safety measures and the overall well-being of the community surrounding the BESS facility.

CHS Monitoring

The vigilance of community health and safety hazards throughout the various phases of a Battery Energy Storage System (BESS) project is imperative to safeguard the well-being of the local population. This monitoring process serves as a proactive measure, enabling the identification of potential hazards and the timely implementation of mitigation measures to prevent adverse effects on the community. The monitoring initiative spans the entire project lifecycle, encompassing planning, design, construction, and operation phases.

The monitoring program should encompass a diverse set of indicators, including but not limited to air and water quality, noise pollution, vibration, and potential traffic congestion. Implementation of environmental parameter monitoring is necessitated when there are indications of risks or impacts, be it through an Environmental and Social Impact Assessment (ESIA), community grievances, routine observations by project personnel, or other relevant channels. Furthermore, regular health and safety assessments may be required if there is any indication of potential risks to community health and safety.

In instances where monitoring is deemed necessary, active involvement of community members in the monitoring process is essential. This ensures that their concerns and observations are considered, fostering transparency and community engagement throughout the BESS project.

Relevant National Regulations

- Government Regulation 30/2021 on Road Transportation

- MOEF Regulation 6/2021 concerning Procedures and Requirements for the Management of Hazardous and Toxic Wastes
- Law Number 40 of 2007 concerning Limited Liability Companies, Corporate Social Responsibility (CSR)
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Relevant International Standards

- IFC Environmental, Health, and Safety General Guidelines

3.4 GUIDELINE AND MITIGATION FOR BIODIVERSITY OFFSET

a. Introduction

Biodiversity offset can be defined as measurable conservation outcomes resulting from actions designed to compensate for significant residual adverse biodiversity impacts arising from project development and persist after appropriate avoidance, minimization and recovery measures have been taken¹⁹. In simple terms, biodiversity offset can be regarded as additional conservation activities intended to compensate for the otherwise inevitable damage to species or ecosystems resulting from a development project.

Biodiversity offsets may be considered only after appropriate mitigation measures hierarchy has been fully assessed and implemented and significant residual impacts remain. The decision to undertake a biodiversity offset therefore would never be a substitute for the implementation of good management practices on the actual project site.

The goal in applying biodiversity offsets is to achieve no net loss and preferably a net gain of biodiversity at the project site level concerning species composition, habitat structure, ecosystem services and cultural values associated with biodiversity. On the other hand, the application of biodiversity offsets is not permitted to have significant negative impacts on biodiversity, the environment, society and culture at the selected offset sites and surroundings. The potential impact should be identified during the offset site selection and the mitigation measures should be well-planned and well-discussed.

b. Key Concept and Principle

Offset principles are a set of factors that need to be taken into account during design and implementation to ensure that offsets are used appropriately and that No Net Loss is achieved. Effective application of these principles aims to reduce business risk and improve biodiversity outcomes by ensuring that offsets are fair, sustainable, bring real change and involve appropriate stakeholders.

The principle of Biodiversity Offset is a set of factors that need to be considered during the biodiversity offset plan, design and implementation. The principle is applied to ensure that biodiversity offsets are planned and implemented appropriately and that No Net Loss and Net Gain is achieved. Practical application of these principles aims to reduce business risk and improve biodiversity outcomes, be sustainable, bring real change and involve appropriate stakeholders.

Below are ten principles to establish a framework for designing and implementing biodiversity offsets and verifying the success of biodiversity offset implementation (BBOP, 2012¹⁹):

- 1) **Adherence to the mitigation hierarchy:** A biodiversity offset is a commitment to compensate for significant residual adverse impacts on biodiversity identified after appropriate AVOIDANCE, minimization and on-site rehabilitation measures have been taken according to the mitigation hierarchy.
- 2) **Limits to what can be offset:** There are situations where residual impacts cannot be fully compensated for by a biodiversity offset because of the irreplaceability or vulnerability of the biodiversity affected.
- 3) **Landscape approach:** A biodiversity offset should be designed and implemented in a landscape context to achieve the expected measurable conservation outcomes, considering available information on the full range of biological, social and cultural values of biodiversity and supporting an ecosystem approach.

¹⁹ Business and Biodiversity Offsets Programme (BBOP). 2012. Biodiversity Offset Design Handbook-Updated. BBOP, Washington, D.C. Available from: [BBOP Document Cover Sheet \(forest-trends.org\)](http://forest-trends.org)

- 4) **No net loss:** A biodiversity offset should be designed and implemented to achieve in situ, measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity.
- 5) **Additionality:** A biodiversity offset should achieve conservation outcomes above and beyond the results that would have occurred if the offset had not taken place. Offset design and implementation should avoid displacing activities harmful to biodiversity in other locations.
- 6) **Stakeholder participation:** In areas affected by the project and by the biodiversity offset, the effective participation of stakeholders should be ensured in decision-making about biodiversity offsets, including their evaluation, selection, design, implementation and monitoring.
- 7) **Equivalence:** A biodiversity offset should be designed and implemented equitably, which means the sharing among stakeholders of the rights and responsibilities, risks and rewards associated with a project and offset in a fair and balanced way, respecting legal and customary arrangements. Special consideration should be given to respecting both the internationally and nationally recognized rights of indigenous peoples and local communities.
- 8) **Permanence:** The design and implementation of a biodiversity offset should be based on an ADAPTIVE MANAGEMENT approach, incorporating MONITORING AND EVALUATION, to secure outcomes that last at least as long as the project's impacts and preferably in PERPETUITY.
- 9) **Transparency:** The design and implementation of a biodiversity offset, and communication of its results to the public, should be undertaken transparently and timely.
- 10) **Science and traditional knowledge:** The design and implementation of a biodiversity offset should be a documented process informed by sound science, including appropriate consideration of traditional knowledge.

c. The Biodiversity Offset Step-by-Step Process

The steps for compiling and developing a biodiversity offset document (sometimes known as Biodiversity Offsets Management Plan -BOMP) are dependent on the location of the offset to be selected and the condition of the location based on the various accompanying components. There are at least the following five main stages that must be followed by the project in preparing the offset plan. The following steps are developed and adopted from World Bank²⁰, Business and Biodiversity Offsets Programs (BOPP)²¹, IUCN²², and some related sources.

Step 1. Completing Biodiversity Assessment and Mitigation Measures

To know what should or could be offset by the Project, it is necessary first to estimate the likely biodiversity losses (direct and indirect) if the original development of the project were to proceed as planned (taking into account other available measures in the mitigation hierarchy). The main instrument to calculate the biodiversity impacts is the proper biodiversity impact assessment and mitigation measures which are mostly included in the National Environmental Impact Assessment (EIA), Environmental and Social Impact Assessment (ESIA) or other terminology (depending on the country and institution). However, the quality and integrity of the ESIA process are critically important factors in decision-making for biodiversity offsets. Additional biodiversity assessment might be required when the EIA and/or ESIA do not meet the requirements.

²⁰ Ledec, George Campos; Johnson, Sally Diana Reay. Biodiversity offsets: a user guide (Burmese). Washington, D.C.: World Bank Group. Available from: <http://documents.worldbank.org/curated/en/58319158744424775/Biodiversity-offsets-a-user-guide>

²¹ Business and Biodiversity Offsets Programme (BBOP). 2012. Biodiversity Offset Design Handbook-Updated. BBOP, Washington, D.C. Available from: [BBOP Document Cover Sheet \(forest-trends.org\)](http://www.biodiversityoffsets.org/BBOP-Documents/BBOP-Documents-Cover-Sheet)

²² IUCN. 2016. IUCN Policy on Biodiversity Offsets. Available form: https://www.iucn.org/sites/default/files/2022-06/iucn_biodiversity_offsets_policy_jan_29_2016_0.pdf

Assuming the biodiversity assessment in EIA/ESIA was conducted at the beginning of the project lifecycle, the EIA/ESIA should provide important biodiversity information for decision-making. Accordingly, the ESIA (including ESIA TOR) should specify the need for information including (but not limited to):

❑ Review of up-to-date project description

The EIA/ESIA shall provide adequate project description information especially detailed information that can support biodiversity loss calculation such as project types, scale of activities, project component, timing, frequency and duration. The proposed project components are also required to provide in digital format for mapping and supporting the biodiversity loss calculation process.

❑ Review of the legal framework, applicable standards and regulation

The EIA/ESIA shall provide a review of legal and policy frameworks that may influence a biodiversity offset before developing and implementing it. It's including the legal framework for biodiversity impact assessment and mitigation measures.

In the national context, the regulatory framework shall be identified and explain relevant regulation from the national level to the local level. It's including the potential specific framework that might be only applicable to specific locations such as cultural regulation (e.g. *Hutan adat*, *Lubuk Larangan*). Formal law and regulation may also accommodate specific local cultural regulations.

In the international context, the regulatory framework shall be identified the applicable international requirements and standards that can be used as the project consideration including financial or lending institutions requirements, international conservation organisation requirements and regional and/or international agreements.

Should be noted: There may be differences between the regulatory framework for biodiversity impact assessment and mitigation measures with the regulatory framework for biodiversity offset location.

❑ Biodiversity Baseline

An EIA/ESIA shall be provided with adequate biodiversity baseline information to produce an adequate impact assessment and proper mitigation measures.

▪ Desktop review

In the preliminary step of ESIA, an adequate desktop review shall be conducted by identifying the species and habitat information from reputable sources including (but not limited to) IBAT, Birdlife Data Zone, IUCN Red List, scientific journals, regional and national strategic action plan, previous study, and surrounding project documentation.

▪ Habitat protection and conservation status.

The EIA/ESIA shall be explained the protection and conservation status of habitat within the project site and vicinity based on national regulations and international requirements. The national protection and conservation status refers to Act No 41 of 1999 on Forestry, Minister of Forestry Regulation P.50 of 2009, Minister of Forestry Regulation 37 of 2007, and Government Regulation 68 of 1998.

The internationally recognize area shall be assed several types of landscape status including (but not limited to):

- UNESCO World Heritage Site
- Key Biodiversity Area (KBA) Including Important Birds and Biodiversity Area (IBA) and Alliance for Zero Extinction (AZE) Site
- Ramsar Sites

- Regional Conservation Partnership Program (e.g. Heart of Borneo Initiative, East Asian-Australasian Flyway (EAAF) Partnership, Tiger Conservation Landscape (TCL), The Coral Triangle Initiative (CTI), Transboundary Conservation Landscape, and other relevant programs and partnerships)

Each area's national protection and conservation status as well as an internationally recognised area shall be identified, described, assessed and suitably mapped within the EIA/ESIA. A distance of around 25 to 50 km from the project site is the best practice for assessing habitat protection and conservation status. Consultation with the area management and partnership institution is required when the project is located inside the area boundary.

- Ecosystem/habitat type affected

A GIS and remote sensing analysis is required to be conducted in the ESIA/EIA study followed by ground check and site survey. Each ecosystem/habitat within the study area should be identified, described and suitably mapped. Each ecosystem/habitat is also required to be classified as natural or modified habitat.

Each ecosystem/habitat should estimate the total area in hectares and percentage terms of each habitat type that is expected to be converted (lost) or modified (including degraded) as a direct or induced (indirect) impact of the original development project.

- Critical habitat determination

The determination of critical habitat is required to be assessed during the ESIA study according to WB ESF ESS6 for Critical Habitat and undertake consultation with relevant experts to supplement information gaps to inform the Critical Habitat assessment.

Based on ESS6, critical habitat refers to areas that are of utmost importance for biodiversity, comprising:

- Habitat crucial for protecting species classified as Critically Endangered or Endangered in the IUCN Red List or similar national lists.
- Habitat of vital significance for endemic or restricted-range species.
- Habitat supporting significant concentrations of migratory or congregatory species, both on a global or national scale.
- Exceptionally threatened or one-of-a-kind ecosystems.
- Ecological functions or characteristics essential for sustaining the biodiversity values mentioned in (a) to (d).

Critical habitat is not limited to pristine or highly biodiverse areas. It can include both modified and natural habitats supporting the biodiversity values that trigger the critical habitat criterion. Critical habitats can therefore be a subset of both modified natural habitats.

- Biodiversity baseline survey

The EIA/ESIA shall provide a proper biodiversity baseline survey representing seasonal conditions in the project site (dry season and wet season) and representing ecosystem/habitat and vegetation type in the site location and vicinity, such as primary forest, secondary forest, planted forest, plantation, agriculture, shrub, riverbank, river, lake, etc. The survey needs to cover several taxa including flora, mammals, birds, reptiles, amphibians, plankton, benthos, and fish species.

When the desktop review indicated the potential species of conservation significance inhabit within the study area and/or the critical habitat is triggered, a more detailed survey is required to be conducted for the targeted species. The identification of the target species to be surveyed should be finished within the TOR of EIA/ESIA.

- Review of species of conservation significance

The EIA/ESIA should indicate and assess the protection and conservation status of the species referring to national regulations and international requirements. The relevant regulation in Indonesia are:

- Government Regulation No 7 of 1999 regarding The Preservation of Plants and Animals
- MoEF Regulation No 106 of 2018 regarding The List of Protected Fauna and Flora Species
- Decree of The Minister of Marine Affairs and Fisheries No 1 of 2021 regarding Protected Fish Species
- IUCN Red List (Critically Endangered, Endangered, Vulnerable, or Near Threatened)
- CITES Appendix

Other than that, the migratory species and restricted range species following the critical habitat criteria are also categorised as species of conservation significance.

▪ Other Biodiversity Value

The EIA/ESIA should describe the other ways in which the project area might be of biodiversity interest but not include as a nationally protected and conservation area, internationally recognise area and/or habitat of species of conservation significance. This typical value such as a development area for a wildlife corridor, NGO concession area, other company restoration or offset area,

□ Biodiversity Impact Assessment and Mitigation measures

A proper biodiversity impact assessment and determination of mitigation measures should be completed within the ESIA study. The assessment needs to be conducted by following the national regulation and international applicable requirements to the project. The detailed manual on the Biodiversity Impact Assessment is following the manual in **Chapter 4** and **Chapter 5**.

To support the biodiversity offset, the EIA/ESIA is also should seek to quantify ongoing, baseline rates of habitat loss or degradation (if any) within the project area. It should also describe existing and likely future threats (other than the proposed project) to the area's biodiversity.

To manage the project's impact on biodiversity, the mitigation measures shall be identified, assessed and described in the EIA/ESIA as part of ESMP or as a separate document as Biodiversity Management Plan (BMP). The mitigation measures shall be applied following the mitigation hierarchy approach. The mitigation hierarchy emphasizes designing out risk to the maximum extent possible (through avoidance and minimization), and only then implementing corrective measures as needed (through restoration and then compensation, including offsets).

The mitigation hierarchy typically states that development project planners should (1) first seek to avoid damaging any biodiversity; (2) then aim to minimize any such damage; (3) then consider how to restore sites or species populations damaged by the project; and (4) then if adverse biodiversity impacts remain to compensate through specific actions (not merely cash) comprising a biodiversity offset (Figure 1).

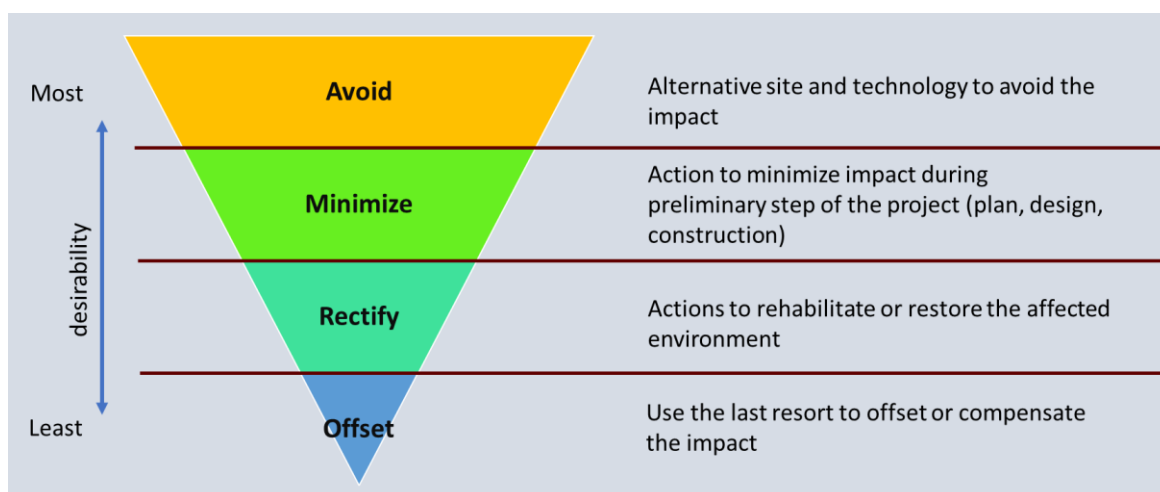


Figure 1. The Mitigation Hierarchy Concept

Applying the mitigation hierarchy to the original development project means biodiversity offsets are viewed as a last resort when considering different mitigation options. Biodiversity offsets are only applied when the adverse impact cannot be completely managed by avoiding, minimizing and rectifying management programs.

Step 2. Estimate Residual Biodiversity Losses from the Original Project

A target for developing a biodiversity offset to compensate for the residual adverse impacts on biodiversity caused by the project is balanced or no net loss and to demonstrate the project may achieve the Net Gain in biodiversity management.

The EIA/ESIA should assess and discuss the significance of the proposed project's expected residual impacts on biodiversity, including both direct and indirect (aka induced) impacts. It should also take into account the likely cumulative impacts from nearby, upstream or downstream, associated, follow-up, or repeater projects. Establishing the significance of the expected adverse biodiversity impacts is a key input to deciding whether a biodiversity offset might be needed:

The project shall quantify the residual impact properly so that offset planning can illustrate how net gain can be achieved. This step involves using accounting approaches to identify and quantify predicted or actual residual impacts on biodiversity. Most approaches are based on quantified measures which enable comparisons to be made between biodiversity losses (habitat and species) due to project development and what can be gained through an offset, to demonstrate no net loss and show additional, measurable conservation outcomes. However, no single measure can adequately capture the diversity of life at all levels of biological diversity. Rather, it is necessary to choose from a suite of measures which are a suitable proxy or surrogate for biodiversity overall. In general, the biodiversity offset quantification should be bigger than the residual adverse impact quantification (Figure 2).

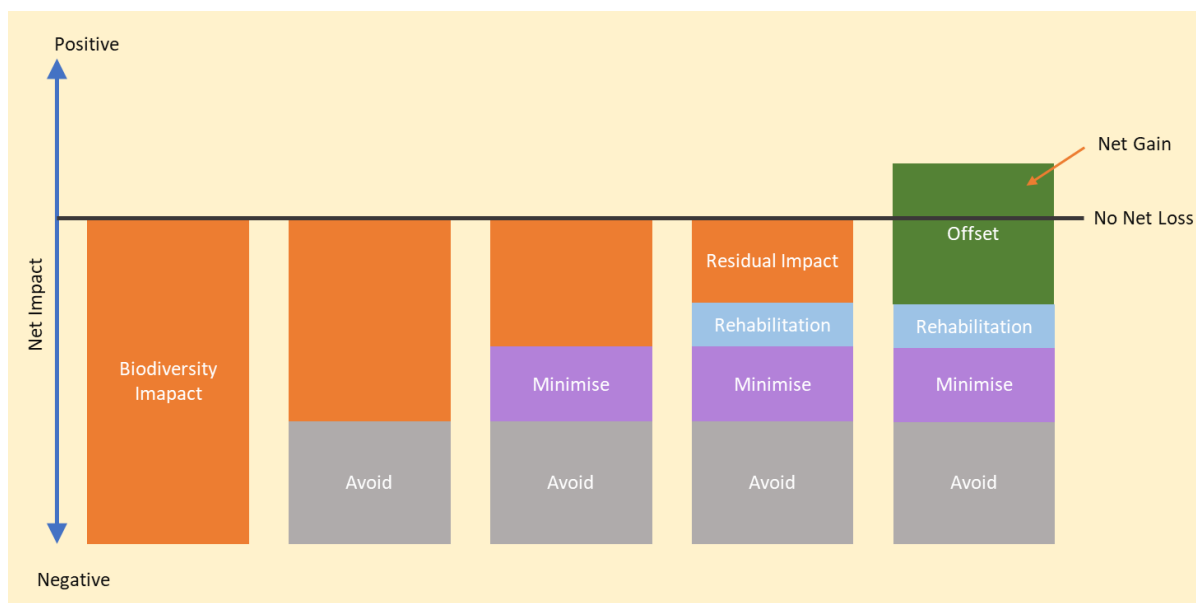


Figure 2. Mitigation hierarchy concept on the application of biodiversity offsets

In case the EIA/ESIA is not adequate for figuring out whether the project has followed the proper impact assessment and mitigation measures including applying mitigation hierarchy, the project is required to provide an additional impact assessment and additional mitigation measures as per requirements. This additional assessment can become a separate document or include in BOMP documents for the effectiveness of assessments. The biodiversity offset plan can be processed after the additional assessments are completed or can be inline separately depending on the gaps condition.

Step 3. Select the Conservation Site(s) and Offset Activities

The site(s) selected for conservation offset activities should take into account the core principle of equivalence, seeking to achieve like-for-like or trading-up conservation outcomes. The site(s) selected should also take into account the landscape context such as the size of remaining patches of natural vegetation, and connectivity to nearby areas of similar habitat as well as the feasibility of establishing a successful and sustainable conservation offset in that area. The following criteria are important to assess in the site selection process (but not limited to):

☐ Landscape Context

The project should give priority to the choice of offset site based on the government's spatial planning at the landscape and seascape level. The spatial planning is including biodiversity conservation priorities, land use (and seascape) priority, conservation sites and sensitivity areas. However, the chosen offsite site must consider the important places and values for meeting the conservation goals of the project biodiversity offsets including areas where impacts should be avoided altogether, as well as areas where aggregations of offsets could best meet conservation goals.

☐ Legal aspect

Not all habitats can become biodiversity offset areas. The legal status of the land/forest is also important to identify and assess. This includes legal status based on the spatial plan, ownership, forest classification, land & habitat utilization, cultural condition, the presence of other projects and activities and potential agrarian conflict.

Within the site selection stage, the project will review each legal formal aspect of each potential offset site. The high-risk area and areas with less possibility to develop as a biodiversity of set sites based on the legal formal aspect will removing from the potential offsets site.

☐ Offset site baseline condition

The baseline of each potential offsets site is important to assess. The baseline is not only for the biodiversity component but includes environmental and social aspects. A rapid survey on biodiversity and social aspect may be required to be conducted depending on the availability of data and information on each potential offsets site. Minimum data and information in supporting offsets planning should be done by the survey. It should be noted, the baseline survey for the non-biodiversity aspect is only conducted to get a better understanding of each aspect condition in supporting the potential programs and activities on the offsets sites.

☐ Risk and impact assessment

The risk and impact assessment is required to be conducted based on potential offsets activities and baseline conditions. The biodiversity offsets will have impacts on the environment and are not allowed to have a significant negative adverse impact on the biodiversity and community. The risk Impact assessment will be ensuring the biodiversity site selection with the potential offsets activities assessing any potential impacts and developing suitable offsets activities. Risk and impact assessment on the offsets site is conducted in different levels of detail with project impact assessments.

☐ Stakeholder engagement and consultation

Effective stakeholder engagement is needed to help ensure the success of all types of development and conservation projects, including biodiversity offsets. Robust stakeholder engagement begins sufficiently early and continues as needed to obtain stakeholder feedback during all key stages of offset planning and implementation. The stakeholders that need to be engaged include (but, are not limited to):

- Related governments Institution responsible for offsets sites and conservation of the habitat and species

- Community and community leaders
- Formal and non-formal community groups
- Surrounding project and activities
- Local NGOs including non-conservation NGO
- International reputable conservation NGO
- Researcher and Scientist
- Local university
- IUCN and/or IUCN SSC groups

☐ Information Sharing

A key part of successful stakeholder engagement is highly transparent information disclosure. Timely and thorough information sharing can deter harmful speculation about the offset as well as the original project. It can also encourage stakeholders to share what they know and sometimes to collaborate further. Information disclosure is most useful when the information is presented in a readily understandable manner.

As a form of compensation for the residual impact, the minimum area of the offset site also needs to be calculated which would provide adequate compensation for the damage from the original project. The project as a designer of the offset sites can use one or a combination of these basic approaches or innovate further, as appropriate.

☐ Surface Area

This simplest of metrics compares the surface area (hectares, ha) of habitat lost, without reference to further details such as habitat quality. A simple 1-for-1 formula (ha protected under the offset, in exchange for hectare (ha) lost under the original project) is a simple approach to this method. However, this method is often not sufficient to achieve a goal of No Net Loss due to the differences in habitat and biodiversity conditions between the project site and offset site.

☐ Habitat Quality

This approach uses Habitat Hectares (HH), based on the area of habitat lost to the project multiplied by the quality of the lost habitat. The HH score reflects the quality of the habitat relative to the benchmark for that ecosystem type in an undisturbed state. For land-based offsets, the criteria that make up “quality” will depend on the vegetation type and should be developed in consultation with knowledgeable botanists. In a simple application of this approach, a hectare of habitat lost can be offset by a hectare similar habitat or more than a hectare depending on the habitat quality based on project assessment on both sites (project site and offset site).

☐ Conservation significance

Some ecosystem types within the project area might be regarded as more significant than others from a conservation standpoint, based on factors such as species richness, ecosystem rarity, or degree of threat (at an international, national, or local level). Ecosystems that are assessed as vulnerable, endangered, or critically endangered could score more highly than those that are more common and not under threat.

☐ Species-level Information

There are situations where measures of habitat area and quality are not a good substitute for losses at the species level. It is therefore necessary to carry out species-specific assessments for key species, particularly where these are highly threatened or otherwise valued. This can be done qualitatively, by ensuring that those species that are lost are included at the offset sites;

alternatively, a more quantitative assessment can be carried out. For some species, there might be information on population density estimates that allow comparisons to be made between impacted areas and offset sites.

☐ Multipliers

In response to uncertainty, some biodiversity offset schemes use simple multipliers. Multipliers can be used to address various forms of uncertainty including:

- a) Induced impacts that may be hard to measure directly;
- b) implementation risk that the offset might fail or only partially succeed;
- c) spatial risk that the offset location will turn out to be of lower quality or conservation significance than the site affected by the original project; and
- d) temporal lags where habitat restoration at the offset site may take a long time.

In this case, the multipliers used are based on a Regional Conservation Plan and stated objectives for habitat targets. In many other cases, multipliers are based on less precise “guesstimates” or “rules of thumb”, with or without scientific underpinning.

Step 3. Select and develop Offset Activities

The development of activities and programs at the offsite site is very dependent on the local context, the conditions of the offset area and the offset goal (such as No Net Loss or ideally a Net Gain). However, in general, the following programs can be developed by the project.

☐ New or Expanded Protected Areas

Protected areas broadly defined here to include governmental, community, and private conservation areas under different categories of management and allowed human use could be created or expanded to offset the biodiversity losses from the original project. The project is highly recommended to apply or propose the offset site to become new or expanded Protected Areas (if directly adjacent to the existing protected area)

For the local context, the offset sites can be proposed as new local protected areas based on local wisdom that potentially will be supported and conserved by the community. Some types of this local protection such as “*Lubuk Larangan* and *Hutan Larangan*”.

☐ Improved Management or Habitat Enhancement

The on-the-ground management of existing protected areas could be strengthened, if additionality can be demonstrated. Project support on area management is an important program to ensure the offset goal can be achieved. Collaboration with existing site management (governments or community institutions) is important to conduct and if necessary the project can provide a dedicated staff (can come from the community) to support the existing management.

The project is also required to develop various programs regarding offset site management on the habitat enhancements with considering the existing habitat condition, surrounding area, socio-economic aspect, conservation issues, political will, budget, and effectiveness of the programs.

☐ Habitat Restoration

This program will be applied only within offset sites with degraded conditions and not be applied in good habitat conditions. It should be ensured, this program is a long-term program where the project is required to involve for the long-term also.

An effective restoration program requires a good understanding of both ecological concepts and practical considerations on the restoration area and vicinity. The project should be adopted the restoration best practice of the habitat restoration process that may be useful as a basis to understand the complexities of the restoration process and a pointer to find further action. The key step of the habitat restoration process are:

- 1) Define aspirational restoration goals and target species.

- 2) Understand what healthy habitat looks like for the target species of interest and how the habitat may naturally change over time.
- 3) Define a desired goal state for the habitat.
- 4) Identify the current state and threats to the habitat in the landscape and site of interest.
- 5) Identify general restoration actions that can be undertaken to reach the desired state.
- 6) Summarise actions in a draft implementation plan, and prepare a draft budget and work plan.
- 7) Redefine specific, measurable, agreed-upon, realistic and timebound restoration goal(s) for the system after feasibility review and set achievable milestones.
- 8) Develop an adaptive management plan if required
- 9) Implement the first phase of restoration actions.
- 10) Monitor outputs and outcomes.
- 11) Re-evaluate the situation, review assumptions about the system, and revise goals/targets/milestones if needed.
- 12) Implement other stages of restoration actions (if required) and manage the site(s) adaptively.

It should be noted, appropriate stakeholder consultation should be carried out at each step that requires key decisions to be made by the project and/or by the stakeholder.

☐ Livelihood or Community Support

Biodiversity offsets should include support for addressing livelihood or community development issues in the vicinity of conservation areas, especially in the area where the community presents and/or take environmental services from that habitat. The livelihood or community support is required to be developed to help build local support as well as to mitigate any negative socio-economic impacts from newly restricted access to natural resources.

The livelihood or community support shall be developed in cooperation with the local context and community involvement itself in the preparation and development of the program. The requirements of the relevant standard within the development of ESIA are also applicable to this livelihood or community support such as World Bank ESS and IFC PS. The involvement of a third party might be required to bridge the communication between the project and the community.

☐ Species-specific Interventions

To compensate for project-related reductions in the population of some species of conservation interest and ensure the offsets goal on species protection and species of conservation significance (no net loss or ideally a net gain), biodiversity offsets can support measures to reduce other (non-project) threats to the same species within the offsets sites. That is why the selection of biodiversity offsets sites within the same landscape and similar habitat is important.

The biodiversity baseline assessment will support the project in the development of a species-specific intervention program. In case the specific species is categorized as critically endangered, endangered and globally sensitive species, in-depth consultation with relevant stakeholders to develop the programs might be required such as specific Conservation NGO, IUCN and or IUCN SSC groups. In the other potential case, collaboration with relevant NGOs and or surrounding habitat managers is also required especially when the offset sites are located within conservation areas and/or adjacent to others surrounding conservation/protected areas.

☐ Scientific research support

The value of biodiversity and offset site habitat is often unknown or very little knowledge about it. A project program on the continuous study and research on offset sites, species of interest inside

and habitat is required to be developed. This program can be supported by the project in collaboration with research and NGOs and/or universities.

Continuous and sustainable research and study can produce significant input that helps the process of developing and conserving offset sites and of course, has a positive impact on the development of science and conservation. Supporting scientific research is also can support the project programs to propose the project area to become a new protected area and/or expand the existing protected areas.

☐ Financial support

All types of biodiversity offset activities require some level of funding including from the project and/or the project sponsor/lenders. However, in some cases, the sponsor of the original project might simply provide additional support to an aggregate, large-scale conservation offset or even a conservation trust fund that was designed to compensate for the cumulative impact of multiple projects, rather than designing a separate, individual offset from scratch. A key consideration in such cases is ensuring (through monitoring) that the offset funding made results in verifiable on-the-ground conservation gains.

Step 4. Prepare the Biodiversity Offset Project Components

☐ Specific Activities and Inputs

To support the offset programs and activities on the ground level, some effort might be required to achieve the offsets goal. The implementation on the ground level might require project investment such as physical demarcation, park infrastructure, vehicles and equipment, rangers, office and supporting facilities or other personnel, or a management plan. Other than that, non-physical investment is also required to provide including increasing skilled personnel with training. The type and number of investments should be assessed properly based on baseline conditions, offsets programs and activities and benchmarking from existing similar programs. Each potential investment in specific offsets programs and activities should be calculated properly and included in budget calculation.

☐ Institutional Responsibilities

The offset project documents should clearly define the responsibilities of different organizations, whether government agencies, private firms, universities, organized communities, NGO partners, or other entities with implementation responsibilities. Working groups or working committees are required to develop in terms of implementing effective and sustainable management of the offset area. Internally, the project is also required to provide specific staff or teams (depending on the size of the offset site). At least one dedicated member of staff is required to involve continuously in the management of the offset site.

☐ Implementation Schedule

The time frames for implementing each biodiversity offset investment or action should be clearly defined, including the expected start date and (if not recurrent) the target completion target for each planned activity. The timing of biodiversity offset activities may need to take into account the implementation schedule for civil works or groundwork (if applicable) under the original development project.

☐ Budget

Effective implementation of any biodiversity offset requires an adequate budget, both for up-front investment costs and long-term recurrent costs. The development of Biodiversity offsets documents shall provide the potential long-term budget for each program and additional cost. This cost should be calculated properly taking into account various existing conditions in the field and possible future conditions. Consultation with stakeholders that have similar existing programs and reviewing the similar published program can support the project to be calculated properly.

☐ Financial sources

Up-front investment costs normally should be met as a defined part of the original project's investment costs, since the original project provides the basis for doing the biodiversity offset in the first place. Securing the funding for long-term recurrent costs is often a challenge; various options should be considered.

Step 5. Monitor Implementation of the Biodiversity Offset Activities and Results

Biodiversity offsets, like other kinds of conservation projects, merit significant investment in the monitoring of implementation as well as outcomes

☐ Implementation monitoring (Supervision).

Diligent monitoring of implementation by the responsible entity is important for achieving the desired outcomes on the ground, as summarized by the saying, "You get what you inspect, not what you expect." Where civil works (such as protected area facilities) are a part of the biodiversity offset, the bidding documents and contracts need to have sufficiently precise technical specifications. The offset documents should provide tools to supervise and monitor each offset's activities and programs. The monitoring of offsets program and activities should be recorded and reported periodically.

☐ Environmental rules for offsets team management and contractors

Environmental rules for offsets team management and contractors are required to be developed. The rules are used to ensure that the offsets teams (and workers) and contractors working well manner and do not cause undue impact while working on the offset site.

Rules such as these along with transparent penalties for non-compliance should be part of the relevant bidding documents and contracts for the biodiversity offset. Even more importantly, environmental rules are needed as part of the mitigation hierarchy, to minimize the biodiversity-related and other potential adverse impacts of the implementation offsets program and activities work that are part of the original development project.

☐ Outcome Monitoring

To verify that a biodiversity offset has indeed achieved its No Net Loss or other conservation objectives, some kind of field-based outcome monitoring is needed. Outcome monitoring is also an essential part of adaptive management: If the biodiversity offset is falling short of achieving its goals, monitoring can provide the information needed to effectively adjust project implementation to improve on-the-ground outcomes. The scope, duration, frequency, and budget for outcome monitoring activities should be defined as part of the preparation of a biodiversity offset document. Outcome monitoring activities should be designed.

- a. to be feasible to carry out in the field;
- b. to obtain much-needed information;
- c. to avoid undue complexity (such as too many indicators).

Outcome monitoring reports and data should be routinely shared with interested stakeholders, exceptions should be limited to special cases, such as when disclosing the precise locations of threatened plants or animals that could cause them harm. Interested citizens and volunteers often usefully assist with outcome monitoring within a biodiversity offset conservation area, along with other protection and management functions.

☐ Management Effectiveness Tracking Tool

For those biodiversity offsets involving some type of protected area (whether public or private), the Management Effectiveness Tracking Tool (METT) is a useful means to track progress in improving the quality of protected area management across a broad range of indicators. The METT was

developed by the World Wildlife Fund (WWF) International in collaboration with the World Bank Groups.

At its core, the METT is a standardized questionnaire about different aspects of protected area management, with a theoretical “perfect” top score of around 100. The METT provides a useful instrument for tracking the effectiveness of protected area management and setting future goals, whether or not the protected area in question is part of a biodiversity offset.

Due to the local context being an important consideration in the offsets developments program and activities, some adjustment of METT might be required. The offsets and documents should accommodate the potential adjustment of the tools and the final tools that can be used by the project should be provided by the project in the offset plan documents.

☐ Reporting and evaluation

The offsets implementation programs should be reported and evaluated periodically. The evaluation may require any change, improvement, termination or replacement of the offsets programs and activities. As a living document, the biodiversity of set plan documents can be changed periodically by the additional program and activities assessment in the evaluation report documents. However, specifically for the termination and replacement of the offsets program, the project must follow the step of the offsets program in the previous chapters.

d. Final Consideration

Biodiversity offsets pose many of the same issues and challenges as other types of conservation programs, from stakeholder engagement to careful site selection to long-term financial sustainability. Under the widely-adopted mitigation hierarchy, biodiversity offsets are legitimately viewed as a last resort, when other mitigation options are not sufficient to prevent significant biodiversity losses. In such circumstances, properly done offsets can improve the conservation outcomes from large-scale, private or public sector development projects (ideally to the point of Net Gain). Achieving positive conservation outcomes is by no means assured requires biodiversity offsets, including:

- ☐ to be adequate in their scale, scope, design, implementation, and monitoring;
- ☐ to avoid facilitating the approval of environmentally damaging projects that otherwise would likely not take place, and
- ☐ to avoid being used in cases where the loss of unique or irreplaceable sites could not feasibly be offset.

When considering or planning offsets, it is always important to refer to the specific requirements of each country and financing source, including (where applicable but not limited to) existing and future World Bank Group environmental standards and Biodiversity Offset Design Handbook by Business and Biodiversity Offsets Programme (BBOP).

e. Proposed Table of Contents

There is no mandatory table of contents for the biodiversity offsets management plan. Below are the potential proposed table of content applicable to each project. Adjustments and development still need to be done by the project based on the actual process of biodiversity offsets management plan on each site location.

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- 8. Biodiversity Offset Management Action**
 - 8.1. Management Action on The Protection and Conservation of Biodiversity Offsets Area
 - 8.2. Management Action on The Habitat and Species Inhabited Within Biodiversity Offsets Area
 - 8.3. Community Engagement and Development
 - 8.4. Government Liasion
 - 8.5. Strategic Enforcement
- 9. Biodiversity offset monitoring and evaluation program**
 - 9.1. Habitat and Species Monitoring and Evaluations
 - 9.2. Biodiversity Offsets Programs Monitoring and Evaluation
 - 9.3. Proposed Further Action
- 10. Budget and Financial Aspect**
 - 10.1. Estimation of Budget on Each Program
 - 10.2. Sources of Financing Biodiversity Offsets
- 11. Further steps and action**

3.4 GUIDELINES FOR STUDY ON DETERMINING TRANSMISSION LINE CORRIDOR WITH SCORING SYSTEM

PLN has developed a comprehensive guideline for conducting studies to determine transmission line corridors using a scoring system. This is outlined in the "Guidelines for Study on Determining Transmission Line Corridor with Scoring System, PLN Central Engineering 2020." The document meticulously analyzes influential parameters in determining the transmission line corridor, and subsequently assigns scores to these parameters.

The purpose of this guideline is to serve as a reference for establishing transmission line corridors. It aims to standardize the assessment and selection process for corridors dedicated to the construction of High Voltage/Extra High Voltage (SUTT/ET) and Direct Current High Voltage (SUTTAS) transmissions. Additionally, it is anticipated that decision-making in the selection of transmission line corridors will be made easier, faster, and based on justifiable grounds.

The stages for determining the transmission line corridor with the scoring system are as follows:

1. Gathering secondary data obtained from relevant institutions such as Regional Spatial Plans (RTRW), location maps, disaster area maps, and others, which will be used for a preliminary desk study.
2. Based on the secondary data, a desk study is conducted to select several alternative locations that meet absolute factors. Absolute factors are those that must be fulfilled or avoided to proceed to the next process (factors that absolutely disqualify alternatives).
3. Primary data is collected through field surveys and interviews at all alternative locations. If data or information related to absolute factors are not obtained in the secondary data and this causes the alternative location to not meet the absolute factor criteria, then that alternative location is disqualified.
4. Evaluation of common factors, including land and infrastructure criteria, technical, and socio-environmental aspects, is carried out for all alternative locations that meet the absolute factors based on the scoring system assessment.
5. Selection of the Alternative Transmission Line Corridor with the Highest General Factor Score.

Based on the combined assessment results above, the alternative that produces the highest total/combined value is chosen and declared in the official document determining the transmission line corridor. The flowchart below illustrates the process of determining the corridor.

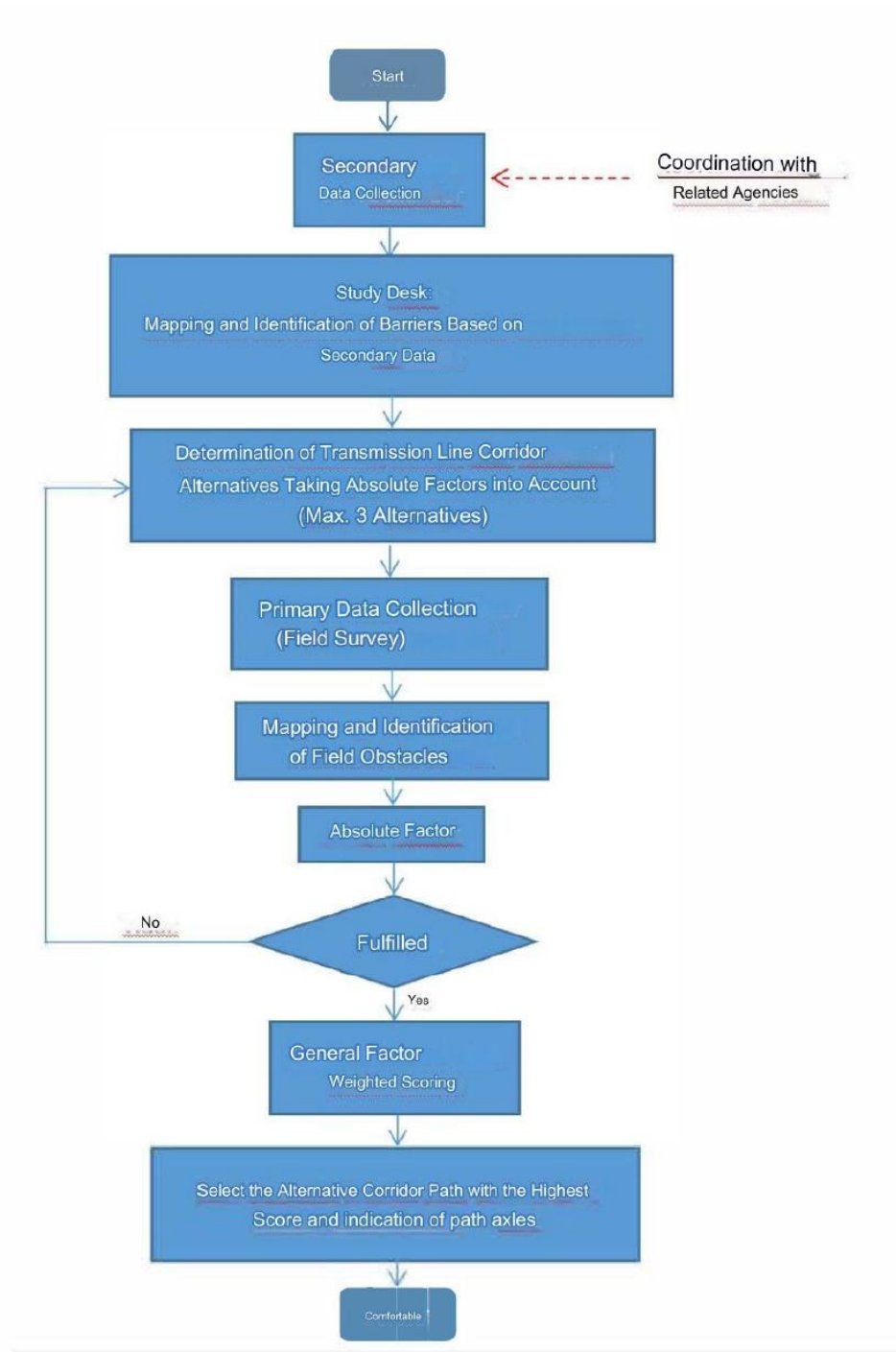


Figure 5.1 Flowchart for Determining Main Substation Locations using a Scoring System

Appendix 1
SCORING FORM FOR SUTT/SUTET/SUTTAS TRANSMISSION LINE CORRIDOR SELECTION *(fill in the Project name)*
ALTERNATIVE..... *(fill the alternative number e.g.: 1,2, etc)*

Project Name : *(fill in the project name)*
Path Length : *(fill in the estimated path length in km)*
Alternative : *(fill in the alternative transmission line corridor options)*

I. Absolute Factors

This is a factor that is mandatory when considering the selection of transmission line corridors

No.	Criteria	Parameter	Fullfill	Not Fullfill	Remark (Information)
1	Regulation	a. There are no Protected Areas			
		b. Not in the Aviation Traffic Safety Area			
		c. Not located in a military area			
		d. Not located in a historical heritage and/or cultural heritage area			
		e. In accordance with the Regional Spatial Planning (RTRW) and is not in area prohibited by local government regulations			
		f. Do not pass through sports, educational and religious areas			
2	Land	a. Do not cross densely populated residential areas			
		b. Not Passing through Amusement and Recreation Parks			
		c. Do not cross communication center areas and TV stations land			
		d. Do not cross peatlands			
3	Disaster - Prone	a. Not located in an area prone to flooding, <i>meandering or braided river</i>			
		b. Not located in an area prone to liquefaction			
		c. Not located in an area prone to ground movement			
		d. Not located in a tsunami-prone area			
		e. Not located in an area prone to tornado disasters Hight Risk Index			
		f. Do not cross areas prone to land fires (check map)			
		g. Not in the danger radius of areas prone to volcanic eruptions			
		h. Not located in a location of human activity with a high risk of disaster (mining exploration and parallel to a gas pipe with an inside radius transmission line ROW)			
Based on the assessment of the absolute factor criteria above, the alternative Transmission Line Corridor (PASS/FAIL)					

Annex E Stakeholder Engagement Framework

(separate document)

Annex F Land Acquisition and Resettlement Policy Framework

Annex G Indigenous Peoples Planning Framework

**The Indonesia Grid and Renewable
Energy Financing Facility (GREFi) -
P178788**

**Stakeholder Engagement
Framework
(SEF)**

PT Perusahaan Listrik Negara (PLN)

September 2024



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ABBREVIATIONS AND ACRONYMS

AMDAL	Environmental Impact Assessment
CLO	Community Liaison Officers
E&S	Environmental & Social
ESCP	Environmental and Social Commitment Plan
ESG	Environmental Social Governance
ESIA	Environmental and Social Impact Assessments
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plan
ESMS	Environmental and Social Management System
ESS	Environmental and Social Standard
FI	Finance Institution
FPIC	Free Prior Informed Consent
FS	Feasibility Study
GBV	Gender-based violence
GREFi	Grid and Renewable Energy Financing Facility
GRM	Grievance Redress Mechanism
IA	Impact Assessment
IBRD	International Bank for Reconstruction and Development
IFC	International Finance Corporation
IMS	Integrated Management System
IP	Indigenous Peoples
IPF	Indigenous People Framework
IPP	Indigineous People Plan
LA	Land Acquisition
LARAP	Land Acquisition and Resettlement Action Plan
LARPF	Land Acquisition and Resettlement Policy Framework
MKJ Division	Madura, Sumatra, Bali, and Jawa Division
MKS Division	Maluku, Kalimantan, Papua, Nusa Tenggara and Sulawesi Division
NGO	Non-Government Organization
PAI	Project Area of Influence
PLN	<i>PT Perusahaan Listrik Negara</i> or a state-owned utility company
RE	Renewable Energy
RKL-RPL	Environmental Management Plan and Environmental Monitoring Plan
RUPTL	<i>Rencana Usaha Penyediaan Tenaga Listrik</i>
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SEF	Stakeholder Engagement Framework
SPPL	Statement of Commitment to Implement Environmental Management and Monitoring

TA	Technical Assistance
TEK Division	<i>Transisi Energi dan Berkelanjutan</i> or Energy Transition Sustainability Division
TORs	Term of References
UIP	<i>Unit Induk Pembangunan</i>
UPP	<i>Unit Pelaksana Proyek</i>
UIW	<i>Unit Induk Wilayah</i>
UKL-UPL	Environmental Management and Monitoring
WB	World Bank
Y1 Y2	Year 1 Year 2

1 Introduction

1.1 Introduction to Project and SEF

The Indonesia Grid and Renewable Financing Facility (GREFi) (hereby referred as the GREFi Project or the Project) will improve the capacity of PT Perusahaan Listrik Negara (PLN) to use market-based sustainable finance instruments to implement its energy-transition strategy. Under this Project, the World Bank will provide a guarantee to mobilize commercial financing up to US\$ 1.5 - 2 billion for certain types of renewable energy (RE)-enabling projects, with the main focus on energy transmission and storage infrastructure that is critical for the integration of renewable energies and to support PT Perusahaan Listrik Negara (PLN)'s improvement of its Environmental, Social and Governance (ESG) programs.

This stakeholder engagement framework (SEF) describes how PLN will inform and engage stakeholders concerning the Project and future sub-projects and the ways they may be affected.

1.2 Objective of the Project

The main objective of the Project is to enable the deployment and integration of RE in the Indonesia's power sector through private capital mobilization. Investors' emphasis on ESG risks are putting increasing pressure on entities like PLN, who have a large coal-fired power asset base. Combined with corporate ESG capacity improvements supported under a separate Technical Assistance program, this Project aims to pilot and secure PLN's continued access to market-based sustainable financing instruments as a key financing source for Indonesia's long-term energy transition.

1.3 Project Description

As described in Chapter 2 of ESMF the GREFi Project, consists in one component: a US\$750 million IBRD Guarantee that would provide partial credit enhancement to mobilize up to US\$1.5-2 billion in PLN borrowing from participating commercial lenders and investors through a series of transactions. The Project will create a blended-financing vehicle to enable PLN's access to the Sustainable-Finance market at scale. The IBRD Guarantee is expected to facilitate PLN's access to sustainable-finance markets on improved terms and conditions due to the expected reduction in financing costs or increase in tenor. For each GREFi transaction backstopped by the IBRD Guarantee, PLN will have the flexibility to use the best fit-for-purpose sustainable finance instrument among the ones established in the market. The financing vehicle put in place under the proposed Project would provide incentives to PLN to meet pre-established ESG performance indicators compatible with its corporate commitments and low-carbon development pathway.

1.4 Potential Environmental and Social Impacts

The scope of the GREFi Project will be limited to sub-projects that are determine to be eligible following to the screening process in ESMF Chapter 2. The screening process is based on the ability of sub-project to meet World Bank standards for biodiversity, natural disasters, land acquisition, cultural heritage, labor and working conditions, Indigenous Peoples and presence of international waterways.

The environmental and social risks associated with each of the RE sub-projects will be defined in screening and impact identification and assessment processes defined through the ESMF. The E&S risks and impacts, particularly for RE sub-projects situated in remote and sensitive areas, could include:

- Biodiversity impacts such as habitat loss, degradation and/or fragmentation of habitats.
- Acquisition and/or voluntary donation of land. Land acquisition may be large scale and involve land that is under recognized customary ownership or management by Indigenous Peoples (IPs). This land acquisition may also result in physical or economic displacement to households.
- Loss of access to natural resources and ecosystem services.
- Direct and indirect health and safety impacts to communities generated through interactions with construction workforce, construction traffic, and informal in-migration into the area.
- Impacts to tangible and intangible cultural heritage.
- Risks to workers, including potential child and forced labor, violation of workers rights, and occupational health and safety risks.

Component 2 will present no risks, as it is intended to reduce risks at all PLN's projects.

2 Previous Stakeholder Engagement Activities

PLN engages stakeholders on many renewable energy projects, and issues that are raised by stakeholders are often similar at different projects. Table 2. 1 gives examples of typical concerns and issues, and the way in which they have been successfully addressed.

Regarding project level stakeholder engagement, for existing projects including those that will be screened in Y1 and Y2, PLN is expected to have stakeholder engagement programs including stakeholder engagement plans. Eligibility screening will consider past stake holder engagement, and will engage affected and potentially affected stakeholders to verify that the sub-project has engaged with them effectively. If necessary, the plans will be updated so they meet World Bank ESS 10.

Table 2. 1 Typical Concerns and Issues from Past Projects

Concerns from Past PLN Projects	Typical Responses
• Value of compensation for the buildings/assets and livelihood. • Sharecroppers/tenants will lose income from cultivating forestry land. • Cultural property and local wisdom should be considered. • Opportunity to work in project construction. • The lack of clarity regarding the presence of indigenous peoples and role and responsibility of government institutions that cover them can lead to indigenous peoples being vulnerable to project impacts. • Initial social situation, local people are not happy due to unresolved legacy issues with existing power plants. • The previous survey and planning not sufficiently consultative. • Customary matters not observed. • In general, broad community support not facilitated at a pre-condition for commencing field activities.	• Clarifications to the affected households regarding appraisal process by Licensed appraiser. • Rehabilitation assistance and livelihood restoration for such PAP. • PLN provides compensation and rehabilitation either on private or communal/village cemetery. • Consultation is important to hear/adopt local wisdom in the implementation of Land Acquisition. • The construction labor will prioritize to be recruited from local villages. • Conduct IP screening directly with field verification by traditional leaders, experts, and local governments. • Seek information and consult with affected communities on issues and concerns related to the power plant project that remain unresolved. • The project is responsible for promptly implementing the SEP and social management plan (including information

Concerns from Past PLN Projects	Typical Responses
	disclosure and consultative planning) from the start of the project cycle. • The SEP in the ESIA document needs to discuss in more detail stakeholder identification, analysis, and proposed strategies. • Availability of a social management consultant since the start of the project. • The process of community involvement needs to be carried out on an ongoing basis. • The process of stakeholder engagement should start at the planning stage and continue as the project starts. • Land acquisition (LA) shall be based on participatory planning of the project site. • The momentum of community and stakeholder engagement activities must be maintained and monitored during breaks in LA activities. • The project should consider customary land tenure systems and how to enforce traditional systems in LA and compensation payment systems. • Need internal project workshops on SEP/FPIC design, how to implement it, and how to assess processes and results on an ongoing basis. • An adequate and flexible budgeting system is needed to be responsive to field conditions.

3 Stakeholders Identification

Project stakeholders can be classified into three groups, namely, project-affected parties including vulnerable groups, and other interested parties:

“Project-affected parties” are persons, groups, communities and other entities within the Project Area of Influence (PAI) that are directly influenced (actually or potentially) by the project and/or have been identified as most susceptible to change associated with the project, and who need to be closely engaged in identifying impacts and their significance, as well as in decision-making on mitigation and management measures. This group of stakeholders include those who are likely to be affected by the project because of actual or potential risks or impacts to their physical environment, health, security, cultural practices, well-being, or livelihoods.

“Vulnerable Groups” are persons who may be disproportionately impacted or further disadvantaged by the project(s) as compared with any other groups due to their vulnerable status, and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project

“Other interested parties” are individuals/groups/entities that may not experience direct impacts from the Project but who consider or perceive their interests as being affected by the project and/or who could affect the project and the process of its implementation in some way. They include individuals, groups, or organizations with an interest in the project, which may be because of the project location, its characteristics, its impacts, or matters related to public interest. For example, these parties may include regulators, government officials, the private sector, the scientific community, academics, unions, women’s organizations, other civil society organizations, and cultural groups.

For the GREFi Project, stakeholders could be expected to be local population where specific investments are to be conducted, national and provincial government agencies, international development financial institutions, and non-governmental organizations. For sub-projects guaranteed by GREFi, the primary stakeholders would be those who could be affected by the sub-projects, as well as government at all levels.

A preliminary identification of stakeholders is provided in Table 3. 1.

Table 3. 1 Preliminary Stakeholders Identification

Governments	
National level (<i>Kementerian dan Lembaga/ K/L</i>)	National Development Planning Agency (BAPPENAS), Ministry of Energy and Mineral Resources (ESDM), Ministry of Environment and Forestry (KLHK), National Land Agency (BPN)
Provincial level	Regional Secretary (Sekda), Provincial Planning Agency (Bappeda), BPN, Environmental Agency (<i>DLH</i>), Manpower Agency
Regency/Municipality level	Regional Secretary (Sekda), Provincial Planning Agency (Bappeda), BPN, Environmental Agency (<i>DLH</i>), Manpower Agency, Transportation Agency, district office
Village Level	Village heads, village secretaries, village consultative bodies (BPD), youth organizations, PKK, village customary groups, health centers, village farmer/fisherman groups, etc.
Direct Project Affected Peoples (PAPs)	
Sub-category relevant in this Project	
PAPs – potentially to be affected partially on their land	Landowners, cultivator (<i>penggarap</i>), renter of land, IP community

PAPs – potentially have to be relocated	Landowners, cultivator (<i>penggarap</i>), renter of land, IP community
PAP as vulnerable groups:	- Informal settlers with family member person with disability - Informal settlers with elderly family member - Informal settlers with women as the head of household (or single-headed household)
PAP as Indigenous People	Customary leader, traditional leaders, clan leaders, nomadic groups or forest-dwelling communities.
Indirect Project Affected Peoples (PAPs)	Sub-category relevant in this Project
PAPs – potentially indirectly affected	- The people who live in or use the area around the project site and/or the access road to the project; - Street vendors, parking attendants, shopkeepers and restaurant owners who are in the path of the PLN transmission network installation.
	Sub-category relevant in this Project
CSOs/NGOs	- Those who are concerned and interested in forest and biodiversity conservation, or endangered species; - Those who are concerned and interested in Indigenous People and Cultural Heritage. - Those who are concerned and interested in rural development and renewable energy sector.
Potential Project Participants	Sub-category relevant in this Project
Contractors and Consultants	Engineers, experts, etc.
Category	Sub-category relevant in this Project
Development Institutions	- IFIs (ADB, AIIB, IsDB, etc.) - DFIs (JICA, USAID, DFC, KfW, etc.) - National Financial Institutions (banks)

Annex 2 provides more details on stakeholders of GREFi and sub-projects.

4 Stakeholder Engagement and Information Disclosure for GREFi Project

Prior to World Bank approval of the GREFi Project, there will be a public meeting on the ESMF, including this SEF, and PLN will define a 30 day period in which comments on the draft ESMF, including SEF, LARPF, and IPPF may be submitted. This SEF and subproject SEPs will be prepared in Bahasa and English and will be disclosed for public review and comment. In addition, SEPs and other subproject information will be published in other language(s) if needed for certain stakeholders, including vulnerable groups. SEPs will define and describe both the subproject information to be disclosed and the frequency and nature of disclosure. PLN will adapt its current disclosure protocols, including information presented on its website information, to reflect Project and subproject requirements. However, disclosure of subproject SEPs and other information will go beyond internet disclosure since stakeholders may not have access to the internet. Disclosure will be consistent with the Government of Indonesia regulation on Information Disclosure.

Information obtained during the disclosure period and this meeting will be considered by PLN in developing the final ESMF and its social frameworks, and by the World Bank in the E&S appraisal that comes before Board approval. Before the meeting, PLN will disclose the draft ESMF, and its social frameworks, announce the location and time of the meeting and how comments can be submitted. The announcements will be made on the PLN and World Bank websites.

PLN will deploy staff with relevant expertise to engage with different stakeholder groups meaningfully.

For affected community members, PLN may deploy Community Liaison Officers (CLO) who can regularly engage with local community members as a bridge between the affected community members and the project. The CLO is particularly useful when impact is significant; affected communities are not homogenous and information may not flow smoothly within the community; and they present distinctive cultural, linguistic and ethnic characteristics that may make direct engagement by PLN staff difficult. CLO may or may not be hired locally, but it is important to select a CLO who knows the affected local communities well.

Experts with academic background may provide useful information about stakeholders (e.g. affected IP communities), and technical experts can provide valuable information about the project impact. Care needs to be exercised about the deployment of such experts in stakeholder engagement processes since communication and people management skills are often as or more important for the success of stakeholder engagement than expert knowledge on impacts or stakeholder groups. The experts can be hired as a stakeholder engagement facilitator which understand the various types of barriers among stakeholders, able to facilitate meaningful discussion during stakeholder engagement process, and choose types of stakeholder engagement to gather stakeholders' feedback.

For other interested parties, PLN may appoint particular staff members with experiences in public relations and trained with communication skills. Some stakeholders may have particular concerns or interests that may go beyond the project. It is important to develop a corporate strategy or talking points on some critical concerns to ensure consistencies in messaging.

Table 5. 1 summarizes typical method and tools for the implementation of SEP at the level of overall GREFi implementation. The TEK Division in the PLN Headquarter and each individual sub-projects (UIP) whose loan is guaranteed by the World Bank may use any of these techniques in developing future consultation and engagement activities.

The ESMF, including this SEF, will be made available for public review at:

- PLN and World Bank websites

- PLN Regional Unit offices

Comments on the draft ESMF, including SEF, may be submitted to:

- Email address: investor.relation@pln.co.id
- PLN will consider all comments when preparing the final ESMF, including IPPF, LARPF, SEF.
- For each sub-project, the sub-project E&S documentation, including the SEP will be made available at:
 - PLN and World Bank website
 - PLN Regional Unit offices
 - Villages offices that are readily accessible to project-affected people
 - Sub-project offices

Again, all comments on the draft documentation will be considered when preparing the final documents and in PLN's final decisions on the subprojects.

5 Stakeholder Engagement During Sub-Project Implementation

For subprojects that have been under operation, the project proponent should do stakeholder mapping and develop a strategy to engage with key stakeholders in particular non-governmental ones and develop a Grievance Redress Mechanism (GRM). For subprojects which are still at the planning phase, Stakeholder Engagement Plan (SEP) will be developed ASAP (if planning is in an advanced stage) and later (when the project concept has firmed up). PLN should develop and implement a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of each sub-project and its potential risks and impacts and must be in consultation with the Bank. A draft of the SEP will be disclosed as early as possible. The SEP will be a living document that is updated and disclosed when there are changes to the sub-project and to engagement methods. Similar to above, subprojects should refer to Stakeholder Engagement Management Guideline which part of PLN's ESMS documents when developing their own SEP.

For some sub-projects with limited risks, PLN will engage the stakeholders but a stand-alone SEP may not be required. In such cases, PLN's engagement process will need to be described in another E&S instrument.

Stakeholders will differ between locations and types of sub-projects. For example, construction of transmission lines inside protected forests where Indigenous People (IP) communities are present will have very different sets of stakeholders for construction of distribution lines in semi-urban areas with mostly modified habitats. Stakeholder will be identified at the beginning of preparation of each sub-project.

Each SEP will provide clear and accurate information about sub-project activities and status, and will describe how this information will be disclosed to stakeholders. It will also describe where formal engagement events (meetings, workshops, conferences, etc.) will take place, when and how often they will be held, and who will be responsible. If stakeholders include vulnerable groups, the SEP will provide appropriate means for them to receive information and to provide information and concerns to PLN.

More details on the examples of topics to consider when implementing sub-project SEP is provided in **Annex 3**.

Table 5. 1 Typical Stakeholder Engagement under the GREFi Project

Project Component	Topic of Engagement	Target Stakeholders	Methods and Tools	Engagement Activities	Time Frame	Responsibilities
<i>Disclosure of E&S assessments and instruments for subprojects (ESDD, ESIA, ESMP, BMP, LARAP, SEP, etc.)</i>	Disclosure of PLN Program for public review and comment (not limited to E&S topic)	• National and Provincial Governments • Financial Institutions • NGOs • Public	Public meeting	• Release of draft documents • Receipt of comments • Development of final documents	30 days	PLN
<i>Existing projects (Y1)</i>	Past stakeholder engagement and community acceptance	• Potential and affected people • NGOs and other stakeholders with potential interest in the projects	• Meetings • Interviews	• Evaluation of engagement process and past engagement process • Any unmitigated/ legacy impacts and unaddressed concerns • Existing GRM	During screening	PLN
<i>New & in-planning projects (Y2++)</i>	• Scoping • E&S instruments • Sub-project performance	• Government • NGOs • Potential affected people • Other interested parties	• Meetings • Interviews • Disclosure • GRM	• Seeks opinions • Disclose documents • Report on performance • Implement GRM	Throughout project planning & implementation	PLN

5.1 Purpose of Stakeholder Engagement Plan

The SEP will be developed for each sub-project which aims to:

- Allows the sub-project to ask for and receive diverse views from broad stakeholders regarding project design, implementation risks, impacts, and mitigation measures;
- Helps the sub-project in developing strong, constructive and responsive relationships with people impacted by the sub-project, including through development of accessible Grievance Redress Mechanism (GRM);
- Support sub-project supervision and help identify potential environmental and social issues early;
- Improve the environmental and social sustainability of the sub-projects, their acceptance and outcomes, and contribute to successful project design and implementation.

5.2 Development of Stakeholder Engagement Plan

A Stakeholder Engagement Plan (SEP) will be developed and disclosed before project activities can start in parallel with preparation of the E&S instruments (ESDD, ESIA, ESMP, BMP, LARAP etc.). It must adhere to the principles defined within this guideline and ensure that the scope and level of detail is commensurate with and proportionate to the nature and scale, potential risks, and impacts of the project and the concerns of the stakeholders who may be affected by or are interested in the project.

The SEP should be clear and concise. The main function of SEP is to record the list of stakeholders identified, inputs received by them during the preparation stage and how the project will engage with them differently depending on their needs and preferred communication channels throughout the project lifecycle. Annex 1 provides the structure of a typical SEP which part of Stakeholder Engagement Management Guideline, with the steps involved in its preparation shown within **Error! Reference source not found.** below and described further below.

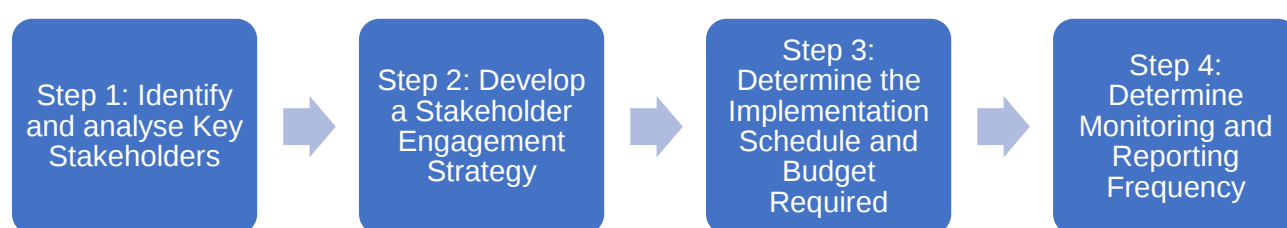


Figure 5. 1 Steps for developing stakeholder engagement plan

Step 1: Identify and analyse key stakeholders

See Chapter 3 on stakeholder identification and analysis, based on the process of stakeholder identification, Mapping, and analysis. The below table defines the minimum level of information required in developing this component of the SEP:

Table 5. 2 Example of data result from stakeholder analysis

Community	Stakeholder Group	Details	Interest	Authority	Stakeholder Engagement Level	Stakeholder Priority
Village A	Women group	20 persons per village	High interest	Low influence	Keep inform	secondary stakeholders
Village B	Hamlets leaders	Each village has 5 hamlet leaders (a, b, c, d, e)	High interest	High influence	Keep satisfied	primary stakeholders

Stakeholders can include three categories:

- **Affected Parties** – persons, groups and other entities within the Project Area of Influence (PAI) that are directly influenced (actually or potentially) by the project and/or have been identified as most susceptible to change associated with the project, and who need to be closely engaged in identifying impacts and their significance, as well as in decision-making on mitigation and management measures.
- **Other Interested Parties** – individuals/groups/entities that may not experience direct impacts from the Project but who consider or perceive their interests as being affected by the project and/or who could affect the project and the process of its implementation in some way; and
- **Vulnerable Groups** – persons who may be disproportionately impacted or further disadvantaged by the project(s) as compared with any other groups due to their vulnerable status¹, and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project.

The stakeholder's list is developed as early as possible in the project stage, is the core basis for development of the SEP, and must be updated regularly along the project Lifecycle. The SEP accompanying documents will require the project to maintain stakeholder contact details, concern about the project, and as much as possible information about the stakeholder's interaction with / attitude towards the project to decide stakeholders' priority. Information may also vary on stakeholders needs¹ and expectation. This information could be gathered through surveys, interviews, and analyzing existing data.

¹ Examples may include (i) Women: ensure that community engagement teams are gender-balanced and promote women's leadership within these, design online and in-person surveys and other engagement activities so that women in unpaid care work can participate; consider provisions for childcare, transport, and safety for any in-person community engagement activities; there may also be women who face multiple challenges, for example, indigenous women, women with disabilities, etc. (ii) Elderly and people with existing medical conditions: develop information on specific needs and explain why they are at more risk and what measures to take to care for them; tailor messages and make them actionable for particular living conditions (including assisted living facilities), and health status; target family members; (iii) People with disabilities: provide information in accessible formats, such as braille or large print; offer multiple forms of communication, such as text captioning or signed videos, text captioning for the hearing impaired, and online materials for people who use assistive technology; and (iv) Children: design information and communication materials in a child-friendly manner and provide parents with skills to handle their own anxieties and help manage those in their children.

Step 2: Develop a Stakeholder Engagement strategy

Referring to chapter 4 on stakeholder engagement approaches, the information of arising from stakeholder identification, analysis and assigning stakeholder priority can be used to decide type of stakeholder engagement method to gather information or to engage the particular group or individual. The stakeholder engagement map results can be used to decide the stakeholder engagement type as follow:

- **High-Power/High-Interest Stakeholders:** These stakeholders are both influential and highly interested in the project. Engage them through more interactive methods that allow for in-depth discussions and collaborative decision-making. Examples include workshops, focus groups, advisory panels, and partnership collaborations.
- **High-Power/Low-Interest Stakeholders:** Even if they are not highly interested, these stakeholders have significant influence. Use methods that efficiently deliver essential information and updates, such as targeted emails, personalized briefings, and occasional one-on-one meetings.
- **Low-Power/High-Interest Stakeholders:** These stakeholders are interested but lack substantial influence. Engage them through methods that provide platforms for sharing their opinions and concerns. Online surveys, open forums, and social media campaigns can be effective.
- **Low-Power/Low-Interest Stakeholders:** With limited influence and interest, these stakeholders might require minimal engagement. Standard communication channels like newsletters, general announcements, and informational web pages can suffice.

Ensure that the chosen methods are accessible to all stakeholder groups, considering factors like language, technology access, and physical constraints. Additionally, evaluate the resources (time, budget, personnel) needed to execute each method effectively. These aspects can be integrated into tables as shown below, which define the minimum level of information required in developing this component on an SEP.

Table 5. 3 Example of engagement strategy

Community	Stakeholder group	Preferred notification	Specific needs	Stakeholder mapping result	Engagement strategy
Village A, Women group	Affected parties	Written information, radio	Childcare for meetings—late afternoon preferred timing	Low-Power/High-Interest Stakeholders	Open forum
Village B, Hamlets leaders	Affected parties	Visit with translator and civil society representative	Graphics, education on process	High-Power/High-Interest Stakeholders	Advisory meeting

Table 5. 4 Example of engagement strategy for each project lifecycle

Project stage	List of information to be disclosed	Methods proposed	General Timetable	Target stakeholders	Percentage reached	Responsibilities
Construction	Traffic management plan	Notification Radio News 100.6 and copy in village hall Poster on community bulletin board	Radio twice daily in weeks of disclosure	Villagers, including pedestrians and drivers	Radio News 100.6 reaches 60% of village Poster on bulletin board reaches another percentage of the population	Community Liaison Officer

The stakeholder engagement strategy needs to be flexible and adjusted based on the stakeholder response and changing circumstances. This is defined through an ongoing monitoring process that solicits feedback from stakeholders to assess whether their needs are being met and whether adjustments are required.

Step 3: Determine the Implementation Schedule and Budget Required

Once the overall strategy has been developed, the community liaison team makes a comprehensive list of all the engagement activities planned to undertake. This could include events, meetings, surveys, communication materials, workshops, and more. The engagement activities are broken down into smaller components. For example, if the project is planning a workshop, consider expenses like venue rental, materials, facilitator fees, refreshments, and travel. A sample of a schedule and methodology is shown within the below table.

Table 5. 5 Example of stakeholder engagement schedule

Project stage	Topic of consultation	Method used	Exact Timetable: Location and dates	Target stakeholders	Responsibilities
Construction	Traffic safety	Discussion with village schools Public meeting	ABC elementary school September 4, 3:00 p.m. Village A town hall September 8, 5:30 p.m.	Parents and children in village Community	Community Liaison Officer (CLO) Transportation Engineer, Manager, CLO

This needs to be accompanied by calculation of the costs of personnel who will be involved in planning, organizing, and executing the engagement activities. This includes staff time, salaries, and any additional support required. Budget allocation includes technology platforms, tools, or software for communication, surveys, or virtual meetings, consider their associated costs. The costs of materials, supplies, printed materials, signage, and any resources needed for engagement activities are estimated by during each engagement or during campaign to disclose information. A review of the total budget estimated and prioritized activities is based on their importance and alignment with the project engagement objectives. As the engagement plan progresses, monitor actual expenses and

compare them to the budget, with adjustments made accordingly and reacting to any required changes in engagement strategy. A sample budget format is shown within the below table.

Table 5. 6 Example of stakeholder engagement budget

Budget Category	Quantity	Unit Costs	Times/Years	Total Costs	Remarks
1. Estimated staff salaries* and related expenses					
1a. [E.g., communication consultant]					
1b. [E.g., travel costs for staff]					
1c. [E.g., estimated salaries for Community Liaison Officers]					
2. Events					
2a. [E.g., organization of focus groups]					
3. Communication campaigns					
3a. [E.g., posters, flyers]					
3b. [E.g., social media campaign]					
4. Trainings					
4a. [E.g., training on social/environmental issues for PIU and contractor staff]					
4b. [E.g., training on gender-based violence (GBV) for Project Implementing Unit (PIU) and contractor staff]					
5. Beneficiary surveys					
5a. [E.g., mid-project perception survey]					
5b. [E.g., end-of-project perception survey]					
6. Grievance Mechanism					
6a. [E.g., training of GM committees]					
6b. [E.g., suggestion boxes in villages]					
6c. [E.g., GM communication materials]					
7. Other expenses					
7a. [insert]					
TOTAL STAKEHOLDER ENGAGEMENT BUDGET:					

Step 4: Determine Monitoring and Reporting Frequency

Describe SEP monitoring and reporting arrangements. Include indicators, for example, number of community meetings held to discuss project progress, number of information boards displayed, etc.). Describe involvement of stakeholders in monitoring activities, if applicable.

The SEP will be periodically revised and updated as necessary in the course of project implementation. Summaries and internal reports on public grievances, enquiries, and related incidents, together with the status of implementation of associated corrective/preventive actions, will be collated by responsible staff and referred to the senior management of the project. Every six months summaries report will provide a mechanism for assessing both the number and nature of complaints and requests for information, along with the Project's ability to address those in a timely and effective manner.

Information on public engagement activities undertaken by the Project during the year may be conveyed to the stakeholders in various ways such as through PLN website or community meeting.

6 Grievance Redress Mechanism (GRM)

Part of the stakeholder engagement process is providing stakeholders with a mechanism for communicating concerns and issues to PLN and to know they will be considered². A Grievance Redress Mechanism (GRM) provides a transparent and credible process for fair, effective and lasting outcomes. It also builds trust and cooperation as an integral component of broader community consultation that facilitates corrective actions. Specifically, the GRM:

- Provides affected people with avenues for making a complaint or resolving any dispute that may arise during the implementation of project.
- Ensures that appropriate and mutually acceptable redress actions are identified and implemented.
- Supports accessibility, anonymity, confidentiality and transparency in handling grievances and grievances.
- Provides an avenue for dispute resolutions outside the court.

The main principle of a Grievance Mechanism (GM) is an accessible and inclusive system, process, or procedure that receives and acts upon complaints and suggestions for improvement in a timely fashion and facilitates resolution of concerns and grievances arising in connection with a project. An effective grievance mechanism provides project-affected parties (external) and PLN's workers as well as contractor's workers (internal) with redress and helps address issues at an early stage and along the project lifecycle (pre-construction, construction, operation).

A grievance mechanism is established as early as possible (for ESIA and land acquisition process) in project development and supported by appropriate tools, human and financial resources. The mechanism provides specific places and ways whereby grievances would be received and the means by which they can be submitted (for example, mail, text message, e-mail, website, telephone, suggestion / complaint boxes, grievance form); specifies a person, an office, or an institution responsible for processing grievances; and establishes timelines for processing a complaint and a process for registering and monitoring grievances. Grievance mechanisms for larger or more complex projects may have multiple locations, means, and methods to receive, process, and monitor grievances, an adequately staffed team, and an appeals process. Vocal points should be appointed within an organization structure as a responsible person to monitor and to coordinate the grievance resolution.

The grievance mechanism will be proportionate to the potential risks and impacts of the project and will be accessible and inclusive. Where feasible and suitable for the project, the grievance mechanism will utilize existing formal or informal grievance mechanisms, supplemented as needed with project-specific arrangements.

The grievance mechanism is expected to address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. The mechanism, process, or procedure will not prevent access to judicial or administrative remedies. The PLN will inform the project-affected parties about the grievance process

² The mechanism described in this section is for external stakeholders. Separate mechanism will be in place for project workers.

in the course of its community engagement activities and will make publicly available a record documenting the responses to all grievances received.

Example of topic that can be reported through the project's GRM are

- For external stakeholders: land claim information about the project footprint during pre-construction, disruption of increase noise to the surrounding community during construction, and unfair worker selection (submission of these issues may start from reporting it to Onsite Security Officers and they continue the report process to K3L division)
- For internal stakeholders: gender-based violence topic: sexual abuse, bullying; other: unsafe behavior in workplace, thief, and harassment (submission of these issues may start from reporting it to Human Resource or dedicated whistle blower personnel/platform or K3L division)

PLN will provide multiple ways for stakeholders to submit grievances, including comment boxes, email boxes, voicemail boxes, mailing address, etc. For the Tranche 1 GREFi, stakeholder comments and concerns about GREFi Project may be submitted to PLN as follows:

- Telephone number: TBD
- Email address: TBD
- Mail address:
 - A. UIP SBT: Jl. Purwodadi No.150a, Sidomulyo Bar., Tampan, Pekanbaru, Riau 28289
 - B. UIP SBS: Jl. Residen Abdul Rozak No.99, 8 Ilir, Kec. Ilir Tim. II, Palembang, South Sumatera 30163

Eligibility screening for existing projects in Y1 will identify if potential sub-projects are implementing affected GRM and may need to fill gaps if sub-project is determined to be eligible.

PLN has assigned the responsibility for managing the GRM for the GREFi Project to MKJ and MKS Division. Grievance will be registered, assigned to a person to investigate and identify solutions, and the solution adopted and implemented. This will be communicated to the complaint who may accept or may appeal to the court.

Sub-project SEPs will identify the means by which grievances and other communications may be submitted and to whom they may be submitted. Grievances will be logged, assigned to a responsible person, investigated, addressed/resolved, and reported back to the grievant, and with each step in the process documented.

The GRM Form is presented in **Annex 4**.

7 Institutional Arrangement for SEP Implementation

MKJ and MKS Division will coordinate with TEK Division are responsible for the stakeholder engagement at the GREFi Project Level. UIP will coordinate with UPP are responsible for developing and implementing sub-project SEPs, and PLN and project contractors will assign specialized staff to be responsible for managing engagement with stakeholders and the GRM process for sub-projects.

SEP includes cost estimates for each of activity or set of activities implementation, including long-term recurrent costs (when specific approach needs to be implemented regularly such as grievance resolution). Confirm that an adequate budget has been allocated toward stakeholder engagement activities and where the source adequate budget sourced from. The budget for the implementation of the Stakeholder Management at the corporate level is under the budget for implementing the Corporate Secretary program. While Stakeholder engagement budget in each Unit is allocated under

each Implementing Sub Units and are included in the Work Plan and Budget Company (RKAP) for each work unit. The stakeholder engagement is implemented along the project stage/lifecycle as such the resource allocation (fund and human resource for all components of stakeholder engagement activities) is built in within the project budget.

7.1 Roles of key personnel in stakeholder engagement

PLN staff assigned to stakeholders engagement should play an important role in terms of :

- Provide clear, factual and accurate information in a transparent and sustainable manner to community stakeholders through free, prior and informed consultation;
- Provide opportunities for community stakeholders to raise issues, make suggestions and voice their concerns and expectations regarding the Project;
- Responding to issues and requests for permission;
- Provide feedback to stakeholders on how their contributions have been considered in the preparation of relevant studies and plans. Community and stakeholder engagement in the preparation of the ESIA (AMDAL) will be incorporated at the time of approval of the RKL-RPL documents through consultation with the ESIA (AMDAL) Technical Team. This also applies at the time of public consultation to determine proposed project sites that require land acquisition. Input and suggestions from relevant stakeholders will be used to refine the project documents with specific mentions to indicate where stakeholder input has been taken.
- To fulfil the role the key project personnel involved in stakeholder engagement must have sensitivity and empathy towards the target group by means of:
- Treat all community stakeholders with respect, and ensure that all Project personnel and contractors in contact with community stakeholders do the same;
- Willing to listening and learning about local language and local custom;
- Pay attention to and prioritize the presence of vulnerable groups affected by the project, such as persons with disabilities, the elderly, the poor, indigenous peoples, as well as those with authority and power;
- Employ appropriate communication modalities for each target group, and take into account additional measures needed to reach persons with disabilities.

8 Monitoring and Reporting

SEPs for subprojects will include requirements for contractors to report details of important stakeholder engagement to PLN Regions, and PLN Regions will provide periodic reports to PLN TEK Division information on both formal and informal engagement. Contractor and Supervising Consultant reporting requirements will be defined in contracts, and will include summaries of grievances and resolutions, including grievances that remain unresolved. The GREFi ESCP will define what, and when, PLN has to report to the World Bank.

9 Change Management

This SEF will be reviewed by PLN TEK Division on at least an annual basis and revised as needed to improve stakeholder engagement and grievance management; if no changes are needed, this will be

approved by TEK management. Similarly, PLN will review and update subproject SEPs on a semi-annual basis during construction, and an annual basis during operation.

ANNEXES

Annex 1

Stakeholder Engagement Management Guideline

1. Introduction

PLN recognizes the importance of open and transparent engagement with project stakeholders in improving the environmental and social sustainability of projects and enhancing project acceptance among broad stakeholders. PLN understands that stakeholder engagement is an inclusive process conducted throughout the project life cycle, commencing early in project or activity development as an integral part of project decisions processes. Supporting this is the recognised need for an inclusive and functioning Grievance Redress Mechanism (GRM) that allows for proactive management of concerns and grievances from project affected parties and helps to achieve and maintain a “social license to operate”.

This guidance is developed based on international stakeholder engagement process as well as main guidance on stakeholder engagement in PLN. The main reference for Stakeholder Engagement Management Guideline (SE MG) is detailed in the chapter 11. References.

2. Disclaimer

This guideline provides an overall guidance to the PLN staff when a project or activity is implemented where specific stakeholder engagement approach is needed, however, additional requirements may be applied to respective project or activity depending on the policy or standard of the financier. This guideline will also be updated from time to time based on the changes in applicable policies, standards and regulations.

This guideline should not be taken as a standard, regulation, or manual. It provides general guidance to PLN staff on how to engage with broad stakeholders including but not limited to project affected people. The guideline does not provide detailed work instructions such as how to engage with specific stakeholder groups for respective projects. Such detailed work instructions will be provided in project level Land Stakeholder Engagement Plan (SEP) as stakeholder groups and their interests will vary between projects. This guideline is also not directly applicable in circumstances where impacts to Indigenous People requires projects to secure Free, Prior, and Informed Consent (FPIC), with the consultation mechanisms to be defined through an Indigenous Peoples Plan (IPP) which will supplement any SEP.

Any revision that needs to be made to this guideline will be made following the terms and conditions in the ESMS' Management of Change. If any revision is made; references, rationales and amended parts should be clearly defined. Also, any changes to this guideline may potentially trigger updates to such procedures.

This guideline should be reviewed, implemented, and/or enforced by and to PLN staffs with relevant authorities and competencies specified in the ESMS Manual Chapter 3. Any changes to this guideline may potentially trigger the need to update other related guidelines or procedures.

PLN's Safeguard Team (consisted of TEK Div and K3L Div) should be fully informed and adequately consulted for any update, deviation, or suggestion upon implementation of this guideline.

This guideline should be read with relevant parts of other guidelines, such as the guideline on land acquisition and resettlement guideline, and Indigenous peoples guidelines.

3. Objective of Stakeholder Engagement

PLN will engage with broad stakeholders and develop the Stakeholder Engagement Plan (SEP) for respective projects or investments to achieve the following objectives:

- Allows the project to ask for and receive diverse views from broad stakeholders regarding project design, implementation risks, impacts, and mitigation measures;
- Helps the project in developing strong, constructive and responsive relationships with people impacted by the project, including through development of accessible Grievance Redress Mechanism (GRM);
- Support project supervision and help identify potential environmental and social issues early;
- Improve the environmental and social sustainability of the sub-projects, their acceptance and outcomes, and contribute to successful project design and implementation.

4. Key Principles for Stakeholder Engagement

The PLN commits to applying the following principles in engaging with its stakeholders.

- **As a platform to provide clear, accurate information and timely communication:** the Project should provide information that is clear, accurate, relevant and timely, recognizing the different communication needs and preferences of various stakeholders and that effective communication involves listening and talking;
- **Accessibility and Inclusivity:** The Project will seek out stakeholders potentially affected by, or interested in, the activities, processes, or decisions of PLN or participating governments and provide them with whatever information they need to participate in an appropriate and meaningful way; particularly for people with special needs/ people with disabilities.
- **Transparency:** management should clearly identify and explain the engagement process, stakeholders' role in the engagement process, and communicate how their input was considered and how it informed the decision or Project; and
- **Measurability:** evaluating engagement activities will assist in identifying effective stakeholder engagement methods and improve the quality of stakeholder engagement over time.
- **Sensitivity and oriented towards public health safety:** as Covid-19 cases are still being a concern of public health in Indonesia (and across the globe), all stakeholders engagement activities will have to follow the Covid-19 health and to adjust the plan as appropriate, while meeting the engagement objectives.
- **Confidentiality:** Whenever complainant requests for a confidential-reporting, after verifying the complaint (whenever possible), Grievance Redress officer/social specialist /OHS officer in UIP or UIW should remove any identities attached to the complainant and to ensure that there is no information that can lead to identification of the complainant.

5. Stakeholder Identification and Analysis

5.1 Stakeholder Identification

Project stakeholders can be classified into three groups, namely, project-affected parties including vulnerable groups, and other interested parties:

“Project-affected parties” are persons, groups, communities and other entities within the Project Area of Influence (PAI) that are directly influenced (actually or potentially) by the project and/or have been identified as most susceptible to change associated with the project, and who need to be closely engaged in identifying impacts and their significance, as well as in decision-making on mitigation and management measures. This group of stakeholders include those who are likely to be affected by the project because of actual or potential risks or impacts to their physical environment, health, security, cultural practices, well-being, or livelihoods.

“Vulnerable Groups” are persons who may be disproportionately impacted or further disadvantaged by the project(s) as compared with any other groups due to their vulnerable status³, and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project.

“Other interested parties” are individuals/groups/entities that may not experience direct impacts from the Project but who consider or perceive their interests as being affected by the project and/or who could affect the project and the process of its implementation in some way. They include individuals, groups, or organizations with an interest in the project, which may be because of the project location, its characteristics, its impacts, or matters related to public interest. For example, these parties may include regulators, government officials, the private sector, the scientific community, academics, unions, women’s organizations, other civil society organizations, and cultural groups.

The process to identify stakeholders captures the following:

(a) First, at the beginning of the environmental and social assessment for the project, the PLN develops a list of project-affected and other interested parties, paying special attention to classifying and identifying disadvantaged or vulnerable groups. Information from any preliminary social impact assessment or screening exercises (eg RESA) can inform this list.

(b) Second, other interested parties are identified by listing relevant interest groups, and considering historical issues, social relations, relationships between local communities and the project implementer, and any other relevant factors related to the sector and location that help anticipate local and external responses to the project. (c) Third, it is advisable to conduct discussions with representatives of the stakeholders identified and with persons knowledgeable about the local, country, and sector contexts. In some circumstances, media and social media searches may help to verify the list and identify any other project-affected or interested parties and to contact them. Specific attention is given to identifying any disadvantaged or vulnerable groups.

Depending on the societal context, women, children, youth, and the elderly or other groups may need to be considered as **stakeholder groups** of their own, and separate consultation formats may be needed to capture suggestions and concerns.

³ To be defined in accordance with prevailing regulations and project context, and typically includes elderly, households with disabled family members, female headed households, illiterate community members etc

PLN will identify those project-affected parties (individuals or groups) who, because of their particular circumstances, may be disadvantaged or vulnerable⁴. Based on this identification, PLN will further identify individuals or groups who may have different concerns and priorities about project impacts, mitigation mechanisms, and benefits, and who may require different, or separate, forms of engagement. An adequate level of detail will be included in the stakeholder identification and analysis so as to determine the level of communication that is appropriate for the project.

Various types of barriers may influence the capacity of disadvantaged or vulnerable groups to articulate their concerns and priorities about project impacts. These barriers can be linked to sociopolitical, societal conflict, educational, or practical factors. For example, barriers can exist for ethnic, linguistic, and religious minorities; low-income households; women; youth; persons with limited mobility; or persons with disabilities. An array of strategies can be deployed to mitigate these obstacles by focusing on issues of accessibility, communication, empowerment, and/or confidentiality. It is important to put in place measures for ensuring that stakeholders, and especially vulnerable and disadvantaged groups, are able to safely participate in consultations and that consultations are free of coercion and duress.

An inclusive engagement process aims to empower all relevant stakeholders to participate. This participation includes systematic engagement with, for example, women, children, youth, the elderly, people with disabilities, and other vulnerable or disadvantaged groups.

⁴ Disadvantaged or vulnerable refers to those who may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of a project's benefits. Such an individual/group is also more likely to be excluded from/unable to participate fully in the mainstream consultation process and as such may require specific measures and/or assistance to do so. This will take into account considerations relating to age, including the elderly and minors, and including in circumstances where they may be separated from their family, the community, or other individuals upon which they depend.

In the absence of an environment and social impact process can make stakeholder analysis more challenging, there are still several steps for a project that can start the process:

1. Define the project or initiative: Clearly articulate the goals, objectives, and scope of project. Understand what the project aims to achieve and the potential risk and impact it may have on the environment and social aspect.
2. Identify potential stakeholders: Brainstorm among internal project implementation teams and make a list of individuals, groups, or organizations that could be affected by or have an interest in the project. Think broadly and consider various categories, such as local communities, project affected people, government agencies, non-profit organizations, industry associations, contractors, and employees.
3. Prioritize stakeholders: Once the project has identified potential stakeholders, prioritize them based on their level of influence and impact on the project. Consider factors such as their position, authority, expertise, and the potential consequences they may have on your project's success.
4. Gather information of similar project components (typical transmission line or BESS): Research and gather information about each stakeholder to better understand their interests, concerns, values, and objectives. Look for publicly available information, such as websites, annual reports, news articles, and social media profiles. Additionally, reach out to relevant contacts or organizations to gather insights and perspectives.
5. Analyze stakeholder interests and influence: Evaluate the interests and concerns of each stakeholder and assess their potential influence on the project. Consider their potential to affect the project positively or negatively, and how important their support or opposition may be.
6. Engage with stakeholders: Develop a plan to engage with the identified stakeholders. This could involve conducting meetings, workshops, surveys, or interviews to gather their input and feedback about the project design. Seek to understand their perspectives, address their concerns, and explore potential collaboration opportunities.
7. Update stakeholder information: As the project progresses, continuously update and refine the stakeholder information. Stakeholders and their interests can change over time, so it is important to stay informed and adapt stakeholders' engagement strategies accordingly.

While the absence of an environment and social impact process may limit the available resources and guidance, these steps can help a project to begin the stakeholder analysis and identification process. It is important to remain proactive, flexible, and open to feedback from stakeholders to ensure their interests are considered throughout the project.

5.2 Stakeholder Mapping and Analysis

As mentioned, stakeholders can be broadly classified into three groups, namely, project-affected parties including vulnerable groups, and other interested parties. For the purposes of effective and tailored engagement, stakeholders are to be mapped and analysed in light of the following aspects:

1. **Influence:** Assess the level of influence each stakeholder has over your project. Consider factors such as their decision-making power, authority, resources, and expertise. Stakeholders with high influence can significantly impact the success of your project, so it's important to identify and engage with them effectively. Example of high influence stakeholders in general: A head of village has higher influence due to their current position compared to a villager without any position in the village government body.
2. **Interest:** Evaluate the level of interest each stakeholder has in your project. Determine how much they are affected by or involved in your project's outcomes. Stakeholders with high interest are more likely to actively engage, so it's crucial to address their concerns and

incorporate their feedback. Example of high interest stakeholders in general: Land owners (vegetable farmer) living in the project's footprint has higher interest to the land acquisition consultation process compared to a community member who is living 5 KMs away from the project's footprint that only comes to this location for buying a small quantity vegetable.

3. **Goals and Objectives:** Understand the goals and objectives of each stakeholder. Identify their motivations, priorities, and desired outcomes related to your project. This understanding will help you tailor your communication and engagement strategies to align with their interests.
4. **Attitudes and Influence Networks:** Consider the attitudes and relationships between stakeholders. Identify potential alliances, conflicts, or dependencies among stakeholders. Understanding their influence networks can help you navigate complex stakeholder dynamics and anticipate potential challenges.
5. **Communication Preferences:** Recognize the preferred communication channels and styles of each stakeholder. Some stakeholders may prefer face-to-face meetings, while others may prefer written communications or online platforms. Adapting your communication approach to suit their preferences can enhance engagement and collaboration.
6. **Prioritization:** Once you have assessed influence, interest, goals, and attitudes, prioritize stakeholders based on their significance to your project. Categorize stakeholders into groups such as primary stakeholders (high influence, high interest), secondary stakeholders (low influence, high interest), key influencers, or potential blockers. This prioritization helps allocate resources and focus efforts on engaging with stakeholders effectively.
7. **Ongoing Monitoring and Updates:** Stakeholder mapping is not a one-time activity. Stakeholder dynamics can change throughout the course of a project, so it's important to regularly review and update stakeholder mapping diagram. Keep track of any changes in stakeholders' interests, influence, or relationships to ensure your engagement strategies remain relevant.

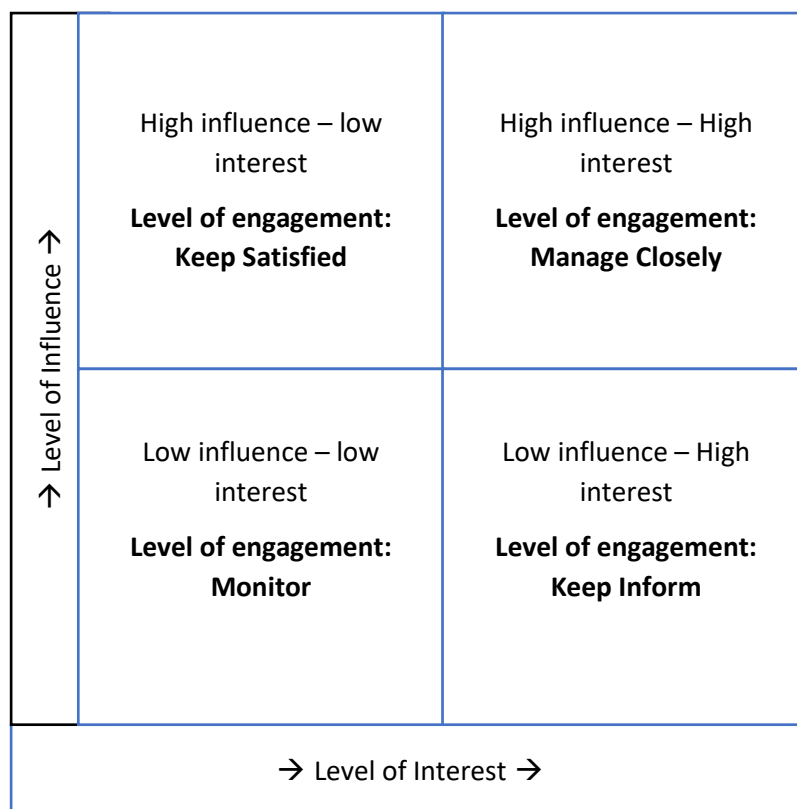


Figure 1 Stakeholder Mapping Diagram

The higher the influence and interest, the project needs to find out the most effective way to engage stakeholder in this group. While Identification of vulnerable groups helps the Project further identify individuals and sub-groups who may have different concerns and priorities about Project impacts, mitigation mechanisms and benefits, and who may require different, or separate, forms of engagement. The results of stakeholder identification, analysis, and mapping is a living document and must be periodically re-analyzed and reviewed to ensure that approaches for consultation based on the analysis remain current and effective.

6. Stakeholder Engagement Approach

6.1. Meaningful consultation

Meaningful stakeholder engagement throughout the project cycle is an essential aspect of good project management and provides opportunities for PLN to learn from the experience, knowledge, and concerns of the affected and interested stakeholders, and to manage their expectations by clarifying the extent of the PLN responsibilities and resources. The level and frequency of stakeholder engagement conducted is proportionate to the risks and impacts of the project, and PLN will develop and implement a Stakeholder Engagement Plan (SEP) accordingly.

Based on the result of stakeholder identification, mapping and analysis, PLN will undertake a process of stakeholder engagement in a manner that provides stakeholders with opportunities to express their views on project risks, impacts, and mitigation measures, and allows PLN to consider and respond to them. Meaningful stakeholder engagement will be carried out on an ongoing basis as the nature of issues, impacts, and opportunities evolves. PLN will provide all stakeholders with timely, relevant, understandable, and accessible information, tailored to their needs and priorities, and consult with them in a culturally appropriate manner, free of manipulation, interference, coercion, discrimination, and intimidation.

Meaningful stakeholder engagement is a two-way process, that:

- (a) Begins early in the project planning process to gather initial views on the project proposal and inform project design;
- (b) Encourages stakeholder feedback, particularly as a way of informing project design and engagement by stakeholders in the identification and mitigation of environmental and social risks and impacts;
- (c) Continues on an ongoing basis, as risks and impacts arise;
- (d) Is based on the prior disclosure and dissemination of relevant, transparent, objective, meaningful, and easily accessible information in a time frame that enables engaging with stakeholders in a culturally appropriate format, in relevant local language(s), and is understandable to stakeholders;
- (e) Considers and responds to feedback;
- (f) Supports active and inclusive engagement with project-affected parties;
- (g) Is free of external manipulation, interference, coercion, discrimination, and intimidation; and
- (h) Is documented and disclosed by PLN.

PLN will deploy staff with relevant expertise to engage with different stakeholder groups meaningfully.

For affected community members, PLN may deploy Community Liaison Officers (CLO) who can regularly engage with local community members as a bridge between the affected community members and the project. The CLO is particularly useful when impact is significant; affected communities are not homogenous and information may not flow smoothly within the community; and they present distinctive cultural, linguistic and ethnic characteristics that may make direct engagement by PLN staff difficult. CLO may or may not be hired locally, but it is important to select a CLO who knows the affected local communities well.

Experts with academic background may provide useful information about stakeholders (e.g. affected IP communities), and technical experts can provide valuable information about the project impact. Care needs to be exercised about the deployment of such experts in stakeholder engagement processes since communication and people management skills are often as or more important for the success of stakeholder engagement than expert knowledge on impacts or stakeholder groups. The experts can be hired as a stakeholder engagement facilitator which understand the various types of barriers among stakeholders, able to facilitate meaningful discussion during stakeholder engagement process, and choose types of stakeholder engagement to gather stakeholders' feedback.

For other interested parties, PLN may appoint particular staff members with experiences in public relations and trained with communication skills. Some stakeholders may have particular concerns or interests that may go beyond the project. It is important to develop a corporate strategy or talking points on some critical concerns to ensure consistencies in messaging.

6.2. Stakeholder engagement information

PLN will provide stakeholders with access to the following information as early as possible, but no later than the start of the project in a time frame that enables meaningful consultations with stakeholders on project design:

- (a) The purpose, nature, and scale of the project;
- (b) The duration of proposed project activities;
- (c) Potential risks and impacts of the project on local communities, and the proposals for mitigating these, highlighting potential risks and impacts that might disproportionately affect vulnerable and disadvantaged groups, and describing the differentiated measures taken to avoid and minimize these;
- (d) The proposed stakeholder engagement process highlighting the ways in which stakeholders can participate;
- (e) The time and venue of any proposed public consultation meetings, and the process by which meetings will be notified, summarized, and reported; and
- (f) The process and means by which grievances can be raised and will be addressed.

Meaningful stakeholder engagement depends on timely, accurate, accessible, and comprehensible information. Making available project-related information as early as possible in the project cycle and in a manner, format, and language appropriate for each stakeholder group is important. Formats to provide information may include presentation printouts, nontechnical summaries, project leaflets, and pamphlets. Ideally, maps of the project area and non-technical drawings is included in the materials. Documents used in stakeholder engagement is made available to stakeholders, for example on community public notice boards, and, where possible, on PLN's website.

The information will be disclosed in relevant local languages and in a manner that is accessible and culturally appropriate, taking into account any specific needs of groups that may be differentially or disproportionately affected by the project or groups of the population with specific information needs (such as, disability, literacy, gender, mobility, differences in language or accessibility).

6.3. Stakeholder engagement type

In engaging with stakeholders, there are a multitude of methods and forums that can be utilised to effectively engage with all stakeholder groups. This includes, town halls, workshops, focus groups, written consultations, online consultations as described in the below table:

Table 1 Types of stakeholders group engagement method

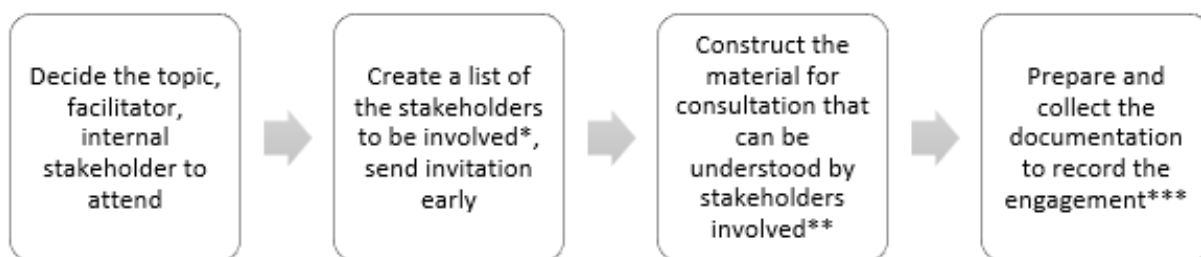
No	Types of engagement	Consideration
1	Town halls	1. Purpose: A town hall meeting is a public event where members of a community, organization, or a specific group come together to discuss and address issues, concerns, or ideas. It typically involves open communication between leaders, officials, or representatives and the community members. 2. Format: Town hall meetings are usually more formal and structured, with designated speakers, moderators, or panellists leading the discussion. There may be presentations, Q&A sessions, and opportunities for the audience to share their thoughts and ask questions. 3. Interaction: While there is an opportunity for audience interaction, it is generally limited to asking questions or sharing opinions from the floor, rather than active participation in activities.
2	Workshop	1. Purpose: Workshops are organized gatherings focused on learning, skill-building, and problem-solving. They provide a more hands-on and participatory experience, allowing participants to engage actively and collaborate with each other. 2. Format: Workshops are interactive and practical in nature. They involve facilitators or trainers leading participants through exercises, group activities, discussions, and practical tasks related to a specific topic or skill. 3. Interaction: Active participation is a central element of workshops. Attendees are encouraged to contribute, collaborate, and apply their knowledge or skills during the session.
3	Focus group	1. Purpose: Focus group discussions are used primarily for gathering qualitative data and insights on a specific topic or issue. They aim to explore participants' perceptions, opinions, attitudes, and experiences related to a particular subject. 2. Format: In focus group discussions, a moderator or facilitator leads a group of participants through an open-ended and semi-structured discussion. The moderator poses questions, encourages dialogue, and ensures that all participants have an opportunity to express their thoughts. 3. Interaction: Participants in focus group discussions actively share their views, respond to each other's comments, and build on ideas presented by others. The group dynamic fosters a rich exchange of perspectives.
4	Written consultations	1. Purpose: Written consultation refers to seeking feedback or input from stakeholders, experts, or the public through written documents, forms, or surveys. It can be used in various contexts, such as government policymaking, organizational decision-making,

No	Types of engagement	Consideration
		or public opinion gathering. 2. Format: Written consultation often involves distributing questionnaires, surveys, or open-ended prompts in physical or digital formats (e.g., printed paper, email attachments, or downloadable PDFs). 3. Interaction: The interaction in written consultation is primarily one-way. The organization or entity seeking input provides the questions or prompts, and respondents provide their feedback or answers in writing. There is generally limited direct interaction or real-time discussion between the parties involved. 4. Response Time: Written consultation allows respondents to take their time to provide thoughtful responses. It may have a specified deadline for submission, but the respondents have the flexibility to choose when to respond.
5	Online consultation	1. Purpose: Online consultation involves seeking input, feedback, or advice from stakeholders, experts, or the public through online platforms and digital tools. It is commonly used in various fields, including public policy, market research, and customer engagement. 2. Format: Online consultation can take various forms, such as online surveys, web-based questionnaires, discussion forums, social media polls, or interactive webinars. It leverages the internet and digital technology to facilitate communication. 3. Interaction: Online consultation allows for two-way interaction between the parties involved. Respondents can provide their feedback or answers online, and there may be opportunities for real-time discussions, follow-up questions, and interactions with the facilitators or organizers. 4. Response Time: Online consultation often has a specified time frame for responses. Participants are expected to provide their feedback within the given time limit, which can be helpful in gathering timely data.

The engagement type is a strategy choose to reach as much as possible or majority of stakeholders' groups in an efficient and effective manner. In preparing or after a big group consultation, other types of engagement can be used such as regular meetings with community leaders, brochures, notice boards. The project should consider the project's resource and accessibility to choose stakeholder engagement strategy.

6.4. Implementation of stakeholder engagement activities

Defining stakeholder engagement methodologies and moving through to implementation is a progressive process as shown within the below figure.



5

Figure 2 Stakeholder engagement activity implementation

To achieve meaningful consultation, this process needs to further consider the following as relevant to the specific context in which an activity or project is being conducted:

1. The coordination and invitation of consultation are delivered and conducted at least 5 working days before the consultation of which the invitations must be sent to the all of Project Affected People who will join the consultation process and must be displayed outside the meeting room where the consultation takes place. The invitations and discussions are clearly specified the purpose of the consultation.
2. Public consultation is conducted by PLN and/or its contractor during as scheduled along the project lifecycle. The stakeholder engagement is designed in timely manner to ensure all of the affected community representatives are involved and the information is disclosed with sufficient time to receive information, pose questions and obtain responses from PLN.
3. Minutes of meeting which records the result discussion from stakeholder engagement is disclosed on information/noticed boards located in public areas such as in village head offices, district offices, recreational and worship areas.
4. Stakeholder engagement can be arranged into groups of stakeholders to make sure all stakeholders groups can be reached as early as possible in the project stage and throughout the project stages.
5. When the vulnerable people have limited capability (i.e. physical limitation or health limitation) to join the stakeholder engagement, PLN field team will come to the identified impacted vulnerable household to gather their perspective/ concerns.
6. The approach of stakeholder engagement is implemented in the form of meetings/discussions that enable transparent and interactive communications. Meeting is set with an agenda of discussion and actions are recorded. When the participant numbers exceed 15 persons, the meeting has a meeting facilitator to enable an active and fair discussion process, allowing all to have an opportunity to speak.

Practical guidance for application of these principles is further described within the boxes below.

Meaningful stakeholder engagement aims to deliver information and to identify any issues or concerns as well as gather responses from the stakeholders associated with the project and any decisions made by PLN. The issues, concerns, responses must be recorded in the minutes of meeting and preferably populated in a consultation database.

⁵note

*Based on stakeholder identification and analysis

**Consider to limit technical wordings and translate the technical wordings into information that can be understood by stakeholders, as well as possibility to deliver information in local language.

***see Annex 3 on stakeholder engagement documentation record

Example box A for stakeholder engagement activities

The PLN feasibility team's approach in engaging stakeholders is aimed to demonstrate a commitment to effective stakeholder engagement, thorough data collection, and informed decision-making for the power plant project. The systematic collection of information, transparent communication, and thorough documentation contribute to a well-organized and informed project planning process.

Scenario: Stakeholder meeting during feasibility survey

PLN feasibility team has decided to choose a site for project location. The team sent a notification letter 5 days before the site visit activity to the head of sub district. Mentioning the objective of meeting is to understand the community perception if a small power plant project is planned to be built in the sub district. The meeting is planned at 10 am, on 23 September 2021 in the subdistrict office for 2 hours. The notification letter is delivered on 15 September 2021, to the office of subdistrict office.

Before this meeting, the team has planned to bring some general information about the power plant project such as timeline of development, size of land potentially needed from similar power plant. The team consist of UIP/UIW power plant engineering, community relation (who speaks local language) and land acquisition team.

During the meeting, the discussion between PLN team and sub district leader is recorded in the minutes of meeting and reported to the UIW/UIP team. PLN team mentioned the general information to the leader so that the leader can provide information about the community potential perception towards the PLN plan, existence of cultural heritage, indigenous people location, and location of biodiversity protected area based on the subdistrict leader's and his/her team's understanding.

After the meeting, this minute of meeting is considered as feasibility survey information to take the next step in planning the project activities. For documentation purposes, PLN team collected notification letter, minutes of meeting, attendance list, and a photo of meeting with sub district leader.

Evaluation box A of stakeholder engagement activities scenario

1. Notification Letter and Objective:

The PLN feasibility team sent a notification letter to the head of the subdistrict five days before the site visit activity. The letter clearly communicated the objective of the meeting, which is to understand the community's perception of the planned power plant project and other contextual information.

2. Meeting schedule arrangement:

PLN feasibility team has decided to choose a site for project location. The team sent a notification letter 5 days before the site visit activity to the head of sub district. Mentioning the objective of meeting is to understand the community perception if a small power plant project is planned to be built in the sub district. The meeting is planned at 10 am, on 23 September 2021 in the subdistrict office for 2 hours. The notification letter is delivered on 15 September 2021, to the office of subdistrict office.

3. Preparation:

Before the meeting, the PLN team planned to bring relevant information about the power plant project. This includes details such as the project's development timeline and the approximate size of land required, drawing from similar power plant projects.

The PLN team includes members from different departments, including UIP/UIW power plant engineering, community relations, and land acquisition teams. This suggests a holistic approach to engagement and project planning.

The PLN team shared the general information about the power plant project with the subdistrict leader. This allowed the leader to provide information based on their understanding and knowledge, including community perceptions, cultural heritage, indigenous people's locations, and biodiversity-protected areas.

4. Implementation:

PLN team explains the general information agreed internally. The team brings easy to understand information and conducts the meeting in the subdistrict office to make sure there is no intimidation and stakeholders can speak freely. The team can also conduct the meeting in local language as one of the team members can speak local language.

5. Documentation:

During the meeting, the discussion between the PLN team and the subdistrict leader is recorded in the minutes of the meeting. This ensures that all important points, insights, and decisions are captured accurately. The minutes of the meeting are considered as valuable feasibility survey information. This information will guide the PLN team's next steps in planning the project activities. For documentation purposes, the PLN team collects various materials, including the notification letter, minutes of the meeting, an attendance list, and a photo of the meeting with the subdistrict leader. This comprehensive documentation ensures accountability and transparency. The discussion and outcomes of the meeting are reported back to the UIW/UIP power plant engineering team. This ensures that the information collected is integrated into the overall project planning and decision-making process. Overall, the PLN feasibility team's approach demonstrates a commitment to effective stakeholder engagement, thorough data collection, and informed decision-making for their power plant project. The systematic collection of information, transparent communication, and thorough documentation contribute to a well-organized and informed project planning process.

7. Grievance Redress Mechanism

The main objective of a Grievance Redress Mechanism (GRM) is an accessible and inclusive system, process, or procedure that receives and acts upon complaints and suggestions for improvement in a timely fashion and facilitates resolution of concerns and grievances arising in connection with a project. An effective grievance mechanism provides project-affected parties (external) and PLN's workers as well as contractor's workers (internal) with redress and helps address issues at an early stage and along the project lifecycle (pre-construction, construction, operation).

A GRM is established as early as possible in project development and supported by appropriate human and financial resources. The mechanism provides specific places and ways whereby grievances would be received and the means by which they can be submitted (for example, mail, text message, e-mail, website, telephone, suggestion / complaint boxes, grievance form); specifies a person, an office, or an institution responsible for processing grievances; and establishes timelines for processing a complaint and a process for registering and monitoring grievances. GRM for larger or more complex projects may have multiple locations, means, and methods to receive, process, and monitor grievances, an adequately staffed team, and an appeals process. Vocal points are appointed within an organisation structure as a responsible person to monitor and to coordinate the grievance resolution.

The GRM will be proportionate to the potential risks and impacts of the project and will be accessible and inclusive. Where feasible and suitable for the project, the GRM will utilize existing formal or informal grievance mechanisms, supplemented as needed with project-specific arrangements.

The GRM is expected to address concerns promptly and effectively, in a transparent manner that is culturally appropriate and readily accessible to all project-affected parties, at no cost and without retribution. The mechanism, process, or procedure will not prevent access to judicial or administrative remedies. The PLN will inform the project-affected parties about the GRM in the course of its community engagement activities, and will make publicly available a record documenting the responses to all grievances received;

Example of topic that can be reported through the project's GRM are:

- For external stakeholders: land claim information about the project footprint during pre-construction, disruption of increase noise to the surrounding community during construction, and unfair worker selection (submission of these issues may start from reporting it to Onsite Security Officers and they continue the report process to K3L division)
- For internal stakeholders: gender-based violence topic: sexual abuse, bullying; other: unsafe behaviour in workplace, thief, and harassment (submission of these issues may start from reporting it to Human Resource or dedicated whistle blower personnel/platform or K3L division)

Handling of grievances will be done in a culturally appropriate manner and be discreet, objective, sensitive, and responsive to the needs and concerns of the external and internal stakeholders. The mechanism will also allow for anonymous complaints to be raised and addressed. Protection and safe environment are given especially for gender-based violence issues (GBV). Refer to PLN guidance on GBV (sexual harassment) for community and workers. PLN has also established PT-K3L-34 *Prosedur Mekanisme Penanganan Pengaduan dan Keluhan* which describes a comprehensive system to address grievance submitted. The mechanism and the form for submitted grievance are also included in this internal procedure. Hence, GREFi Project and subprojects' grievance mechanism can refer to this procedure.

8. Resource allocation

PLN must identify and describe the responsibilities of all parties (PLN, contractor or other relevant third parties) and competent authorities in implementing the stakeholder engagement process. PLN must also identify the roles and responsibilities of individual positions within these organizations.

SEP includes cost estimates for each of activity or set of activities implementation, including long-term recurrent costs (when specific approach needs to be implemented regularly such as grievance resolution). Confirm that an adequate budget has been allocated toward stakeholder engagement activities and where the source adequate budget sourced from. The budget for the implementation of the Stakeholder Management at the corporate level is under the budget for implementing the Corporate Secretary program. While Stakeholder engagement budget in each Unit is allocated under each Implementing Sub Units and are included in the Work Plan and Budget Company (RKAP) for each work unit. The stakeholder engagement is implemented along the project stage/lifecycle as such the resource allocation (fund and human resource for all components of stakeholder engagement activities) is built in within the project budget.

Each project have a dedicated liaison officer to coordinate, record and manage the stakeholder engagement process including managing grievance process. The corporate safeguard team guides the appointment of this officer as early as possible in project lifecycle.

8.1 Roles of key personnel in stakeholder engagement

PLN staff assigned to stakeholders engagement should plays an important role in terms of :

- Provide clear, factual and accurate information in a transparent and sustainable manner to community stakeholders through free, prior and informed consultation;
- Provide opportunities for community stakeholders to raise issues, make suggestions and voice their concerns and expectations regarding the Project;
- Responding to issues and requests for permission;
- Provide feedback to stakeholders on how their contributions have been considered in the preparation of relevant studies and plans. Community and stakeholder engagement in the preparation of the ESIA (AMDAL) will be incorporated at the time of approval of the RKL-RPL documents through consultation with the ESIA (AMDAL) Technical Team. This also applies at the time of public consultation to determine proposed project sites that require land acquisition. Input and suggestions from relevant stakeholders will be used to refine the project documents with specific mentions to indicate where stakeholder input has been taken.
- To fulfil the role the key project personnel involved in stakeholder engagement must have sensitivity and empathy towards the target group by means of:
- Treat all community stakeholders with respect, and ensure that all Project personnel and contractors in contact with community stakeholders do the same;
- Willing to listening and learning about local language and local custom; •Pay attention to and prioritize the presence of vulnerable groups affected by the project, such as persons with disabilities, the elderly, the poor, indigenous peoples, as well as those with authority and power;

- Employ appropriate communication modalities for each target group, and take into account additional measures needed to reach persons with disabilities.

9. Development of Stakeholder Engagement Plan

A Stakeholder Engagement Plan (SEP) will be developed before the commencement of the project, or per requirements of the financier. It must adhere to the principles defined within this guideline and ensure that the scope and level of detail is commensurate with and proportionate to the nature and scale, potential risks, and impacts of the project and the concerns of the stakeholders who may be affected by or are interested in the project. Depending on the nature of the scale of the risks and impacts of the project, the elements of a SEP may be included as part of the Environmental and Social Commitment Plan (ESCP), for example:

- Low risk rating projects: a preparation of a stand-alone SEP may not be necessary. SEP can be designed as part of ESMP (Environment Social Management Plan)
- Moderate risk rating projects: a simplified standalone SEP is required.
- High to very high risk rating project: estimated engagement for every stage of the project should be planned carefully in a standalone SEP.

The SEP should be clear and concise. The main function of SEP is to record the list of stakeholders identified, inputs received by them during the preparation stage and how the project will engage with them differently depending on their needs and preferred communication channels throughout the project lifecycle. Annex 1 provides the structure of a typical SEP, with the steps involved in its preparation shown within Figure 3 below and described further below.

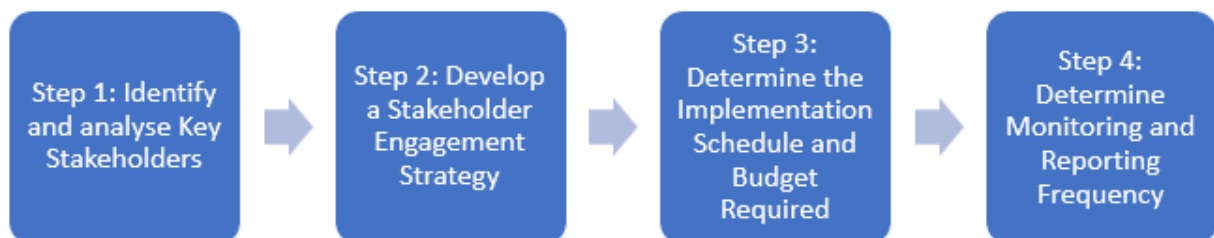


Figure 3 Steps for developing stakeholder engagement plan

Step 1: Identify and analyse key stakeholders

See chapter 3 on stakeholder identification and analysis, based on the process of stakeholder identification, Mapping, and analysis. The below table defines the minimum level of information required in developing this component of the SEP:

Table 2 Example of data result from stakeholder analysis

Community	Stakeholder group	Details	Interest	Authority	Stakeholder engagement level	Stakeholder Priority
Village A	Women group	20 persons per village	High interest	Low influence	Keep inform	secondary stakeholders
Village B	Hamlets leaders	Each village has 5 hamlet leaders (a, b, c, d, e)	High interest	High influence	Keep satisfied	primary stakeholders

Stakeholders can include three categories:

- **Affected Parties** – persons, groups and other entities within the Project Area of Influence (PAI) that are directly influenced (actually or potentially) by the project and/or have been identified as most susceptible to change associated with the project, and who need to be closely engaged in identifying impacts and their significance, as well as in decision-making on mitigation and management measures.
- **Other Interested Parties** – individuals/groups/entities that may not experience direct impacts from the Project but who consider or perceive their interests as being affected by the project and/or who could affect the project and the process of its implementation in some way; and
- **Vulnerable Groups** – persons who may be disproportionately impacted or further disadvantaged by the project(s) as compared with any other groups due to their vulnerable status¹, and that may require special engagement efforts to ensure their equal representation in the consultation and decision-making process associated with the project.

The stakeholder's list is developed as early as possible in the project stage, is the core basis for development of the SEP, and must be updated regularly along the project Lifecycle. The SEP accompanying documents will require the project to maintain stakeholder contact details, concern about the project, and as much as possible information about the stakeholder's interaction with / attitude towards the project to decide stakeholders' priority. Information may also vary on stakeholders needs⁶ and expectation. This information could be gathered through surveys, interviews, and analyzing existing data.

⁶ Examples may include (i) Women: ensure that community engagement teams are gender-balanced and promote women's leadership within these, design online and in-person surveys and other engagement activities so that women in unpaid care work can participate; consider provisions for childcare, transport, and safety for any in-person community engagement activities; there may also be women who face multiple challenges, for example, indigenous women, women with disabilities, etc. (ii) Elderly and people with existing medical conditions: develop information on specific needs and explain why they are at more risk and what measures to take to care for them; tailor messages and make them actionable for particular living conditions (including assisted living facilities), and health status; target family members; (iii) People with disabilities: provide information in accessible formats, such as braille or large print; offer multiple forms of communication, such as text captioning or signed videos, text captioning for the hearing impaired, and online materials for people who use assistive technology; and (iv) Children: design information and communication materials in a child-friendly manner and provide parents with skills to handle their own anxieties and help manage those in their children.

Step 2: Develop a Stakeholder Engagement strategy

Referring to chapter 4 on stakeholder engagement approaches, the information of arising from stakeholder identification, analysis and assigning stakeholder priority can be used to decide type of stakeholder engagement method to gather information or to engage the particular group or individual. The stakeholder engagement map results can be used to decide the stakeholder engagement type as follow:

High-Power/High-Interest Stakeholders: These stakeholders are both influential and highly interested in the project. Engage them through more interactive methods that allow for in-depth discussions and collaborative decision-making. Examples include workshops, focus groups, advisory panels, and partnership collaborations.

High-Power/Low-Interest Stakeholders: Even if they are not highly interested, these stakeholders have significant influence. Use methods that efficiently deliver essential information and updates, such as targeted emails, personalized briefings, and occasional one-on-one meetings.

Low-Power/High-Interest Stakeholders: These stakeholders are interested but lack substantial influence. Engage them through methods that provide platforms for sharing their opinions and concerns. Online surveys, open forums, and social media campaigns can be effective.

Low-Power/Low-Interest Stakeholders: With limited influence and interest, these stakeholders might require minimal engagement. Standard communication channels like newsletters, general announcements, and informational web pages can suffice.

Ensure that the chosen methods are accessible to all stakeholder groups, considering factors like language, technology access, and physical constraints. Additionally, evaluate the resources (time, budget, personnel) needed to execute each method effectively. These aspects can be integrated into tables as shown below, which define the minimum level of information required in developing this component on an SEP.

Table 3 Example of engagement strategy

Community	Stakeholder group	Preferred notification	Specific needs	Stakeholder mapping result	Engagement strategy
Village A, Women group	Affected parties	Written information, radio	Child care for meetings—late afternoon preferred timing	Low-Power/High-Interest Stakeholders	Open forum
Village B, Hamlets leaders	Affected parties	Visit with translator and civil society representative	Graphics, education on process	High-Power/High-Interest Stakeholders	Advisory meeting

Table 4 Example of engagement strategy for each project lifecycle

Project stage	List of information to be disclosed	Methods proposed	General Timetable	Target stakeholders	Percentage reached	Responsibilities
Construction	Traffic management plan	Notification Radio News 100.6 and copy in village hall Poster on community bulletin board	Radio twice daily in weeks of disclosure	Villagers, including pedestrians and drivers	Radio News 100.6 reaches 60% of village Poster on bulletin board reaches another percentage of the	Community Liaison Officer

The stakeholder engagement strategy needs to be flexible and adjusted based on the stakeholder response and changing circumstances. This is defined through an ongoing monitoring process that solicits feedback from stakeholders to assess whether their needs are being met and whether adjustments are required..

Step 3: Determine the Implementation Schedule and Budget Required

Once the overall strategy has been developed, the community liaison team makes a comprehensive list of all the engagement activities planned to undertake. This could include events, meetings, surveys, communication materials, workshops, and more. The engagement activities are broken down into smaller components. For example, if the project is planning a workshop, consider expenses like venue rental, materials, facilitator fees, refreshments, and travel. A sample of a schedule and methodology is shown within the below table.

Table 5 Example of stakeholder engagement schedule

Project stage	Topic of consultation	Method used	Exact Timetable: Location and dates	Target stakeholders	Responsibilities
Construction	Traffic safety	Discussion with village schools Public meeting	ABC elementary school September 4, 3:00 p.m. Village A town hall September 8, 5:30 p.m.	Parents and children in village Community	Community Liaison Officer (CLO) Transportation Engineer, Manager, CLO

This needs to be accompanied by calculation of the costs of personnel who will be involved in planning, organizing, and executing the engagement activities. This includes staff time, salaries, and any additional support required. Budget allocation includes technology platforms, tools, or software for communication, surveys, or virtual meetings, consider their associated costs. The costs of materials, supplies, printed materials, signage, and any resources needed for engagement activities are estimated by during each engagement or during campaign to disclose information. A review of the total budget estimated and prioritized activities is based on their importance and alignment with the project engagement objectives. As the engagement plan progresses, monitor actual expenses and compare them to the budget, with adjustments made accordingly and reacting to any required changes in engagement strategy. A sample budget format is shown within the below table.

Table 6 Example of stakeholder engagement budget

Budget Category	Quantity	Unit Costs	Times/Years	Total Costs	Remarks
1. Estimated staff salaries* and related expenses					
1a. [E.g., communication consultant]					
1b. [E.g., travel costs for staff]					
1c. [E.g., estimated salaries for Community Liaison Officers]					
2. Events					
2a. [E.g., organization of focus groups]					
3. Communication campaigns					
3a. [E.g., posters, flyers]					
3b. [E.g., social media campaign]					
4. Trainings					
4a. [E.g., training on social/environmental issues for PIU and contractor staff]					
4b. [E.g., training on gender-based violence (GBV) for Project Implementing Unit (PIU) and contractor staff]					
5. Beneficiary surveys					
5a. [E.g., mid-project perception survey]					
5b. [E.g., end-of-project perception survey]					
6. Grievance Mechanism					
6a. [E.g., training of GM committees]					
6b. [E.g., suggestion boxes in villages]					
6c. [E.g., GM communication materials]					
7. Other expenses					
7a. [insert]					
TOTAL STAKEHOLDER ENGAGEMENT BUDGET:					

Step 4: Determine Monitoring and Reporting Frequency

Describe SEP monitoring and reporting arrangements. Include indicators, for example, number of community meetings held to discuss project progress, number of information boards displayed, etc.). Describe involvement of stakeholders in monitoring activities, if applicable.

The SEP will be periodically revised and updated as necessary in the course of project implementation. Summaries and internal reports on public grievances, enquiries, and related incidents, together with the status of implementation of associated corrective/preventive actions, will be collated by responsible staff and referred to the senior management of the project. Every six months summaries report will provide a mechanism for assessing both the number and nature of complaints and requests

for information, along with the Project's ability to address those in a timely and effective manner. Information on public engagement activities undertaken by the Project during the year may be conveyed to the stakeholders in various ways such as through PLN website or community meeting.

A key component of data required for monitoring will be both the Stakeholder Engagement Log and Community Grievance Log which are aspects of SEP implementation required to be maintained and updated in real time. These are both defined in Annex 1.

10. Monitoring and Review

PLN must call for monitoring of stakeholder engagement activities, in order to ensure compliance with the applicable national law and regulation or the international standard, as set in the stakeholder engagement objectives. The SEP should specify:

- Indicators to be monitored;
- Monitoring location/position;
- The frequency of monitoring;
- Regulatory criteria (if applicable);
- The required qualifications of persons who will conduct the monitoring, and of any members of the public who may participate in monitoring;
- Records that must be kept and the person responsible for keeping the records;
- Reports that will be prepared, to whom the reports are to be submitted for review, and the length of time records will be kept. This will include summary reports at intervals and to which institution it is submitted.

The monitoring frequency and reporting of stakeholder engagement activities are based on commitment between PLN and Lenders. SEP implementation is monitored, periodically (at least every 6 month or annually) or at the end of the activity, depend on the type and time span. The frequency of monitoring is specified for each activity, includes the resource/person in charge required for monitoring, person qualified to conduct the monitoring, and the record that must be kept. The SEP document itself may also define more frequent monitoring or monitoring as a follow-up to a significant planned activity (eg environmental and social impact assessment disclosure) or a significant unplanned activity (eg evaluation of incident involving damage to community or individual property). Additionally, both the Stakeholder Engagement Log and Community Grievance Log must be maintained in real time and continually referred to for the purpose of ongoing monitoring and whether community acceptability and "social licenses to operate" is being maintained.

The Environmental and Social Management Plan (ESMP) is a living document, as stated in the ESMS manual (Chapter 6). Therefore, a SEP under ESMP is also a living document where it has to be referred to every time along the project stage. Its target and approach are reviewed, modified, or renewed as deemed necessary to find the best possible result. Regular review of a Stakeholder Engagement Plan needs to be conducted at minimum annually.

Regular review of the management plan and the party responsible for conducting a review, making an amendment and the party approving the results of the review and the changes made (if any) must be stated in the management plan.

The monitoring result is reported, the Plan specifies to whom the reports are to be submitted for review, and the length of time records will be kept. This will include summary reports at intervals and

to which institution the monitoring report is submitted. Finally, the result of monitoring includes decision whether the SEP document should be updated and disclosed to the public or not.

References

- The Law No. 32/2009 on Environmental Protection and Management states that “environmental protection and management shall be executed on the basis of participation.”
- Law No. 14/2018 on Public Information Transparency, which guarantees the rights of citizens on public policy decisions and fosters public participation in such decision making.
- Law No. 32/2009 on Environmental Protection and Management also covers communities’ right to raise objections to proposed projects and the government’s obligation to develop and implement policies on the management of public complaints related to protecting and managing the environment.
- Law No. 7/1984 on the Enactment of the Convention on the Elimination of All Forms of Discrimination Against Women.
- Presidential Instruction No. 9/2000 on Gender Mainstreaming in National Development emphasizes women’s participation in development processes.
- Minister of Environment Regulation No. 17/2012 on Guidelines for Public Participation in Environmental Impact Assessment and the Environmental Permit Process.
- Minister of Environmental Regulation No. 9/2010, provides guidelines for handling community grievances caused by Environmental pollution and degradation. As a final recourse, Articles 84 and 85 of Law No. 32/2009 provide for citizen lawsuits with respect to environmental disputes resulting in court ordered or out-of-court settlements, including provisions for environmental restoration and compensation.
- Government regulation number 22 of 2021, the implementation of environmental protection and management, article 32 on the involvement of directly affected communities includes indigenous peoples as parties that need to be involved in the public consultation process
- ESS10 Worldbank Stakeholder Engagement and Information Disclosure
- Guidance Note Environmental & Social Framework for IPF Operations ESS10: Stakeholder Engagement and Information Disclosure
- Environmental Safeguards Technical Guidelines (Draft Edition 3, September 2021)

Internal PLN regulation to date with relation to stakeholder engagement activities:

- PT-HSSE-03 Prosedur Komunikasi;
- PT-HSSE-25 Prosedur Komunikasi Eksternal dan Publikasi Dokumen Lingkungan
- PT-K3L-34 Prosedur Mekanisme Penanganan Pengaduan dan Keluhan
- PerDir PLN NO: 0015P/DIR/2020 Perlindungan, Pencegahan dan Penanganan Pelecehan Sksual di Lingkungan PT.PLN Persero
- PLN.PST-SMP-IK-09-07 Penanganan Demonstrasi (Aksi Massa)
- PLN.PST-SMP-PR-07-06 Komunikasi, Konsultasi Dan Partisipasi
- PLN.PST-SMP-PR-07-07 Penyampaian Dan Penanganan Keluhan Sistem Manajement Pengamanan

Annex 2 General Template of Stakeholder Engagement Plan

Stakeholder Engagement Plan (SEP)

The scope and level of detail of the plan should be commensurate and proportionate with the nature and scale, potential risks, and impacts of the project and the concerns of the stakeholders who may be affected by or are interested in the project. Depending on the nature of the scale of the risks and impacts of the project, the elements of an SEP may be included as part of the Environmental and Social Commitment Plan (ESCP), and preparation of a stand-alone SEP may not be necessary.

The SEP should be clear and concise and focus on describing the project and identifying its stakeholders. It is key to identify what information will be in the public domain, in what languages, and where it will be located. It should explain the opportunities for public consultation, provide a deadline for comments, and explain how people will be notified of new information or opportunities for comment. It should explain how comments will be assessed and taken into account. It should also describe the project's grievance mechanism and how to access this mechanism. The SEP should also commit to releasing routine information on the project's environmental and social performance, including opportunities for consultation and how grievances will be managed.

1. Introduction/Project Description

Briefly describe the project, the stage of the project, its purpose, and what decisions are currently under consideration on which public input is sought.

Describe location and, where possible, include a map of the project site(s) and surrounding area, showing communities and proximity to sensitive sites, and including any worker accommodation, lay-down yards, or other temporary activities that also may impact stakeholders. Provide a link to, or attach a nontechnical summary of, the potential social and environmental risks and impacts of the project.

2. Brief Summary of Previous Stakeholder Engagement Activities

If consultation or disclosure activities have been undertaken to date, including information disclosure and informal or formal meetings/or consultation, provide a summary of those activities (no more than half a page), the information disclosed, and where more detailed information on these previous activities can be obtained (for example, a link, or physical location, or make available on request).

3. Stakeholder identification and analysis

Identify key stakeholders who will be informed and consulted about the project, including individuals, groups, or communities that:

- Are affected or likely to be affected by the project (project-affected parties); and
- May have an interest in the project (other interested parties).

Depending on the nature and scope of the project and its potential risks and impacts, examples of other potential stakeholders may include government authorities, local organizations, NGOs, and companies, and nearby communities. Stakeholders may also include politicians, labor unions, academics, religious groups, national social and environmental public-sector agencies, and the media.

a. Affected parties

Identify individuals, groups, local communities, and other stakeholders that may be directly or indirectly affected by the project, positively or negatively. The SEP should focus particularly on those directly and adversely affected by project activities. Mapping the impact zones by placing the affected communities within a geographic area can help define or refine the project's area of influence. The SEP should identify others who think they may be affected, and who will need additional information to understand the limits of project impacts.

b. Other interested parties

Identify broader stakeholders who may be interested in the project because of its location, its proximity to natural or other resources, or because of the sector or parties involved in the project. These may be local government officials, community leaders, and civil society organizations, particularly those who work in or with the affected communities. While these groups may not be directly affected by the project, they may have a role in the project preparation (for example, government permitting) or be in a community affected by the project and have a broader concern than their individual household.

Moreover, civil society and nongovernmental organizations may have in-depth knowledge about the environmental and social characteristics of the project area and the nearby populations, and can help play a role in identifying risks, potential impacts, and opportunities for the Borrower to consider and address in the assessment process. Some groups may be interested in the project because of the sector it is in (for example, mining or health care), and others may wish to have information simply because public finance is being proposed to support the project. It is not important to identify the underlying reasons why people or groups want information about a project—if the information is in the public domain, it should be open to anyone interested.

c. Disadvantaged / vulnerable individuals or groups

It is particularly important to understand project impacts and whether they may disproportionately fall on disadvantaged or vulnerable individuals or groups, who often do not have a voice to express their concerns or understand the impacts of a project. The following can help outline an approach to understand the viewpoints of these groups:

- Identify vulnerable or disadvantaged individuals or groups and the limitations they may have in participating and/or in understanding the project information or participating in the consultation process.
- What might prevent these individuals or groups from participating in the planned process? (For example, language differences, lack of transportation to events, accessibility of venues, disability, lack of understanding of a consultation process).
- How do they normally get information about the community, projects, activities?
- Do they have limitations about time of day or location for public consultation?
- What additional support or resources might be needed to enable these people to participate in the consultation process? (Examples are providing translation into a minority language, sign language, large print or Braille information; choosing accessible venues for events; providing transportation for people in remote areas to the nearest meeting; having small, focused meetings where vulnerable stakeholders

are more comfortable asking questions or raising concerns.)

- If there are no organizations active in the project area that work with vulnerable groups, such as persons with disability, contact medical providers, who may be more aware of marginalized groups and how best to communicate with them.
- What recent engagement has the project had with vulnerable stakeholders and their representatives?

d. Summary of project stakeholder needs

Example

Community	Stakeholder Group	Key Characteristics	Language Needs	Preferred Notification Means (E-Mail, Phone, Radio, Letter)	Specific Needs (Accessibility, Large Print, Child Care, Daytime Meetings)
Village A	Parents with young children	Approximately 180 households affected; 300 children	Official language	Written information, radio	Child care for meetings—late afternoon preferred timing
Village A	Refugees	38 extended families, poverty level	Language alternative	Visit with translator and civil society representative	Graphics, education on process

4. Stakeholder Engagement Program

a. Purpose and timing of stakeholder engagement program

Summarize the main goals of the stakeholder engagement program and the envisaged schedule for the various stakeholder engagement activities: at what stages throughout the project's life they will take place, with what periodicity, and what decision is being undertaken on which people's comments and concerns. If decisions on public meetings, locations, and timing of meetings have not yet been made, provide specific information on how people will be made aware of forthcoming opportunities to review information and provide their views. Include the ESCP as part of such information. For some projects, a stand-alone SEP may not be necessary and its elements may be incorporated into the ESCP.

b. Proposed strategy for information disclosure

Briefly describe what information will be disclosed, in what formats, and the types of methods that will be used to communicate this information to each of the stakeholder groups. Methods used may vary according to target audience. For each media example, identify the specific names (for example, The Daily News and The Independent, Radio News 100.6, television Channel 44). The selection of disclosure—both for notification and providing information—should be based on how most people in the vicinity of the project routinely get information, and may include a more central information source for national interest. A variety of methods of communication should be used to reach the majority of stakeholders. The project should select those that are most appropriate and have a clear rationale for their choices. The plan should include a statement welcoming comments on the proposed engagement plan and suggestions for improvement. For remote stakeholders, it may be necessary to provide for an additional newspaper outlet or

separate meeting, or additional documents that should be placed in the public domain. The public domain includes:

- Newspapers, posters, radio, television;
- Information centers and exhibitions or other visual displays;
- Brochures, leaflets, posters, nontechnical summary documents and reports;
- Official correspondence, meetings;
- Website, social media.

The strategy should include means to consult with project-affected stakeholders if there are significant changes to the project resulting in additional risks and impacts. Following such consultation, an updated ESCP will be disclosed.

Example

Project Stage	List of information to be disclosed	Methods proposed	Timetable: Locations/ dates	Target stakeholders	Percentage reached	Responsi-bilities
Construction	Traffic management plan	Notification Radio News 100.6 and copy in village hall Poster on community bulletin board	Radio twice daily in weeks of disclosure	Villagers, including pedestrians and drivers	Radio News 100.6 reaches 60% of village Poster on bulletin board reaches another percentage of the population	Community Liaison Officer

c. Proposed strategy for consultation

Briefly describe the methods that will be used to consult with each of the stakeholder groups. Methods used may vary according to target audience, for example:

- Interviews with stakeholders and relevant organization
- Surveys, polls, and questionnaires
- Public meetings, workshops, and/or focus groups on specific topic
- Participatory methods
- Other traditional mechanisms for consultation and decision making.

Example of stakeholder engagement log

Project Stage	Topic Of Consultation	Method Used	Timetable: Location And Dates	Target Stakeholders	Responsibilities
Construction	Traffic safety	Discussion with village schools	ABC elementary school September 4, 3:00 p.m.	Parents and children in village	Community Liaison Officer (CLO)
		Public meeting	Village A town hall September 8, 5:30 p.m.	Community	Transportation Engineer, Manager, CLO

d. Proposed strategy to incorporate the view of vulnerable groups

Describe how the views of vulnerable or disadvantaged groups will be sought during the consultation process. Which measures will be used to remove obstacles to participation? This may include separate mechanisms for consultation and grievances, developing measures that allow access to project benefits, and so forth.

e. Timelines

Provide information on timelines for project phases and key decisions. Provide deadlines for comments.

f. Review of Comments

Explain how comments will be gathered (written and oral comments) and reviewed, and commit to reporting back to stakeholders on the final decision and a summary of how comments were taken into account.

g. Future Phases of Project

Explain that people will be kept informed as the project develops, including reporting on project environmental and social performance and implementation of the stakeholder engagement plan and grievance mechanism. Projects should report at least annually to stakeholders, but often will report more frequently during particularly active periods, when the public may experience more impacts or when phases are changing (for example, quarterly reports during construction, then annual reports during implementation).

5. Resources and Responsibilities for implementing stakeholder engagement activities

a. Resources

Indicate what resources will be devoted to managing and implementing the Stakeholder Engagement Plan, in particular:

- What people are in charge of the SEP
- Confirm that an adequate budget has been allocated toward stakeholder engagement
- Provide contact information if people have comments or questions about the project or the consultation process; that is, phone number, address, e-mail address, title of responsible person (individual names may change).

b. Management functions and responsibilities

Describe how stakeholder engagement activities will be incorporated into the project's management system and indicate what staff will be devoted to managing and implementing the Stakeholder Engagement Plan:

- Who will be responsible for carrying out each of the stakeholder engagement activities and what are the qualifications of those responsible?
- How involved will management be in stakeholder engagement?
- How will the process be documented, tracked, and managed (for example, stakeholder database, commitments register, and so forth)?

6. Grievance Mechanism

Describe the process by which people affected by the project can bring their grievances and concerns to the project management's attention, and how they will be considered and addressed:

- Is there an existing formal or informal grievance mechanism, and does it meet the requirements of ESS10? Can it be adapted or does something new need to be established?
- Is the grievance mechanism culturally appropriate, that is, is it designed to take into account culturally appropriate ways of handling community concerns? For example, in cultures where men and women have separate meetings, can a woman raise a concern to a woman in the project grievance process?
- What process will be used to document complaints and concerns? Who will receive public grievances? How will they be logged and monitored?
- What time commitments will be made to acknowledge and resolve issues? Will there be ongoing communication with the complainant throughout the process?
- How will the existence of the grievance mechanism be communicated to all stakeholder groups? Are separate processes needed for vulnerable stakeholders?
- If a complaint is not considered appropriate to investigate, will an explanation be provided to the complainant on why it could not be pursued?
- Will there be an appeals process if the complainant is not satisfied with the proposed resolution of the complaint? Not all projects will necessarily have an appeals process, but it is advisable to include one for more complex projects. In all cases, complainants need to be reassured that they still have all their legal rights under their national judicial process.
- A summary of implementation of the grievance mechanism should be provided to the public on a regular basis, after removing identifying information on individuals to protect their identities. How often will reports go into the public domain to show that the process is being implemented?

7. Monitoring and Reporting

a. Involvement of stakeholders in monitoring activities

Some projects include a role for third parties in monitoring the project or impacts associated with the project. Describe any plans to involve project stakeholders (including affected communities) or third-party monitors in the monitoring of project impacts and mitigation programs. The criteria for selection of third parties should be clear.

b. Reporting back to stakeholder groups

Describe how, when, and where the results of stakeholder engagement activities will be reported back to both affected stakeholders and broader stakeholder groups. It is advised that these reports rely on the same sources of communication that were used earlier to notify stakeholders. Stakeholders should always be reminded of the availability of the grievance mechanism.

Example of grievance log

PLN Wilayah:

PLN UP3:

Submitted by:

Period:

No	Grievance Information				Follow up Actions			
	Location/ grievance form number:	Date, Day, Time	Grievant Name	Issue (please describe in details 5W1H)	Person in charge	Date, day. time of process	Follow up action	Status (Resolve/ Investigation/ Unresolved)
1								
2								

Example of grievance form

Date & Time: PLN Office Unit Location :.....	
Grievance Receiver (Name, Position):	
Grievance Form Number:	
Grievant Name	
Address	
Contact Number	
Complaint Issue (When, Where, What, why, Who, How)	
Grievant signature	
Follow up action	
Date & Time	
Complaint Answered/Person In Charge by (Name, Position)	
Action Taken (evidence attached: Photo, working order, Corresponding letter/email (if any exist))	
Grievance Status After Follow up	Resolve/ Investigation/ Unresolved (Choose one)
Grievant signature	
PLN official signature and stamp	

Annex 3 Indicative List of Potentially Affected Stakeholders for GREFi Sub-Projects

No	Stakeholder Type	Stakeholder Category	Stakeholder Profile	Context of Stakeholder Relation to the Project	Level Potency of Impacts	Level Potency of Interests
1.	- Landowners - Cultivator - Renter of land	Directly affected communities	- Communities who own the land in the planned project location - Communities who are not land owners but utilize the land or resources in the planned project location - Communities who are not land owners but pay rent for the land they work on to the land owner	- They need to be involved when identifying impacts, the significance of PAPs and during the discussion of management actions including consultation regarding the mitigation plan and compensation scheme; - It is expected the project will benefit the population at large and to get Broad Community Support.	High	High
2.	- Local community in the project footprints. - Street vendors, parking attendants, shopkeepers and restaurant owners.	Indirect affected communities	- The people who live in or use the area around the project site and/or the access road to the project; - The people who depend their business and source of income on the land affected by the construction of the PLN project installation network.	- They need to be involved when identifying impacts, the significance of PAPs, and during the discussion of management actions including consultation regarding the mitigation plan and compensation mechanism and scheme; - It is expected the project will benefit the population at large and to get Broad Community Support.	High	High
3.	- Religious leaders, Traditional leaders, Youth leaders - Women Leaders - Other well-known community figures.	Local Leader	The local leader is a stakeholder group trusted by the community to occupy positions in the governance department at the village level or indigenous community level.	Local leaders within a community who care deeply about helping the community and have the ability to influence the people living there will have the greatest	High	High

No	Stakeholder Type	Stakeholder Category	Stakeholder Profile	Context of Stakeholder Relation to the Project	Level Potency of Impacts	Level Potency of Interests
				impact.		
4.	• Elderly • Individuals with chronic diseases and pre-existing medical conditions; • People with disabilities • Pregnant women • Widow and female headed households • Children • Daily wage earners • Those living below poverty line • Unemployed • Communities in remote villages and communities living in neglected urban settlements	Vulnerable groups	• Generally low-income with low Human Capital Index level and lack of availability of basic public infrastructure services. • Especially for the elderly over 60 years and those who have a chronic disease conditions, such as tuberculosis. • Necessary to pay attention to the fear and other negative perceptions of project. • The low nutritional intake and quality to public health services.	• They need to be involved when identifying impacts, the significance of PAPs and during the discussion of management actions including consultation regarding the mitigation plan and compensation scheme; • Has dependence on Project • As Project's target groups and project beneficiaries; • It is expected the project will benefit the population at large and to get Broad Community Support; • The role and involvement of various community groups is very important to support the successful implementation of the CSR program implementation in the field.	High	Low
5.	Indigenous People.	Vulnerable group	• Indigenous community with criteria has self-identification, collective attachment; customary and distinctive institutions, and distinct language/dialect; • Indigenous Peoples have specific rights over land or natural resources; •	• To respect the IP's rights, there are more stringent requirements related to engaging Indigenous People, which often means using forms of engagement that give greater decision-making authority to representatives of these communities, including Free, Prior and Informed Consent (FPIC); • An effective process ensures	High	High

No	Stakeholder Type	Stakeholder Category	Stakeholder Profile	Context of Stakeholder Relation to the Project	Level Potency of Impacts	Level Potency of Interests
				that Indigenous Peoples are meaningfully engaged and have sufficient information about the project and sufficient time to be involved in decisions. They can freely make decisions without coercion, intimidation or manipulation; • It is expected the project will benefit the IP population at large and to get Broad Community Support; • The role and involvement of IP is very important to support the successful implementation of the IPP program implementation in the field.		

Indicative List of Interested Stakeholders

No	Stakeholder Type	Stakeholder Category	Stakeholder Profile	Context of Stakeholder Relation to the Project	Level of Impacts	Level of Interests
1.	Key ministries and agencies, including:	Government Institution at National Level	Government Agencies at the National Level are a group of stakeholders who have competence and those who are delegated by the state to oversee and/or implement project activities according to their respective fields at national level.	The role of Government Agencies at the National Level is to direct and direct the Government's general policies in Renewable Energy sector and all government actions at national level;		
	National Development Planning Agency (BAPPENAS)	Government Institution at National Level	As a coordinating and synchronizing body in the implementation of development planning and budgeting policies in Indonesia;	Play a central role in supporting and encouraging coordination of the implementation of programs to accelerate renewable energy development in Indonesia.	High	High
	Ministry of Energy and Mineral Resources (ESDM)	Government Institution at National Level	PLN as a state-owned enterprise engaged in the energy sector, especially in generation, supply of electricity, and maintenance services.	As the designated technical ministry to develop the EBT power plant road map policy and RUTL in Indonesia.	High	High
	Ministry of Environment and Forestry (KLHK)	Government Institution at National Level	The Ministry of Environment and Forestry of the Republic of Indonesia is a ministry in the Government of Indonesia in charge of environmental affairs, and forestry. The Ministry of Environment and Forestry is a merger between the Ministry of Environment and the Ministry of Forestry.	Play an important role in supporting the utilization of forest and watershed areas to support national electricity program and at the same time play a role in preserving forests and their functions for the sustainability of electricity and national energy security.	High	High
	The Ministry of Agrarian Affairs and Spatial Planning / National Land Agency (BPN)	Government Institution at National Level	The Ministry of Agrarian Affairs and Spatial Planning / National Land Agency is a non-ministerial government agency in Indonesia	The Directorate General of Spatial Planning of the Ministry of Agrarian Affairs and Spatial Planning/BPN plays an important role in helping	High	High

No	Stakeholder Type	Stakeholder Category	Stakeholder Profile	Context of Stakeholder Relation to the Project	Level of Impacts	Level of Interests
			that has the task of carrying out government tasks in the Land sector in accordance with the provisions of laws and regulations.	to accelerate utilization of land for the implementation of the National Strategic Project (PSN) in the Electricity Infrastructure Development sector.		
2.	Key agencies at the provincial level, including: - Regional Development Planning, Research and Development Agency (Bappeda) - Regional Secretary (Sekda) - BPN	Government Institution at Provincial Level	Government Agencies at the Provincial Level are a group of stakeholders who have competence and those who are delegated by the state to oversee and/or implement project activities according to their respective fields at provincial level.	The role of Government Agencies at the Provincial Level is to direct and direct the Government's general policies and all government actions at provincial level.	High	High
3.	Key agencies at the provincial level, including: - Bappeda - Sekda - BPN - District - Village	Government Institution at Regency/ Municipality Level	Government Agencies at the Regency/ Municipality Level are a group of stakeholders who have competence and those who are delegated by the state to oversee and/or implement project activities according to their respective fields at Regency/ Municipality level.	The role of Government Agencies at the Regency/ Municipality Level is to direct and direct the Government's general policies and all government actions at Regency/ Municipality level.	High	High
4.	World Bank, ADB, IBRD	External Partner	Partnership program between PLN and the international lender in which each partner represents a company with equal rights. All partners can participate in management activities, decision making, and have the right to control program implementation.	Supporting the Project, including for costs during construction and operation of project activities as well as other operational costs related to monitoring and evaluation.	High	High
	Energy Transition Partnership (ETP)	External Partner	Partnersip program in providing technical assistance combined	The ETP can play an important role in supporting constructive	High	High

No	Stakeholder Type	Stakeholder Category	Stakeholder Profile	Context of Stakeholder Relation to the Project	Level of Impacts	Level of Interests
			with financial support to strengthen Indonesia's capacity to increase the use of renewable energy in the energy mix, while creating sustainable socio-economic and investment opportunities in Indonesia.	coordination of energy transition activities in Indonesia.		
5.	• TV stations • Radio stations • Internet Website	Mass Media	Mass media is a media technology used to disseminate information to a wide audience.	The use of mass media is expected to accelerate project development and support overall project implementation.	High	High
6.	• Walhi, Yayasan Burung Indonesia, Yayasan Peduli Konservasi Alam Indonesia, Lestari Indonesia, Yayasan Konservasi Alam Nusantara, Forum Komunikasi Kehutanan Masyarakat, Working Group Forest and Land Tenure, etc.	CSOs/NGOs	A CSO and an NGO is an organization formed by an individual or group of people who voluntarily provide services to the general public by putting aside the goal of making a profit from their activities. Similar to volunteers, these organizations or institutions are not part of the government, bureaucracy or state.	CSOs and NGOs in the forestry and biodiversity sector have a role and power in influencing government policy or local community. The role of non-profit organization can be as a bridge for community voices and a counterweight to government or project decisions.	High	High
	• AMAN, BRWA, Lembaga Adat Melayu, Dewan Adat Dayak, Majlis Desa Adat Pakraman Bali, etc.	CSOs/NGOs		As an alliance of Indigenous Peoples of the Archipelago and associations of local customary institutions in each region, their existence is important in bridging the aspirations of indigenous peoples from various regions in Indonesia with the interests of national electricity development policies.	High	High
	• Coaction Indonesia, Institute for Essential Services Reform (IESR), Indonesian Conservation and Energy	CSOs/NGOs		The role of CSOs/NGOs who concern with renewable energy sector can be as a think-tank in the field of energy and environment,	High	High

No	Stakeholder Type	Stakeholder Category	Stakeholder Profile	Context of Stakeholder Relation to the Project	Level of Impacts	Level of Interests
	Efficiency Society (MASKEEI), Yayasan Indonesia CeraH, etc.			and also to encourage transformation into a low carbon energy system by advocating a public policy that rests on data-driven and scientific studies, conducting capacity development assistance, promoting the efficient use of energy in all sectors of the economy, including the Industry, Transportation, Buildings and Household, and establishing strategic partnerships with among non-governmental actors.		
7	- Consultant - Resource Person - Adviser	Individual expert or a consultant firm	Individual expert or a consultant firm is a group of stakeholders who will provide intensive technical, fiduciary, and environmental and social safeguard management implementation.	To support during the project implementation period, as well as to mitigate project impact and risks in accordance with national regulations and the lenders or international best practice requirements.	Low	High

Annex 3
Examples of Topics to Consider when Implementing Sub-Project SEP

No	Activities	Objective	Key Performance Indicators	Target Stakeholder	Methods and Tools
Engagement Plan / Action					
1	SEP document renewal and implementation plan is done monthly	Ensure SEP is aligned with changing dynamic conditions.	Approval of renewal of SEP once a month SEP renewal and implementation plan is done monthly.	N/A	Workshop internal
2	Ensure alignment between SEP and communication plans / media	Ensuring stakeholder engagement is consistent with relevant SEP components.	The implementation plan is customized to the communications / media plan. Immediately and updated monthly	N/A	Workshop internal
3	Establish an external stakeholder forum and conduct meetings once every three months for forums at village, sub-district and Regency levels.	To ensure ongoing open communication channels with key stakeholders.	The establishment of forums	- Government agencies at the district level - Local government at the sub-district level and village level - NGOs - Media - Local communities - Traditional leaders	▪ A structured agenda ▪ Focus group meetings ▪ Workshop ▪ Individual consultation
4	Create quarterly reports as stakeholder activation feedback and project development reports. This report is also intended as part of the reporting process to the community. (Note: can be integrated with various forums that have been running).	Dispel the potential for misperceptions about project development.	Approved and standardized feedback reports.	- Government agencies at the district level - Local government at the sub-district level and village level - NGOs - Media - Local communities	▪ Reports with structured content ▪ Focus group meetings ▪ Forum

No	Activities	Objective	Key Performance Indicators	Target Stakeholder	Methods and Tools
				- Traditional leaders	
5	Implement internal stakeholder feedback processes. (Note: proposed enforcement mechanisms can be used for this process, but not all feedback received from stakeholders is considered a complaint. Therefore, a separate process for managing stakeholder feedback needs to be developed).	Keep track of stakeholder feedback internally.	Stake feedback process for each stakeholder group.	- Government agencies at the district level - Local government at the sub-district level and village level - NGOs - Media - Local communities - Traditional leaders	▪ Internal workshop ▪ Internal mail ▪ suggestion box ▪ Survey ▪ Community capacity development initiatives ▪ Note Complaint Handling ▪ Village Facilitator Team
Stakeholder Information					
6	Regularly review monthly stakeholder tendencies and update stakeholder information.	Understanding stakeholders' interests and expectations	▪ Updated SEP ▪ Stakeholder study activities on a regulatory basis.	- Government agencies at the district level - Local government at the sub-district level and village level - NGOs - Media - Local communities - Traditional leaders	▪ Internal workshop ▪ Focus group meetings ▪ Individual consultation ▪ Survey ▪ Media / online analysis
7	Identify and analyze issues that potentially cause stakeholder conflicts every month (Note: the identification of potential benefits and potential risks in the future as a consequence of the implementation of various corporate program implementation plans What determines the effectiveness of the issue management is the performance of the internal unit assigned to manage the identified issues / risks.	Understanding potential areas of conflict with stakeholders to ensure proactive mitigation.	▪ Updated SEP ▪ Stakeholder mapping studies on a regular basis.	- Government agencies at the district level - Local government at the sub-district level and village level - NGOs - Media - Local communities - Traditional leaders	▪ Internal workshop ▪ Focus group meetings ▪ Individual consultation ▪ Survey ▪ Online media / analysis ▪ Grievance complaint appraisal database

No	Activities	Objective	Key Performance Indicators	Target Stakeholder	Methods and Tools
Database					
8	Develop, implement and update stakeholder database tools.	Gain access to updated stakeholder engagement information and history.	Stakeholder database tool implemented	N/A	N/A
9	Develop, implement and update tool database issues. (Note: the identification of potential benefits and potential risks in the future as a consequence of implementing various project program implementation plans. These issues should be incorporated into the database continuously).	Identify stakeholders and potential project risks.	▪ Implementation of database tool issues. ▪ Integrated with Grievance Handling Mechanism.	N/A	Internal workshops Focus group meetings Individual consultation Survey Online media / analysis Grievance complaint appraisal database
10	Develop a data management system for all stakeholder engagement records.	To ensure compliance and management of potential project risks or stakeholders.	Implementation of data management system of stakeholder engagement.	N/A	▪ Complaint Grievance database ▪ Attendance list ▪ Suggestion box ▪ MoM ▪ Survey ▪ Ad-hoc Stakeholder Comment ▪ Online Stakeholders Mapping Tool ▪ Online Event Tool ▪ Online Minutes of Meeting Tool ▪ Online Monitoring Tool ▪ Online Grievance Mechanism.

No	Activities	Objective	Key Performance Indicators	Target Stakeholder	Methods and Tools
Protocol					
11	Integrating stakeholder engagement policies with EHS & S policies. (Note: the policy needs to clarify the position of the project's organization on how stakeholder engagement will be implemented. From this policy protocol it will be developed and proposed that the stakeholder engagement policy should include other units that execute corporate communications strategies such as government relations units, public relations, media relations, marketing, information management and communications, etc..	Define and consolidate the communication strategy of the project	The formulation of company policy on the involvement of approved stakeholders.	N/A	Internal Workshop
12	Develop a stakeholder engagement protocol for all employees, consultants and contractors. (Note: protocols need to be incorporated into decision makers, internal coordination, communication plans and grievance mechanisms).	Stakeholder management and potential project / social risks are proactive	▪ Availability of stakeholder engagement protocols ▪ Stakeholder engagement protocols are incorporated into the material of induction and dissemination for contractors and sub-kontraktor	N/A	N/A
Grievance Management					
13	Implement and update the complaint handling process (Note: the complaint handling process needs to be integrated with decision making, protokol, internal coordination and database issues).	Accurate and timely decision-making on issues and complaints	Approved and implemented Grievance Handling Mechanism.	- Government agencies at the district level - Local government at the sub-district level and village level - NGOs - Media - Local communities - Traditional leaders	▪ Grievance complaint appraisal database ▪ Attendance list ▪ Suggestion box ▪ Stakeholder meetings ▪ Survey
Communication Plan					

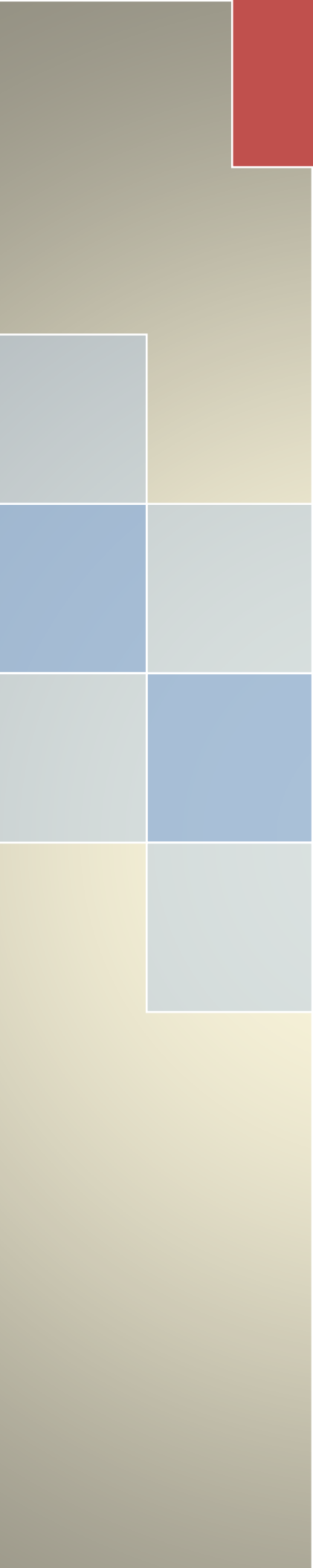
No	Activities	Objective	Key Performance Indicators	Target Stakeholder	Methods and Tools
14	Develop and implement communication / media plans for project. (Note: communication plans may include such components as disaster management communications, Public Relations, strategic communications, but must be supported by corporate strategy).	Create an overall structure and general direction for Project's communication.	▪ Approved and implemented communication plan / media. ▪ In accordance with the with SEP. ▪ implemented every month.	N/A	N/A
15	Continuous monitoring and media engagement. (Note: media monitoring consists of three components (a) enterprise risk monitoring (b) project risk monitoring (c) identification of trends and opportunities of the Renewable Energy sector).	Track external developments and reduce potential risks.	Implemented a media monitoring program and executed every month	• TV stations • Radio stations - Internet Website - NGOs - Media - Related Government Institution at National Level	▪ Online Media ▪ Print media
Structure					
Defining the Team					
16	Form a team responsible for stakeholder engagement, community development and external communications.	To ensure integration and coordination among all external corporate communication functions.	▪ Establishment of an established and integrated Team.	N/A	Internal Workshop
Internal Coordination					
17	Establish internal coordination structures for international implementation and action plans. (Note: it is assumed that a team will be established responsible for all stakeholder engagement activities. This team needs to establish necessary relationships with support departments such as HR, Logistics, Engineering, Procurement Services and Goods, Security, Finance, etc..	To ensure internal alignment to identify and proactively reduce the risk of risk.	Develop and implement internal coordination structures and executed every month	N/A	Internal Workshop
Decision-making					

No	Activities	Objective	Key Performance Indicators	Target Stakeholder	Methods and Tools
18	Formulate internal decision making procedures and responsibilities with related protocols. (Note: Decision-making protocols need to reflect the different components of the SEP).	To ensure rapid response time to stakeholder complaints and identified risks.	Develop and apply decision-making matrices with protocols.	N/A	Internal Workshop
Skills					
Skills Assessment					
19	Identify skills requirements Stakeholder engagement for project staff and contractors.	Identify potential gaps for stakeholder engagement personnel	Develop a matrix of stakeholder engagement management requirements	- Consultant - Resource Person - Adviser	▪ Interview internal ▪ Need Assessment
Training / Capacity Building					
20	Develop and implement specialized training programs for stakeholder involvement to improve the skills of staff and contractors. (Note: training content should include internal protocols, process of imposition mechanisms, decision-making processes, cultural and social challenges, stakeholder information and internal coordination).	Addressing the lack of skill of the stakeholder engagement team and to reduce potential risks.	Approval of training program plan and training of trainers.	- Consultant - Resource Person - Adviser	▪ Training ▪ Workshop ▪ Course
Staff					
Outsourcing					
21	Develop selection criteria for stakeholder engagement for contractors. (Note: selection criteria should take into consideration the sensitivity of local culture, language skills, stakeholder managing experience, team composition, social risk complexity and stakeholder requirements).	To ensure the employment of his contractor personnel skills in stakeholder involvement.	The criteria of skilled contractor in the field of stakeholder involvement are included in the contract.	N/A	N/A

No	Activities	Objective	Key Performance Indicators	Target Stakeholder	Methods and Tools
22	Identify third party mediators for conflict resolution (if needed)	Strengthen conflict resolution capacity.	List of external facilitators and their respective areas of expertise.	- Consultant - Resource Person - Adviser	- Consultation
23	Increase the team of Village Facilitator Team (TFD) one person per village	To ensure that the updating of stakeholder data is valid and objective, facilitate stakeholder involvement in the field and ensure that the grievance mechanism is effective and accessible.	Increasing the number of TFD personnel as needed. executed every month	Local Community Representative	- Collaboration

Annex 4 GRM Form

PT PLN (Persero) UIP JBT		ASLI	
FORMULIR PENGADUAN/KELUHAN			
Formulasi A - Pencatatan Aduan			
Nama / Tanggal :	:		
Nomor Kode Aduan :	:		
Lokasi Aduan :	:		
	:	S	(di mark dengan GPS)
	:	E	
KT/RW :	:		
Dusun/Kampung :	:		
Desa :	:		
Nama Pelapor :	:		
No. KTP :	:		
No. Kartu Pelapor :	:		
Kategori Aduan (lingkari salah satu) :	1. LARAP	2. CSA, BWP, FRAP	3. Keteranga kerjaan, kesalahan kerja, pelanggaran kode etik (KKE)
	3. Gender, KRG, dan KTA	4. Covid-19	
Urutan aduan :	:		
	:		
Jalur aduan :	:		
	:		
Urutan rencana tindak lanjut :	:		
Mohon dilengkapi dengan foto kondisi/lokasi dan foto KTP pelapor. PT PLN (Persero) UIP JBT 2 Penerima Aduan, Pelapor,			
Formulasi B - Berita Acara Pengambilan Aduan			
Pada hari ini _____ tanggal _____ bulan _____ tahun _____,	telah dilakukan pengambilan Pengaduan Nomor _____ kepada _____ (sebutkan).		
Nama :	:		
Alamat :	:		
Pekerjaan :	:		
No kartu/IDP :	:		
Pengaduan tersebut diambil karena tidak relevan dengan 5 kategori aduan sebagai berikut ini: 1. LARAP; Penjelasan _____ 2. CSA, BWP, FRAP; Penjelasan _____ 3. Gender, KRG, KTA; Penjelasan _____ 4. Covid-19; Penjelasan _____ 5. Keteranga kerjaan, kesalahan kerja, pelanggaran kode Etik; Penjelasan _____ 6. Di luar proyek PCTA Upper Cloakun/Pumped Storage (Pengiri salah satu dari isi penjelasan) Catatan: (Materi ini akan oleh petugas apakah pengadu telah sepaht dengan hasil verifikasi dan petugas akan menindaklanjuti aduan) Penerima Aduan, Pelapor,			
Formulasi C - Berita Acara Penyelesaian Aduan			
Pada hari ini _____ tanggal _____ bulan _____ tahun _____,	telah dilakukan penyelesaian Pengaduan Nomor _____ kepada _____ (sebutkan)? ...		
Nama :	:		
Alamat :	:		
Pekerjaan :	:		
No kartu/IDP :	:		
Salaku Pengadu/Pelapor Materi Pengadu/Pelapor telah menyampaikan salurannya kepada Proyek pada tanggal _____ (Aduan tercatat di Formulir A dengan Nomor _____) Materi Proyek telah menerima penyelesaian atas pengaduan tersebut dengan: Materi Pengadu telah menerima penyelesaian atas Aduan yang dimaksud. Dengan demikian, Aduan Nomor _____ dinyatakan TELAH DISELESAIKAN. Pelapor, Petugas GRN,			



The Indonesia Grid and Renewable Energy Financing Facility (GREFi) - P178788

Land Acquisition and Resettlement Policy Framework (LARPF) as Annex of ESMF

PT Perusahaan Listrik Negara (PLN)

September 2024



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Indonesia Green Finance Facility

Land Acquisition and Resettlement Policy Framework

1. Introduction

This LARPF was prepared separately but as an integral part of the Environmental and Social Management Framework (ESMF). This Land Acquisition and Resettlement Policy Framework (LARPF) is developed to ensure all subprojects that are guaranteed by the World Bank comply with requirements for economic and physical displacement in World Bank Environmental and Social Standard 5, specifically to:

- Set out policies and procedures to prepare site-specific subproject level land acquisition and resettlement consistent with the ESS5¹
- Provide guideline to screening and exclusion of subprojects that would result in significant land acquisition and resettlement impacts

The requirement of this LARPF will be incorporated into one of either sub projects Land Acquisition and Resettlement Action Plan (LARAP) or the required due diligence process necessary where land acquisition has commenced or been completed ahead of sub-project proposed for inclusion within GREFi.

This Land Acquisition and Resettlement Planning Framework (LARPF) was prepared to guide the implementing agencies for the Indonesia Grid and Renewable Energy Financing Facility Project, which will provide guaranteed financing for subprojects that may require land acquisition or the reinstatement of public land that is currently being used. The LARPF has been prepared to guide the development of Land Acquisition and Resettlement Action Plans (LARAPs), which will be prepared to manage risks and impacts related to land acquisition and resettlement, including importantly impacts on informal land users/occupants for individual subprojects. In the event that land acquisition and/or reinstatement of public land² may result in significant income loss, a program of livelihood restoration assistance will be incorporated as part of the LARAP.

Physical displacement and/or economic displacement are envisaged under the scope of GREFi, (physical investments on the ground). State-lands and government-owned lands³ are often used for residential or economic purposes by land users (with or without legal land titling). When the governments need to use state or government-owned land for the project activity, in-situ land acquisition and resettlement within the existing compound through slightly moving the structures relocated and/or partial acquisition of land will be considered as the first mitigation measure to avoid physical displacement, and if not feasible, relocation of land occupants including those on the state/government-owned land will be pursued through a meaningful consultation with PAPs, options for compensation/ entitlement matrix according to the ESS 5.

The LARPF also establishes a mechanism to undertake monitoring and evaluation as well as reporting of land acquisition and resettlement. It also establishes a Grievance Redress Mechanism (GRM) that will be

¹ Environmental and Social Standard 5 (ESS5) of World Bank establishes standards and key requirements that must be met when projects financed by the World Bank require land acquisition and/or reinstatement of Government- or state-owned land which results in restrictions on land use, involuntary resettlement, and adverse economic impact due to loss of land, assets or access to assets leading to loss of income sources or other means of livelihood) or both.

² Reinstatement of government-owned and/or state-owned land which resulting in displacement of the squatters, encroachers, and other form of informal land use.

³ State lands refer to lands that have no formal titling, are not attached to any government agencies, and are managed under the state.

accessible to landowners, land users and potentially affected communities during project implementation.

1.1. Project Overview

The Indonesia Grid and Renewable Energy Financing Facility (GREFi) (hereby referred as the Project) is aiming to improve the capacity of PT Perusahaan Listrik Negara (PLN) to use market-based sustainable finance instruments to implement its energy-transition strategy. Under this Project, the World Bank will provide a guaranteed financing to mobilize commercial financing up to US\$ 1.5 - 2 billion for certain types of renewable energy (RE)-enabling projects, with the main focus on energy transmission and storage infrastructure that is critical for the integration of renewable energies, and to support PT Perusahaan Listrik Negara (PLN)'s improvement of its Environmental, Social and Governance (ESG) programs. The proposed development objective (PDO) for the Project is to enable the deployment and integration of RE in Indonesia's power sector through private capital mobilization. Investors' emphasis on ESG risks are putting increasing pressure on entities like PLN, who have a large coal-fired power asset base. Combined with corporate ESG capacity improvements supported under a separate Technical Assistance program, this Project aims to pilot and secure PLN's continued access to market-based sustainable financing instruments as a key financing source for Indonesia's long-term energy transition.

As described in Chapter 2 of ESMF the GREFi Project, The GREFi program is planned to be implemented through the IBRD Guarantee scheme worth up to USD 1 billion. This scheme will provide partial credit enhancement to mobilize PLN loans ranging from USD 1.5 to 2 billion from participating commercial lenders and investors through a series of transactions. The Project will create a blended-financing vehicle to enable PLN's access to the Sustainable-Finance market at scale. The IBRD Guarantee is expected to facilitate PLN's access to sustainable-finance markets on improved terms and conditions due to the expected reduction in financing costs or increase in tenor. For each GREFi transaction backstopped by the IBRD Guarantee, PLN will have the flexibility to use the best fit-for-purpose sustainable finance instrument among the ones established in the market. The financing vehicle put in place under the proposed Project would provide incentives to PLN to meet pre-established ESG performance indicators compatible with its corporate commitments and low-carbon development pathway.

The preparation and implementation of the GREFi transactions will be complemented by a comprehensive Technical Assistance – funded through separate projects outside GREFi, to support PLN in strengthening PLN's ES frameworks and capacity building, including in implementation of this LARPF.

1.2. Scope of Impacts (Land Requirements for the Project)

The subprojects will likely require acquisition of land that is either held by government⁴ or privately owned. Specific subproject locations have not been determined, however based on PLN forward planning are anticipated to be situated throughout Indonesia. Subprojects may include transmission lines, transmission substations, and battery energy storage systems (BESS) that carry power from renewable energy facilities. Although it can vary widely depending on Project design and planning, Table 1 provides an indicative minimum amount of land that would be required for subprojects of various types, and the types of adverse impacts that may result from land acquisition.

⁴ UU 2/2012, Agencies are state institutions, ministries and non-ministerial government agencies, provincial governments, district/city governments, and State-Owned Legal Entities/State-Owned Enterprises that receive special assignments from the Government. PLN is one of the state-owned enterprises.

Table 1 Potential Impacts of Land Requirement

Activities under the GREFi Project	Potential Scale of Land Requirements	Potential Impacts of Land Acquisition
Transmission line and substation	Land requirements range from 1.5 to 2.3 hectares (ha) per MWp	• Relocation of HH • Decrease in asset value • Loss of livelihood (including ecosystem services) • Decrease in value of income • Community perception • Restricted use of land
Battery energy storage systems (BESS)	Maybe collocated with generation facilities	

2. Legal Framework for Land Acquisition and Resettlement

2.1. Indonesia Legislations

There are two laws for land acquisition, Law No 2 Year 2012 and Law No. 6/2023. These laws and implementing regulations set out in detail a land acquisition procedure that is meant to be, among other things, fair, transparent, certain, and participatory. The focus is on the preparation stage and the land planning document (*referred to Dokumen Penyiapan Pengadaan Tanah or DPPT*) as the key document allowing public land acquisition. The laws also define how to raise an objection on the plan, relating to landownership or value of the land, and how this is to be addressed within a limited stated period.

Law No. 2 Year 2012 specifies principles for land acquisition, types of public purpose development, implementation stages and arrangements for land acquisition, requirements, process and institutional arrangements during the planning, preparation, implementation of land acquisition processes, eligible affected persons, affected assets, land/asset valuation, compensation options, consultation, disclosure, complaints, financing, and release of the compensated land/assets. The Laws cover acquisition of both government and private land.

Under the new Omnibus Law, Law No. 6/2023, implementing regulations for acquisition of private land and some government land (where HH have rights to use this land) have not been issued, therefore this assessment still uses the existing regulations:

- Government Regulation (GR) No. 39/2023 provides provision for the implementation of Law. 6/2023 Chapter 8 on land acquisition for development for public interest.
- Minister of ATR/BPN (MAA) Regulation No. 19/2021 which provides technical procedure/provisions to implement the Government Regulation No. 19/2021 regarding Land Acquisition for Public Interest.
- Regulation of the Minister of Energy and Mineral Resources No. 13 of 2021 for compensation for land, buildings, and or plants that are under the free space (right of way) of the electric power transmission network.

With regards to the social impacts on land occupants, MAA Regulation No. 6/2020 provided further detailed provisions to implement the Presidential Regulation (PP) no 78/2023 on management of social impacts on those informal occupants of government-owned or state land. They are eligible for compensation for “non-physical assets” if they meet the following criteria: a) possess valid IDs or civil documentation issued by the local government where the land to be acquired is located, b) have occupied the land in question, with good will, over ten (10) years consecutively, c) get recognition by heads of

villages/wards and landowners. Those who meet the criteria are entitled for compensation for (1) cost for house/structure demolition; (2) moving cost; (3) maximum 12-months rent; and (4) other values that are lost as a direct result of land loss that can be calculated.

In addition, for compensation appraisal, the valuation will be carried out based on MAPPI (*Masyarakat Profesi Penilai Indonesia* – Indonesian Society of Appraisers) Standards as specified in the MAPPI Guidelines on Land Acquisition Assessment for Development of Land for Public Interest, defined in the Indonesia Valuation Standards (SPI) 204 (MAPPI, 2018). According to the standard, the determination of the compensation amount is based on the “fair replacement value” which considers the principles of humanity, fairness, usefulness, certainty, transparency, agreement, participation, welfare, harmony and sustainability. Approach for appraisal will be conducted for: (i) physical components (including land; space above ground and underground; building/structures; plants and crops; and other objects attached to the land, such as utilities and facilities support building), and (ii) non-physical component (including compensation on disposal rights of landowners such as loss of a job or loss of business/profession and emotional loss (*solatium*), compensation of waiting/transition period, loss of remaining land accounts for the decline in the value of land as a result of partial plot land acquisition).

The basis of valuation is replacement costs based on the prevailing market prices and/or productivity (in the case of agricultural land – clauses 4.2.4 and 4.2.5).

Livelihood loss as a direct result of loss of land are included in Non-physical component (i.e. ‘Premium’) for compensation valuation under GR 19/2021; and embedded in ‘loss of income/ loss of means of livelihood’ under the PR No. 78/2023 and 62/2018. Article 11 of the International Covenant on Economic, Social and Cultural Rights—which has been ratified by Indonesia pursuant to Law 11 of 2005—stipulates that the government must provide adequate livelihood to its citizens in order to comply with the Covenant.

Law 2/2012, its Implementing Regulations (GR19/2021 and its amendment GR 39/2023), and the technical guideline (MAA Regulation 19/2021) stipulate that land acquisition planning will be the responsibility of a project proponent. For land acquisition below five hectares, a project proponent may execute land acquisition themselves at city/district level following location determination (*Penetapan Lokasi= Penlok*) by the Mayor/Bupati as governed by Law No 6/2023. For both land acquisition below and above five hectares, the project proponent is mandated to execute the land acquisition and hire a licensed appraiser, to provide for resettlement support which is limited to support for housing and settlement area development and moving cost, but does not include transitional support and development assistance, such as land development, credit facilities, training, or employment opportunities.

2.2. World Bank ESS5

World Bank Environmental and Social Standard 5 on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement (ESS5), requires all Projects and subprojects financed or guaranteed by World Bank to:

- Avoid or minimize involuntary resettlement by exploring project design alternatives
- Avoid forced eviction
- Mitigate unavoidable adverse impacts from land acquisition or restrictions on land use through timely compensation for loss of assets at replacement cost and assisting displaced persons (including those without rights to the land/assets) in their efforts to improve, or at least restore,

livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher

- Improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure
- Ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and informed participation of affected people

ESS5 includes situations where project makes land physically unusable or inaccessible, even when there is no land acquisition. It covers restrictions on access to communal property and natural resources, including marine and aquatic, timber, freshwater, hunting and gathering ground, grazing and cropping areas. It contains criteria on voluntary transactions, land donations, forced eviction and eminent domain; as well as a definition of replacement cost, including where inflation exists.

2.3. PLN Management Framework

The PLN existing Integrated Management System (IMS/SMT) covers compliance requirements for all Indonesian national and local laws and regulations. IMS serves as the basis for the PLN to assess and manage potential significant environmental and social impacts of its operations, including land acquisition and resettlement.

PLN IMS includes regulations and procedures, such as the Board of Directors Regulations (*Peraturan Direktur= Perdir*) and project specific guidelines and procedures, for land acquisition and resettlement, including:

- Perdir 153/2019 concerning' application of PLN's Safeguard System to projects financed by ADB (PLN also applied this regulation to all projects receiving international financing). This regulation states that the land acquisition and resettlement process should be avoided wherever possible or minimized by reviewing alternative projects and other designs if not possible.
- PLN's Technical Guidelines for Land Acquisition and Resettlement, November 2019 (Draft Final)⁵. The Technical Guidelines for Land Acquisition and Resettlement, November 2019 (Draft Final) defined the steps and provisions for undertaking involuntary land acquisition and resettlement process (separated in two parts, for land procurement below and above 5ha). The guideline was intended to be applied for all PLN units/projects, and following the Indonesia government stages consisted of four (4) stages: planning, preparation, implementation and submission of completion results. The Technical Guidelines for Land Acquisition and Resettlement also include provisions for managing socioeconomic impacts from the land procurement including impacts on non-titled land occupants, eligibility and entitlements of compensation, as well as additional livelihood restoration for the vulnerable groups and severely impacted people. The Guideline has also covered procedure for acquiring land through voluntary land donation (VLD).

The guidelines have not been updated to incorporate the Omnibus Law and/or recent regulations. Currently, PLN developed the Land Acquisition and Resettlement Management Guideline as part of its corporate Environmental and Social Management System (ESMS) based on these guidelines with additional elements for full consistency with the Bank's ESS5, formally linked to and form part of the corporate IMS.

⁵ As of May 2023, the guideline has not been fully adopted and implemented. It is still being consulted internally with relevant divisions/units; the document was intended to be used as basis for implementing all international-funded projects.

PLN is encouraging private sector participation in the electricity supply business, including through the Independent Power Producer (IPP) scheme. An IPP is a special purpose company (SPC) which is formed to execute a Power Purchase Agreement (PPA) with PLN and develop, build, own and operate a power plant. The current PPAs include requirements for IPPs to comply with national environmental and social laws and regulations, and obtain applicable permits and to follow International Practice.

This table below provides more detail on PLN guidelines.

Table 2 PLN Guidelines on Land Acquisition and Resettlement

No	PLN Management System and Technical Guideline	Descriptions related to Land Acquisition and Resettlement
1	Technical Guidelines for Land Acquisition and Resettlement, November 2019 (Draft Final)	This document contains an explanation regarding the entitled parties and appropriate entitlements, the scope of the potential impacts of the LARAP, the land acquisition and involuntary resettlement process, land acquisition and resettlement procedures for land acquisition of more than 5 ha, land acquisition procedures and resettlement in the context of land acquisition of less than 5 ha for general purposes, negotiated land acquisition, voluntary land donation, income and livelihood restoration strategy, resettlement and relocation strategy.
2	Land Acquisition and Resettlement Management Guideline (Final) as part of PLN's corporate ESMS	This document is based on the Technical Guidelines for Land Acquisition and Resettlement, November 2019 with additional elements added for full consistency with ESS5.
3	PLN's Guidelines for the Assessment of Transmission Line Corridor with Scoring System (Draft edition November, 2020)	Guidelines/Procedure for the Determining the Transmission Corridor with a Scoring System/Assessment is a guide in decision making in the selection of new transmission line corridors in the form of High/Extra High Voltage Air Lines (SUTTET) or Direct Current High Voltage Air Lines (SUTTAS) for voltage levels of 70kV, 150kV, 275 kV, and 500 kV. It describes the initial screening process including environmental and social aspects, to determine project design or planning for the alternative option to minimize impact. For instance, lower score will be given if the proposed TL traverse: densely/populated area, recreational park, or public center; cultural heritage sites; protected area; masyarakat adat/IP, and/or area prone to natural disasters.
4	<i>Peraturan Direksi PT PLN</i> (0153.P/DIR2019) regarding Implementation of PT PLN (Persero) Safeguard System on Projects Financed by The Asian Development Bank (ADB)	Contains the PLN system in order to strengthen aspects of environmental protection and management and land acquisition. It defines the steps and provisions for undertaking involuntary land acquisition and resettlement process (separated in two parts, for land acquisition below and above 5ha). PLN applied these regulations to all international financed projects.

2.4. Land Acquisition Management Guideline

The implementation of this LARPF is supported by the Land Acquisition Management Guideline (LA-MG) that has been developed to accompany PLN's primary operational Environmental and Social Management

System (ESMS) that is applied universally to all its projects regardless of whether they are funded through GreFi. Both the LA-MG and LARPF have been normalized against each other and therefore the LA-MG forms part of the LARPF, this will ensure consistency of approach. The LA-MG is included as Annex J to this document and the procedural annexes to the LA-MG are referred to throughout the LARPF as necessary.

2.5. PLN Institutional Arrangement

PLN's institutional arrangement for land acquisition at subprojects level depends on the types of electricity infrastructure, as presented in the following sections.

2.5.1. Roles and Responsibility

PLN subproject planning begins with the preparation of a subproject feasibility study by the PLN organization assigned by the Financial Division. The feasibility study identifies land requirements and locations. Land acquisition requires DPPT as described above. The DPPT is prepared and implemented by a division within the responsible unit.

In detail, an explanation of the process of pre-construction to construction activities in accordance with the institutional arrangements is explained in the following table:

Table 3 The Process of Pre-Construction to Construction Activities

No	Step	Division/Unit	Description
A	Pra-construction		
1	Pre-screening feasibility study and full description of activities	Financial Division / RST	The site feasibility pre-assessment document needs to coordinate with UIP where the activities will be carried out.
2	Preferred location filtering	RST	Screening is carried out during the selection of activity locations by the land acquisition sub-division at UIP. If a location may have a significant impact on the socio-economic condition of the community, UIP procurement implementers must inform the Financial Division and determine if there is a possibility to adjust the location or activity design to reduce the impact.
3	Feasibility Study / Operational Work Study / Financial Work Study	Main Unit (UIP)	Land acquisition requirements and current land use are defined, including approximate cost of land and mitigation.
4	Land acquisition document setup/preparation, including screening of recipients of the livelihood recovery program.	Main Unit (UIP)	PLN appoints consultant to prepare land acquisition documents (LARAP for international projects). Land acquisition implementers can work with KJPP (<i>Kantor Jasa Penilai Publik</i> - licensed appraisers) to calculate fair replacement value according to MAPPI standards. Socio-economic data is needed to estimate the nominal fair replacement value and to

No	Step	Division/Unit	Description
			understand the level of livelihood / welfare of the community.
5	Design and implementation of livelihood restoration programs	Main Unit (UIP)	The draft livelihood restoration program may be part of land acquisition document or maybe separated. All the program is submitted by UIP to the responsible Division for approval of funding for the implementation of the land acquisition, resettlement and livelihood restoration program.
B	Construction		
6	Construction	Main Unit (UIP)	May only begin when PAPs are resettled and/or compensated, and disclosed to PAPs.
C	Throughout the Project		
7	Implementation monitoring	Main Unit (UIP)	Monitoring throughout implementation and completion

The land acquisition and resettlement plan process for all subproject activities are basically the same procedure, i.e.: UIP is responsible for each BESS, transmission line and substation sub-projects.

3. Gap Analysis

A major difference between the World Bank principles and the country's legal framework relates to livelihood restoration implementation and monitoring. Livelihood restoration including in particular for vulnerable groups is not clearly addressed in the GOI and PLN regulations. The laws and implementing regulations are also not sufficiently detailed on assisting displaced persons in improving or restoring their livelihoods to pre-displacement levels. Unlike ESS5 there is no requirement in national laws to conduct a livelihoods restoration plan as part of or as a standalone project activity.

As noted above PLN developed the Land Acquisition and Resettlement Management Guideline as part of its corporate Environmental and Social Management System (ESMS) based on these guidelines with additional elements for full consistency with the Bank's ESS5.

Table 4 Gap Analysis between the Existing Indonesia Regulation, PLN Management Framework and ESS 5

ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.			
Topic	Existing Indonesia Regulation and PLN Management Framework	Gap	LARPF Requirements (Gap Filling Measures)
General requirements and Project design	- PLN's Perdir No.153/2019 and Technical Guidelines for Land Acquisition and Resettlement (Draft, Nov 2019) state that the land acquisition and resettlement process should be avoided wherever possible or minimized by reviewing alternative projects and other designs if not possible. - Guidelines for the Assessment of Transmission Line Corridor Screening System describe the non-technical aspect such as the land use and tenure. The scoring result will determine the transmission line corridor design or planning for the alternative option. - Law No 2/2011 and Law 6/2023 state that Land Acquisition Planning for Public Interest is based on the Regional Spatial Plan and development priorities listed in the Medium-Term Development Plan, Strategic Plan, and/or Work Plan of the Government/Agency concerned. - Conduct early screening to identify the impacts and risks of involuntary resettlement in the past, present and future. by physical and/or economic displacement as a result of land acquisition or involuntary	Some of these gaps are covered by the draft guidelines, which is not yet in effect. - Inadequate requirement for assessing and mitigating impact of associated facilities. - Some existing PLN projects may have acquired land and resettle HH. - Lack of clarity regarding the definitions and mechanism to identify impacts severity and significance rating. - Lack of detailed guidance for undertaking the socioeconomic census of the project affected household (PAHs). - Single process for planning land acquisition and resettlement regardless the scale. - Existing PLN guidelines have not been updated with recent government regulations. - all PAPs with recognizable rights may not have official recognition, and those without rights have no recognition. - There is no clear policy for identify and mitigating impact on IPs - There are no written guidelines on mitigating potential impacts for VLD. - The current guidelines don't require GRM.	Some gaps may be filled by adoption of new guidelines similar to those that have been adopted for other international projects or updates to existing technical guidelines. - Identify and mitigate impacts in relation to associated facilities. - Identify significance legacy issues and do not support subprojects with significance legacy issues that cannot be corrected. - Define clear definitions for identifying impacts severity and significance. - Conducting census in accordance with ESS5. - Use abbreviated LARAP for small scale subprojects. - Use ESS5 requirements until PLN guidelines reflect new regulations and international standards. - The Project will help those with recognizable rights receive official recognitions to enable them to receive compensation at replacement value, and those without recognizable rights to receive rehabilitation measures in list of compensation, through consultative processes. - Identify and mitigate impacts on IPs in accordance to ESS7. - Voluntary land donations are allowed only if conditions provided in this LARPF are met.

ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.

	resettlement or restrictions on access to legally designated parks and protected areas. - Develop transparent, consistent and fair procedures for land acquisition through sales purchase, to ensure that: - The Affected Persons have the right to opt out of the negotiated settlement if there is disagreement about the terms of compensation; - There is a third party monitor recruited to ensure that negotiations are free from coercion and follow transparent procedures; and - Residents who choose a negotiated settlement still have the same or better income status.	- The current guidelines don't require monitoring compliance with land acquisition and resettlement program. - Overall, there is limited experience within the organization with regards to livelihoods restoration practice, while national regulatory framework that would guide implementation of such a program is lacking. Thus, PLN holds the ultimate responsibility for implementation.	- Sub projects must have appropriate grievance redress mechanisms. - The LARAP must include monitoring requirements.
Eligibility (Direct and indirect impacts, Support for affected persons who have no recognizable legal right or claim to the land they are occupying,	- With regards to occupants with recognizable right to land, under GR 39/2023 and 19/2021 and MAA Regulation 19/2021, socioeconomic assessment is part of the content that needs to be included in LAP/DPPT. - For occupants without recognizable right to land, under PR 78/2023 & 62/2018 , "the general/ basic" information on the situation of the occupants needs to be included, including those without recognizable right, in the land acquisition planning	- The LAP/DPPT does not fully cover requirements of ESS5. Timing of the preparation of the Land Acquisition Plan resulting in an inventory of affected land plots should be advanced to the planning stage. - There is no further elaboration on the details of the required socioeconomic assessment. - Indirect impact was only available in the explanatory chapter in the GR 19/2021, however was not elaborated.	- LARPF provides details on eligibility and entitlements consistent with ESS5. - LARPF provides an entitlement matrix for the PAHs if land is acquired by repossession of public land and/or purchase of private land. - Compensation for recognizable land occupants and legal owners will include income losses as a direct result of land loss (as part of "non-physical component" of land) above and beyond the compensation for the market value of the land ("physical component").

ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.

Vulnerable Groups/ Households)	document. The same mandate was also stipulated on the MAA Regulation 6/2020. The existing legal framework does not explicitly require an identification of vulnerable groups and households and a provision of additional support in the resettlement and livelihoods restoration processes. Land acquisition in the current legal framework has been conceived as a transactional process of procuring land from the community to facilitate infrastructure.	Adverse social and economic impacts due to restrictions of access and land use are not explicitly covered under the Law 2/2012.	- For unrecognizable land occupants, PLN will provide sufficient resources for planning and implementation of additional livelihood restoration measures such as: skill training, credit or micro-finance facilities for small businesses, short-term project generated employment, etc. to ensure that affected people are able to improve, or at least restore, their livelihoods and levels of income based on consultative processes as part of LARAP development. - Identification of vulnerable groups including informal land occupants without recognizable rights, aged, disabled and other groups that will need additional support in the resettlement and livelihoods process will be eligible for additional support per this LARPF. - Indirect impacts due to land acquisition will be covered by this LARPF for the project once the sub-project location is confirmed. Impacts caused by other factors, that is not directly from or linked to/ indirectly from land-acquisition, will be covered in UKL-UPL/ AMDAL.
Compensation and benefits for affected persons (Replacement cost, Compensation options,	- No gaps in replacement cost. Licensed appraisal team determines compensation for loss of physical and non-physical assets (premium and solatium) at replacement costs. - There has been different mode of compensation other than cash specified in GR 19 of 2021 [Article 76 (1)], particularly in the form of relocation, land-for-land, stock	The current appraisal standard of SPI 204 is generally based on the fair replacement value and will be conducted for physical and non-physical objects, thus align with the World Bank compensation framework, but gap still exists in the quality of resettlement document which may not list all compensable impacts including for income loss or	- LARPF provides details on entitlements and compensation options at replacement costs consistent with ESS5. - Compensation will be provided at replacement costs based on Licensed appraiser valuation, using prevailing market prices and/or land productivity (in the case of agricultural land) and without depreciation.

ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.

Livelihood restoration)	ownership, and 'other forms of compensation that were agreed by both parties. • Law 2/2012 and its implementing regulations do not elaborate the option and implementation of assistance and livelihood restoration.	provide details of the affected people's socioeconomic data which is required to identify the level of income or asset loss. • There is still gap in national system with regards to the provisions of livelihood restoration, particularly for the severely affected and vulnerable groups. There are no provisions to ensure/monitor the livelihood of affected people will be restored or improved. The law is not sufficiently detailed on assisting displaced persons in improving or restore their livelihoods to pre-displacement levels. Similarly, relocation and the improvement or restoration of affected persons' livelihoods would deserve greater detail, including on non-tangible compensation, compensation for temporary loss of wages, and alternative income earning opportunities. • Overall, there is limited experience within the unit/project-level organization with regards to livelihoods restoration practice, while national regulatory framework that would guide implementation of such a program is lacking. Thus, PLN corporate level holds the ultimate responsibility for implementation.	• LARPF includes details on the type of resettlement assistance to displaced households. • PLN will provide sufficient resources for planning and implementation of additional livelihood restoration measures such as: skill training, credit or micro-finance facilities for small businesses, short-term project generated employment, etc. to ensure that affected people are able to improve, or at least restore, their livelihoods and levels of income based on consultative processes as part of LARAP development.
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ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.			
Physical displacement (if can not be avoided)	• Law 2/2012 does not provide details on the procedure for replacement land. GR 39/2023 & 19/2021 do not specifically mention land replacement, but it stipulates relocation as an option. • Assistance to displaced households due to land acquisition are not covered by Law 2/2012 and its implementing regulations (GR 19/2021, GR 39/2023 and MAA Regulation 19/2021).	Gaps including absence of relocation assistance. There are challenges related to available space to relocate all affected people in one location.	• LARPF includes details on the type of resettlement assistance to displaced households. • LARPF elaborates requirement for resettlement /land-for-land option including the completion of relocation arrangements prior to PAHs displacement.
Economic displacement	• The recent regulation, GR 39/2023 & 19/2021 does require socioeconomic assessment to be conducted in the development of Land Acquisition Plan (DPPT). Further, it also covers assessment on the indirect impacts to affected communities as a result of land acquisition. However, indirect impact was only available in the explanatory chapter and was not elaborated. • PR 78/2023 & 62/2018 and MAA Regulation 6/2020 does require to provide compensation of social impacts for those who do not own the land but have occupied or utilized the land with a set of criteria, including: have been residing/ utilizing land continuously for at least 10 years, have local domicile or receive a reference letter from the	• The LAP/DPPT does not fully cover requirements of ESS5. Timing of the preparation of the Land Acquisition Plan resulting in an inventory of affected land plots should be advanced to the planning stage. • There is still gap with regards to the implementation and monitoring of the affected people's livelihood post compensation. There are no provisions to ensure/monitor the livelihood of affected people will be restored or improved.	• LARPF includes details on the type of resettlement assistance to displaced households, and livelihood restoration monitoring post compensation. • LARAP will include livelihood baseline data collection which will be used as basis for monitoring of livelihood restoration.

ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.

	subdistrict office, and the land is undisputed.		
Community engagement (Consultation with PAHs and information disclosure)	- GR 19/2021 (article 11) requires consultation during the preparation of land acquisition planning document. However, the consultation is more on the forms of compensation, not a deliberation of compensation values. - GR 19/2021 (article 12) requires the Land Acquisition-Preparation Task Force (<i>Tim Persiapan</i>) to disclose the documents to the public via website, socialization in person, etc. However, there is no detailed elaboration on what (key) information should be disclosed in the document.	Gaps with the World Bank's principles are identified in the national system related to the level of inclusion of the affected people during consultation. - The new regulations require the project proponent to include vulnerable groups, indigenous people, and gender-balanced representatives during the consultation process with the directly impacted community, however inconsistency in implementation remains a challenge. - However, there is no requirement or guideline to prepare a systemize stakeholder engagement plan and there is a lack of technical guidance to help plan for stakeholder engagement in a manner tailored to the specific potential impacts and risks from land acquisition. - In PLN's system, the recently developed guidelines and procedure, particularly those that have included reference to international standards (such as ADB safeguard and KfW standard) are broadly aligned with the World Bank's principles on community engagement as part of land acquisition process, but capacity gaps for proper implementation remain. PLN's land acquisition division (under Mega Project and	- PLN will include community engagement expert who will help identify recognizable rights that affected people may have, and provide assistance so they receive official recognition to make them eligible for compensation. - Key information on impacts and compensation will be disclosed in transparent manner and consulted to the PAHs in suitable form to meet the Bank's disclosure requirements. Community engagement, including consulting on the survey census result during LARAP preparation with the PAHs, will form part of project implementation.

ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.

		Renewable Energy Directorate), as well as UIP, already has knowledge and experience in carrying out consultation and engagement during the land acquisition process, however, implementation performance varies between regions.	
Grievance redress mechanism (GRM)	Provisions of Law No. 2/2012 and its implementing regulations (GR 39/2023, GR 19/2021 and MAA Regulation 19/2021) have elaborated procedures for filing complaints by affected households and process to address complaints and grievances.	Gaps with regards to recording general feedback and concerns or inputs, the regulatory mechanism focusing more on objection for compensation. It is also unclear whether documentation of grievances is required.	• LARPF requires that subproject's LARAP to specify GRM processes for affected households. • Documentation of grievances and implementation of GRM for affected communities, and overall RGM of the project, will be submitted to the financier as part of LARAP implementation report in quarterly basis.
Planning and implementation (Planning instruments, reporting, monitoring and evaluation)	• Law No. 2/2012, Law No. 11/2020 and the implementing regulations stipulates requirement to prepare a LAP/DPPT for land acquisition above 5ha. • Permen ATR/BPN No.19/2021 stated there are some conditions where small scale land acquisition (under 5ha) would be required to prepare, both: Penlok (<i>Penetapan Lokasi</i> – location determination) and DPPT (Clause 148 & 149)	• They also do not provide for external monitoring of resettlement implementation and post-implementation evaluation to assess whether the objectives of the resettlement plan have been achieved. Further it is deficient in providing details on objectives of evaluation.	• The format and contents of LARAP consistent with ESS 5 has been provided as an annex to the LARPF and has to be prepared for all projects, regardless of size, if there is physical or economic displacement. • LARAP will include the following process: - Identify if private land is to be acquired (and the acquisition process itself doesn't really matter for purposes of the LARPF, only what happens next); - Identify if households will be required to move, either temporarily or permanently; - Identify if households will lose any aspects of their livelihoods, including from ecosystem services;

ESS 5. Applicable laws and regulations in Indonesia have covered the main topics of the ESS5, however, some gaps are identified in terms of detailed explanations and arrangements of the issues.			
			- Define the form and as much detail of the entitlement matrix as can be done at this high level-- would it be possible to do a generic one as part of the RARPF, which would then be refined and completed for individual projects; - Define monitoring and reporting requirements. • LARPF will include specific requirement to monitor LARAP implementation including through external monitoring and ex-post evaluation; preparation and submission of periodic monitoring reports and post-implementation evaluation. • PLN through relevant UIP will submit LARAP implementation report in quarterly basis; and this will also need to be reported as part of the Regular Progress Report of the Project in 6-monthly and annual basis.

4. Basic Principles

Any land acquisition must be undertaken in compliance with the requirements of national laws and the provisions of ESS 5 and is conducted in a manner consistent with the following basic principles:

- Efforts will be made to avoid and minimize involuntary resettlement and impacts on livelihood. No forced eviction will be exercised. In cases where land acquisition and resettlement have not yet occurred, land requirement and ownership will be identified as part of the Annual Work Plan (AWP) process, and efforts made to avoid and minimize land acquisition impact in the selection and siting of subprojects will be described in the AWP;
- In cases where land acquisition, displacement and resettlement have already occurred, due diligence will be conducted to understand the processes followed, nature of impacts and compensation provided to displaced households;
- Subprojects for which land has previously been acquired or cleared beforehand in anticipation of the subprojects will be excluded if there are significant impact that cannot be rectified;
- Regarding government land, the Project will make every effort to help those with recognizable rights receive official recognitions to enable them to receive compensation at replacement value, and those without recognizable rights to receive rehabilitation measures in lieu of compensation, through consultative processes;
- All HH and people who will be affected will be identified including IPs, women and other vulnerable groups;
- Affected households must be well-informed on their entitlements, including their recognizable rights and forms and valuation of compensation;
- Affected households must receive timely compensation for loss of assets at replacement costs and are assisted to improve/restore their livelihoods;
- Vulnerable groups including women will be assisted in receiving appropriate assistance;
- Voluntary land donations are allowed only if conditions provided in this LARPF are met;
- Every effort will be made to reach mutually agreeable terms of land acquisition and compensation with landowner and land users;
- The land acquisition and resettlement program will be described in written form, and will define entitlements, and will be discussed with affected households before being adopted and implemented (that is, there will be draft and final Land Acquisition & Resettlement Action Plans/LARAPs and/or Livelihood Restoration Plans/LRPs) that describe the process and entitlements;
- Appropriate feedback and grievance redress mechanisms will be put in place;
- Mechanisms will be put in place for monitoring compliance with the LARAPs and/or LRPs; and
- Resettlement and Livelihood restoration for IPs will be described in the Indigenous People Plan and will be consistent with this LARPF and IPPF.

This principle will also be applied to Associated Facilities which are defined as any 'other' activity that is not financed under GREFi but meet the following criteria: (i) Directly and significantly related to the project; (ii) Carried out or planned to be carried out contemporaneously with the project; and (iii) Necessary for the project to be viable and would not have been constructed, expanded, or conducted if the project did not exist.

5. Public Interest Land Acquisition Process

5.1. Process Overview

This chapter presents the overall process of land acquisition and resettlement for GREFi subprojects, with reference to the ESMF. The process is elaborated with reference to the ESS5, Indonesia Regulations and PLN's framework. Although some of these regulations and guidelines are still in draft form and are not formally integrated in PLN's Integrated Management System (IMS), PLN intends to further expand and adopt them as part of the ESMS, formally linked to and form part of the corporate IMS. PLN ESMS is in place when GREFi subprojects will be implemented. This framework places the development of subproject specific LARAP in the context of the overall PLN project cycle and captures procedural requirements for implementation during land acquisition defined as in the public interest⁶. The overall procedural aspects pertaining to land identification, measurement, inventory, valuation, disclosure etc are formalized within the Land Acquisition Management Guidelines as part of the PLN ESMS, with relevant aspects describe planning, preparation, implementation, and handover phases of the land acquisition process for any single sub-project.

PLN's institutional arrangement for land acquisition at subprojects level depends on the types of electricity infrastructure and needs to be understood to capture how and where screening for sub-project eligibility is conducted.

In the context of land acquisition, eligibility is defined within the ESMF and reproduced within Table 5 of the LARPF and is carried out during the preferred location filtering phase. The decision as to whether a sub-project is eligible and/or requires the preparation and implementation of a LARAP or Corrective Action Plan/CAP is defined through the structured screening process as shown within Figure 5.1 (which captures the overall screening process for all topic areas as defined within the ESMF).

⁶ Land acquisition and resettlement are considered involuntary if the Entitled Party has no right to refuse land acquisition or prohibition of land use resulting in physical and economic transfer. This occurs in the case of (i) land acquired from a legally valid expropriation (ii) land acquired through a settlement in the public interest where the buyer can seek expropriation if negotiations with the seller fail.

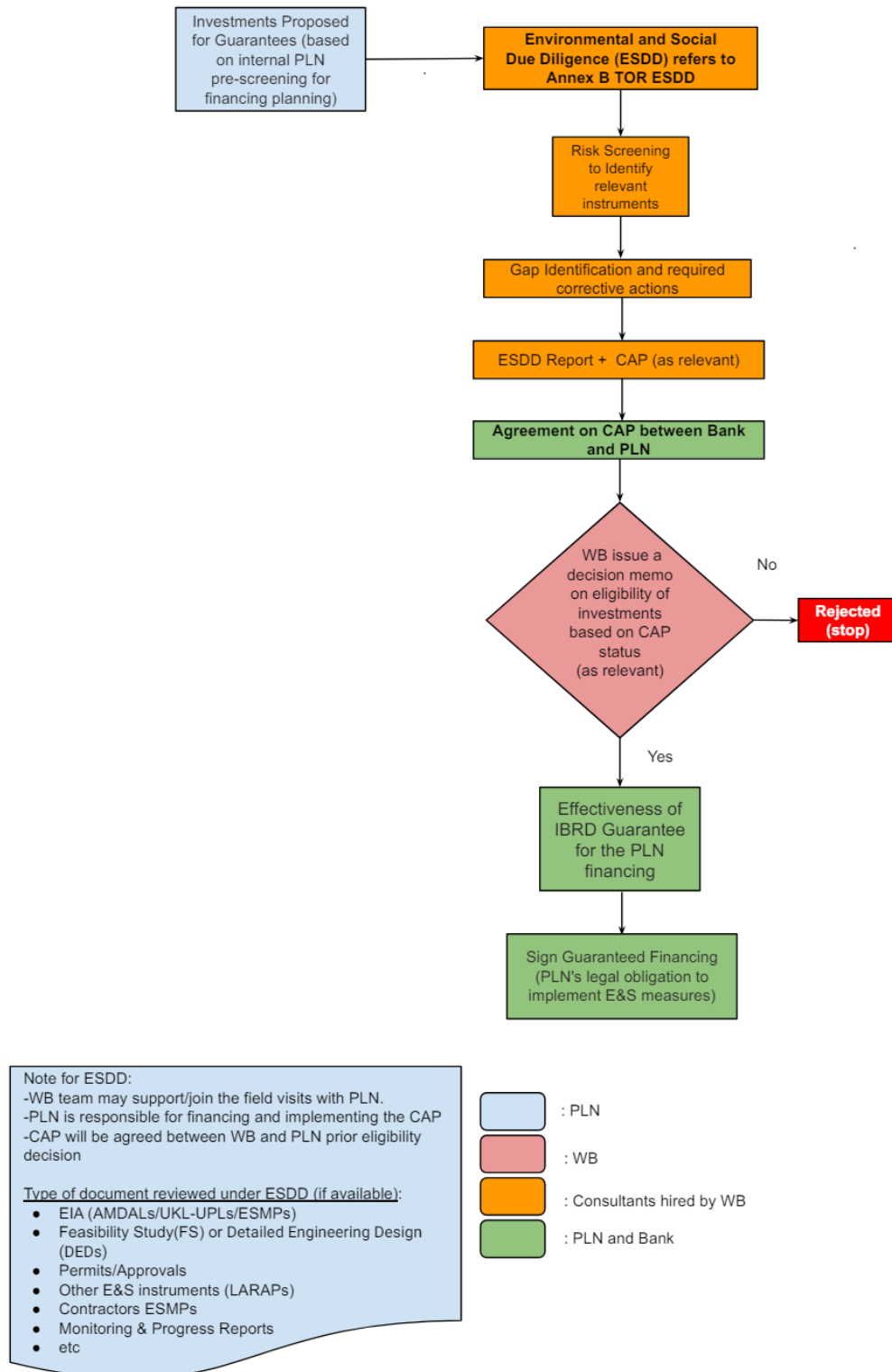


Figure 5. 1 Existing and New Project Screening and E&S Due Diligence Process

After the investment proposal for guaranteed financing to the World Bank , there are several stages as described in Figure 5.1 above.

- Land has been identified as partially or fully acquired or has not been acquired, land due diligence as part of the ESDD should be conducted to review the material in the existing LARAP (or equivalent) document, and analyze the gaps against the requirements of this LARPF, and prepare a Corrective Action Plan (CAP) for review by the World Bank. This due diligence process is further described in Section 5.7.
- If land acquisition has not been carried out, then the CAP recommends preparing a LARAP referring to the requirements of the LARPF. The requirements for developing a LARAP or Abbreviated LARAP are further described in Section 5.6.

5.2. Social Assessment (SA)

Where screening finds (i) land acquisition needs to be conducted for subproject preparation or (ii) gaps remain to be addressed where land acquisition has been conducted for subproject preparation to be funded under the Project, the PLN Regional Unit (Unit Induk) will establish a LARAP Team⁷ which includes a legal expert, a social expert, a community engagement expert, a representative from the Land Office, and other expertise as needed, to identify the different groups of landowners/ land occupants, livelihoods impact affected from land acquisition, and what measures need to be taken to provide compensation as laid out in Table 5 (typology of rights) and 6 (entitlements). This is defined as a social assessment (SA) which drives the preparation of the LARAP and informs land acquisition procedure. It spans the Feasibility Study/Operational Work Study and Land Acquisition Document Setup/Preparation phases as described in Table 3. During this phase, the LARAP team will work closely with multiple parties within PLN, including a licensed appraiser, the team responsible for conducting community engagement and the land acquisition team leaders throughout the social assessment process.

An SA on a census basis is to (i) identify all land owners and occupants who will lose land or access to land, including state/ government land; (ii) vulnerable groups who may be find it difficult to restore livelihoods; and (iii) all loss of land and non-land assets as well as all losses that are compensable under entitlement matrix of this LARPF including importantly loss of livelihoods as a direct result of land acquisition; (iv) classify affected people into a) PAPs with recognizable right to land and b) PAPs without recognizable right to land; (v) assess what support the subproject must provide to help those with recognizable rights to be eligible for compensation; (vi) preferable livelihood-support/ mitigation measures.

In order to determine the loss of businesses/ wage/ income and other livelihood sources, the SA covering all affected household will identify all breadwinners and livelihood sources within each household in order to identify each affected person, the type and scale of impact. This includes assessment on:

- Loss of work/ employment/ benefits derived from affected land: [for workers who are losing their contracts];
- Loss of business and employment (permanent or temporary cessation of business and non-land-based employment): [for affected households, business tenants losing titled business and involved workers]
- Additional severe impact provision (in case of physical displacement of business): [all physically displaced households];

⁷ This is consistent with MAA Regulation No. 19/2021 concerning Implementation on Land Acquisition for Public Interest, Article 21

- Loss of livelihood/ employment/ benefits from the use of land and/or potential production from land use due to physical displacement: [for affected households/ persons losing livelihood/ employment benefits due to physical displacement]; and
- To make it explicit if there are variations in how the land has been used by the PAPs in a specific location (to capture additional production values derived from land use, based on the specificity of the locality); and how the potential loss of production from land use is associated with land acquisition. For instance, if in a specific place during the wet season, people can earn extra income from catching crabs, then this potential loss of earnings associated with land use in a specific locality is to be included in the social assessment.

A guideline to conduct social assessment for LARAP will be developed in the early phase of Project implementation, before the preparation of subprojects that require land acquisition starts.

The SA process will be undertaken in consultation with PAPs, village chiefs, subdistrict office, the Land Office, and other relevant agencies. A series of technical and coordination meetings with the Land Office and other relevant agencies; Focus-group discussion (FGD) and door-to-door survey/ interview with potential PAPs, and community meeting will be implemented to gather information around the potential social impact derived from land acquisition for the proposed subproject. LARAP team will actively collaborate with the licensed appraiser(s) to seek their guidance on legal provisions on compensation for asset loss, and with city/district government officials on extra rehabilitation support that the city/district government can provide especially to vulnerable groups.

A Stakeholder Engagement Plan (SEP) will be prepared by Main Unit based on the Project Stakeholder Engagement Framework (SEF) to guide the overall engagement strategy at Project level, including an engagement through the social assessment to capture recognized and non-recognized occupants of state/ government lands to identify all their compensable assets, receive their official recognition to enable them to receive compensation, and assess overall livelihoods loss to be mitigated in line with this LARPF including importantly for unrecognizable land occupants.

5.3. Cut-off Date

Cut-off date is the first day of the census. Cut-off date, and the result of the census, will be announced to the PAPs at least 2 weeks before the start of census.

5.4. Eligibility

All people affected by land acquisition including as a result of the clearance of existing structures, trees and standing crops in relations to the transfer of state/government lands ("land clearance"), who are thereafter referred to as Project Affected Persons (PAPs), are covered under the LARPF except those who are identified after the Cut-off Date.

5.4.1. Typologies of Project Affected Persons (PAPs)

Identification of the PAPs will be undertaken as part of the LARAP, through census and subsequent classification of affected people into (i) individual or private landowners; (ii) recognizable land occupants/users on government land (e.g., renter, sharecroppers); and (iii) Unrecognizable land occupants/users on government land.

1. **Owners and users of privately owned land:** They have formal legal rights to land or assets and have formal documentation under national law to prove their rights. In the simplest case, an area is registered in the name of an individual or a community. In other cases, a person may have a lease on the land and therefore have legal rights.
2. **Recognizable land occupants of state land/government-owned land:** This group of people have some forms of certification or deeds or land transfer documentation acknowledged by the GR 19/2021 (Articles 18-26). These groups include the rights-holder of the land (*pemegang Hak Atas Tanah*), rightsholder to manage the land (*pemegang Hak Pengelolaan*), rightholder of the Islamic-based land donation-certification (*Nazhir untuk tanah Wakaf*), rightholder of outdated-certifications (*pemegang alat bukti tertulis hak lama*), customary community that is formally registered and acknowledged by the state (*Masyarakat Hukum Adat*), land occupants with good faith (*Pihak yang menguasai Tanah dengan Itikad Baik*), basic-right holder over land (*Pemegang dasar penguasaan atas tanah*), or any other form of land occupancy as per GR 19/2021.
3. **Unrecognizable land occupants:** They are the group of people who cannot prove their ownership over land against the criteria set out in GR 19/2021 (Articles 18-26). These people will be treated under the PR 62/2018 and will be eligible for non-land asset compensation and other rehabilitation support in lieu of compensation.

PAPs eligible for compensation for the affected assets will be identified when the sub-project location has been formally determined. Below are several possible scenarios in regard to the right to use land that are anticipated to be relevant under GREFi. It is worth mentioning that GREFi will utilize a substantial portion of privately-owned land and government-owned land, while a small portion of land may be acquired from those that are state or PLN land.

Table 5 Typologies of Right to Land/Use Land and Management Approaches

No	Scenario	Approach	What can be valued for compensation	Legal framework to substantiate this approach
1.	Group 1: Owners and users of private land.	Prepare LARAP, which includes livelihood assistance prepared for economically displaced [due to land acquisition] people/households	Compensation for loss of “physical and non-physical components” of land Physical: Land, assets (structures, trees, fences, and other investment attached to land) at replacement cost Non-physical: Income support (equivalent to 3 months income); moving cost; cost of changing jobs; value of residual land/structures; and other values that are lost as a direct result of land loss that can be calculated ⁸	Law 2/2012, Law 6/2023; GR 39/2023 (amendment of GR 19/2021); and MAA Regulation 19/2021
2.	Group 2: Occupants of government or state-owned land (including forest estate) with an official document such as tax payment receipts and other documents ⁹ .	Same as the group 1	Same as the group 1	Law 2/ 2012 & 6/2023; GR 39/2023 (amendment of GR 19/2021); PR 78/2023, and MAA Regulation 19/2021.

⁸ In the original language: Law 12/ 2012, Yang dimaksud dengan “kerugian lain yang dapat dinilai” adalah kerugian nonfisik yang dapat disetarakan dengan nilai uang, misalnya kerugian karena kehilangan usaha atau pekerjaan, biaya pemindahan tempat, biaya alih profesi, dan nilai atas properti sisa.

⁹ **Article 24 GR 19/2021** and **Article 46(2)(g) MAA Regulation 19/2021** provide types of “Recognizable form land titling” separately. Under **Article 24 GR 19/2021**, it refers to documentary evidence of occupation (*penguasaan*) of state land and government-owned land such as: a land title certificate which has expired but continues to be occupied by the (former) land holder, a land use/land clearing permit, a replacement plot of land designation/purchase letter; **under Article 46(2)(g) MAA Regulation 19/2021** it refers to: a sale and purchase deed in respect of land for which a certificate of title has been issued but the transfer of title has not been registered in Land Agency’s cadastral book; a sale and purchase deed of Adat ownership rights for which a certificate of title has not yet been issued by the Land Office (ATR/BPN). a license to dwell (*ijin menggarap tanah*) (in a government owned/state owned residential building); an auction deed; a waqf trust deed (its replacement or a waqf declaration); or other equivalent documentary evidence of occupation issued by a government agency.

No	Scenario	Approach	What can be valued for compensation	Legal framework to substantiate this approach
3.	Group 3: Occupants of government-owned land or state land without an official document. This group has three subgroups.			
3.a.	Group 3.a: Occupants of the state land ¹⁰ (<i>Tanah Negara Bebas</i>) who do not have an official document such as tax payment receipts and other documents, but who have a decision/ letter from an authorized official as the basis for a person/legal entity to acquire and use, per Basic Agrarian Law	1. Preliminary screening to collect data for early indication of likely scenarios between Group 3a, 3b and 3c; 2. During subproject preparation, Social Assessment (SA) and stakeholder engagement will classify affected people into Group 3a, 3b and 3c; and take stock of their affected land/ non-land assets, and their livelihoods conditions, as a basis for compensation valuation and livelihoods support eligible for them; see detail on Section VI.	Same as the Group 2 This group has the right to claim ownership rights over the land if requirements of Basic Agrarian Law are met and are eligible for compensation to land and non-land assets, similar to the Group 1 and 2.	The Basic Agrarian Law (Law 5/1960)
3.b	Group 3.b: Occupants of government-owned land or state land <u>who do not have an official document such as tax payment receipts and other documents, nor have recognizable land right per Basic Agrarian Law; but meet eligibility criteria under PR 78/2023 and 62/2018</u> (Continuous occupancy for at least 10 years in good faith; lack of dispute; and a reference	3. SA report will be used as a basis of compensation appraisal, and form part of subproject LARAPs. 4. PLN will include in LARAP additional livelihood assistance measures for low-income groups.	Compensation for loss of “non-physical components” of land • Assets the value of structures and things attached to the land; • Cost for house/structure demolition; • Moving cost; • 12-months rent; • Value of residual land/ structures • Income support (equivalent to 3 months income);	PR 78/2023 (amendment of PR 62/2018) and MAA Regulation 6/2020] ¹¹

¹⁰ State-owned land or known as the state land or *tanah negara bebas* (literally, *Free State Land*). Definition of State Land in original language as stipulated in GR 18/2021 Article 1 (2): “*Tanah Negara atau Tanah yang dikuasai Langsung oleh Negara adalah tanah yang dilekatkan dengan suatu hak atas tanah, bukan Tanah Wakaf, bukan Tanah Ulayat dan/atau bukan merupakan asset barang milik negara/ barang milik daerah.*” State-owned land is not registrable in nature, but there is a designation of the forest area [in a form of formal document issued by the Minister of Environmental and Forestry]. From the perspective of the Government of Indonesia’ regulations, only in case of a “forest release”, occupants of state-owned lands are eligible for a land title and entitled for compensation for loss of land and non-land assets after having received a land title [after register it to the Land Office].

¹¹ In the original language: *Besaran Nilai Santunan sebagaimana dimaksud pada ayat (2) huruf g dihitung berdasarkan penilaian pihak independen dengan memperhatikan: a) biaya pembersihan segala sesuatu yang berada di atas tanah b) mobilisasi c) sewa rumah paling lama 12 (dua belas) bulan dan/atau d) tunjangan kehilangan pendapatan dari pemanfaatan tanah.*

No	Scenario	Approach	What can be valued for compensation	Legal framework to substantiate this approach
	letter from the subdistrict office or village chief)	For group 3.a , PLN to assist identifying eligibility of affected people to claim a land title, with the assistance of the Land office (<i>Kantor Pertanahan</i>), so that Group 3.a can be treated like and eligible to entitlements for the Group2.	Other values that are lost as a direct result of land loss that can be calculated.	
3.	Group 3.c: Land occupants on government or state-owned Government-owned land ¹² / state-owned land <u>who do not have an official document such as tax payment receipts and other documents, nor do they have recognizable land right per Basic Agrarian Law</u> ; and do not meet eligibility criteria under PR 78/2023 and 62/2018	For Group 3.b, PLN will assist obtaining the letter from the village chiefs to make them eligible for compensation. For Group 3.c, PLN will facilitate obtaining a letter of reference from the village chief or other forms of 'legal document' that can assist them to move to Group 3.b.	Similar to 3.b	PR 78/2023 (amendment of PR 62/2018) and MAA Regulation 6/2020 similar to 3.b and supported by LARPF.

¹² Government-owned land is situation when the government agency **has registered this land, under the name of the government agency**, and thus has been acknowledged legally and/or has been included in the relevant government agency's balance sheet.

5.4.2. Entitlement Matrix

The Entitlements Matrix for Project Affected Persons is shown in Table 6 below:

Table 6 Entitlements for Project Affected Persons

No	Project Affected Persons	Entitlements and livelihood restoration measures
1	Legal/recognizable land or asset-owners who lose land and/or other assets affixed to the land (including buildings, structures, utilities, trees, etc.) (Group 1 and 2 in Table 5 above).	Compensation at replacement cost, based on value assessment carried out by licensed/ independent appraisers consistent with replacement cost principles outlined in SPI 204, which is consistent with ESS 5.
2	Unrecognizable land or asset owners lose land and/or other assets affixed to the land (including buildings, structures, utilities, trees, etc.) (Group 3 above).	Compensation at replacement cost other than for affected land and other assets attached to the lost land, based on value assessment carried out by licensed/ independent appraisers consistent with replacement cost principles outlined in SPI 204, which is consistent with ESS 5 (Group 3b and 3c in Table 5). Compensation for affected land may also be payable if a decision/ letter from an authorized official as the basis for a person/legal entity to acquire, control, use, per Basic Agrarian Law is available (Group 3a in Table 5).
3	Legal/recognizable/unrecognizable landowner or occupants who lose their sources of income livelihoods that are directly derived from using the land, temporarily or permanently.	Income support for three-months income based on the proof of income or official minimum monthly wage to support the livelihood restoration of the affected households. Additional income support in the form of livelihood restoration program to address “other impact” that are derived directly from using the affected land (which will be determined based on Social Assessment to be conducted for respective subprojects). The result of social assessment may provide input to include additional support to mitigate income/ business loss and restore livelihood that directly result from land acquisition.
4	Business owners with or without recognizable licenses.	For land and non-land assets, same entitlements as #1 and 2 above, depending on legality and recognizably of land use and business as above. For loss of income/ revenues, the same as #3 above: three-month revenue based on the proof of business turnover or other data collected under Social Assessment to support the livelihood restoration of the affected household.
5	Renters of dwellings and other structures built on state or government land without any recognizable legal right or claim to the land they occupy.	The project provides sufficient time (at least 3 months from the cut-off date/at the time of census survey) for the renters to find another place or other assistance agreed by renters and agency/entity which may include moving allowance and transition allowance and livelihood restoration assistance.

No	Project Affected Persons	Entitlements and livelihood restoration measures
6	Sharecroppers	Assistance to livelihood restoration, such as through registering them as beneficiaries for city-level agencies skillsets or economic-support or social programs.
7	Encroachers who entered the project area after the publicly announced cut-off date.	Not entitled to any compensation.

5.4.3. Additional Notes on Entitlement of Occupants of Government-owned Land or State Land (Group 2 and 3)

This group of affected people are eligible for the following to ensure their livelihood restoration:

- compensation at replacement cost of structures, buildings affixed on the land;
- compensation for trees and standing crops at replacement cost based on the type, age, and productive value;
- moving cost;
- income support for three-months income or business revenues;
- compensation for residual lands and structures that become economically unviable; and
- additional support to mitigate income/ business loss to address “other impact” that are derived directly from using the affected land (which will be determined based on Social Assessment to be conducted for respective subprojects).

In addition, compensation for loss of land can be paid if they:

- Have an official document such as tax payment receipts and other documents described under Group 2 above.
- Do not have the official document mentioned in the bullet 1 above but have a decision/ letter from an authorized official as the basis for a person/legal entity to acquire and use, per Basic Agrarian Law (Group 3a above).

Compensation can be provided in kind or cash. The compensation options will be determined through consultations with PAPs and will be specified in LARAP. The compensation will be provided before the land is cleared and its occupants are required to move to another location.

For low income and vulnerable group who are affected by land acquisition, including disabled, aged sharecroppers, single parent households (esp. female-headed household), city/district government will provide additional livelihoods support from the existing program such as skill-based workshops, productive assets provision (sewing machine, farming equipment's, seedlings, etc.), language trainings and classes, and support to link micro businesses to financial services.

For encroachers, i.e., persons who aggrandize or extend their personal holdings by encroaching into adjacent state or government land, compensation may be paid for plants/trees and structures. Assistance to livelihood restoration and transition and moving allowance as well as improvement to site may also be available.

In a case where Project Affected Persons (physically and/or economically displaced) do not have local residency/domicile card, they will be given opportunity to change their residency status and will be

assisted by the Project to do so upon their consent, to be able to access compensation from the city government. In a case where PAPs do not wish to change their residency status, after knowing the consequences (of not being able to receive compensation), the Project will follow the experience of KOTAKU project under National Urban Development Project or NUFReP (National Urban Flood Resilience Project) and apply several measures, including:

1. Trace their economic situation in the hometown/village (do they have productive assets there that enable them to sustain life at least on the same level prior to relocation?).
2. Upon their informed decision, to provide a moving allowance to enable PAPs to move back to their hometown/village.
3. Monitor their socioeconomic condition (after moving back to their hometown/village, to conduct a rapid social assessment on this group/individual to track their livelihoods standard).

Social assessment will be used to identify this group of people, so a detailed mitigation plan can be prepared during project implementation. Meaningful consultation with PAPs and Grievance Redress Mechanism will be integral parts of these processes. LARAP team will carry out continuing monitoring and carry out a rapid social assessment of this group of affected people following their resettlement. The project will hire a Social Advisor who will visit subprojects on a regular basis to monitor LARAP implementation performance and advise LARAP Team how to address pending actions including with regard to livelihoods restoration of affected people without an ID card following their return to hometown/village.

5.5. Valuation Methodology

The values of affected assets will be assessed by licensed appraisers in accordance with national procurement regulations which are consistent with International Valuation Standards (IVS). Value assessments will be carried out on an affected land plot basis, which includes land, the space above and beneath land, buildings or structures, plants, things that relate to the affected land, and/or other losses that are directly derived from the use of affected land which can be valued.

Land valuation/appraisal by the licensed appraisers will be carried out based on the MAPPI¹³ Standards as specified in MAPPI Guidelines, also known as SPI 204¹⁴, which is consistent with International Valuation Standards (IVS). Compensation should be at least equal to the “replacement value” per ESS5 which will be assessed as a combination of the replacement value of the Physical and Non-Physical Components of affected land which consists of the market value of affected land, buildings, structures, facilities, plants, and other things affixed to the land acquired; the cost of house/structure demolition; moving cost; 12-months rent; income support (equivalent to 3 months income); residual land and assets that become economically unviable; and other values that are lost as a direct result of land loss that can be calculated. Depreciation will not be taken into account in the valuation, and transaction cost will be included in the compensation.

A summary of physical and non-physical components eligible for compensation and the basis of valuation are presented in Table 7 Valuation Methods below.

Table 7 Valuation Methods

Object	Basis for Valuation
Land	Market value/ the value intrinsic to the owners

¹³ Indonesian Society of Appraisers (ISA)

¹⁴ Indonesian Valuation Standard (SPI) 204.

Object	Basis for Valuation
Building	Market value
Plant /trees	Market value
Transaction costs	Moving costs, taxation, notarial costs, labor
Delayed compensation payment by PLN	Entitlement + Bank interest
Other damage	Recovery costs at replacement value
Other things to be defined	Things eligible for compensation are identified under social assessment and valued at their market values

Compensation may take several forms: (a) cash; (b) land replacement/swap; (c) resettlement to other site (d) shares/ stocks/ equity ownership; or (e) other forms of compensation that are agreed both by landowners/land users and the agency requiring the land, consistent with the Government of Indonesia under GR 19/2021 (Article 76)¹⁵. Compensation forms depend on the preference of the landowners/land users and compensation may take combination of these depending on the agreements between the land owners/land users and the agency requiring the land. Detailed explanation for entitlements of occupants of state/government-owned land and informal land occupants of privately-owned land are available as below. Compensation standards for categories of land and fixed assets will be disclosed and applied consistently. Where compensation payments are delayed due to absentee land owners or overlapping claims, compensation will be deposited in an interest-bearing escrow account. The resettlement budget will include at least 10% for contingencies or any reasonable additional amount.

5.6. LARAP Development

The outcomes of the above steps will be utilised to develop a LARAP that, along with PLN's defined procedures for conducting land acquisition planning, preparation, implementation, and handover (refer to Land Acquisition Management Guideline of PLN ESMS), will be based largely on outcomes of the social assessment.

In developing the LARAP, the LARAP team will work closely with a licensed appraiser and relevant officials of the city government to ensure that all compensable impacts get properly identified and valued per the Entitlement Matrix and the valuation methodology in this LARPF, and that other material impacts on affected people that cannot be compensated get mitigated in line with this LARPF. This is to ensure that all economic and physical displacement arising from resettlement are addressed. In-situ/ on-site relocation (moving back structures) should be employed to the extent possible, and be reflected in LARAP, to minimize physical relocation to other locations. LARAP team, working closely with PLN and the city/district government, will explore potential options for livelihood support as needed, especially for vulnerable people including informal land occupants. The development of the LARAP also needs to capture ongoing engagement with project affected people to ensure that multiple options for aspects such as livelihood support are fully explored and consulted with PAPs on an on-going basis to meet their demand. Agreed- upon options should be presented in LARAP and are driven through the process of resettlement, relocation and livelihood restoration planning as detailed within Land Acquisition Management Guideline of PLN ESMS.

¹⁵ In original language, Bentuk Ganti Kerugian yang diatur dalam PP. 19 tahun 2021 Pasal 76 adalah dalam bentuk uang; pengantian tanah; pemukiman kembali; kepemilikan saham; dan bentuk lain yang disepakati oleh kedua belah pihak. Ini boleh satu (berdiri sendiri) atau gabungan, dengan total nominal sesuai dengan hasil Penilai.

The final LARAP is to be structured as detailed within Annex B and contains the following general provisions:

- A description of the project;
- Identification of potential project impacts;
- The objective of resettlement program;
- Both a baseline survey of socio-economic condition and a census of all household and assets
- The legal framework;
- The institutional framework and organizational responsibilities;
- Eligibility and entitlement matrix;
- Methodologies for valuation of losses and compensation for losses;
- A description of compensation packages/resettlement measures;
- Site selection, site preparation and relocation;
- Environmental protection and management;
- PAP participation, consultation and disclosure¹⁶;
- Measures to mitigate the impact of resettlement on any host communities;
- Grievance procedure mechanism¹⁷;
- Organizational responsibilities;
- Implementation schedule and budget¹⁸; and
- Monitoring and evaluation activities.

Responsibility will fall with the Regional Unit and Division TEK to ensure that the LARAP development will be well synchronized with and completed before the finalization of the AWP in which the relevant subproject is included, and that the budget to implement the LARAP will be included in its annual budget, so that the LARAP can be fully implemented before the civil works start¹⁹. As it relates to the land acquisition, civil work can commence only after LARAP implementation has been completed to the satisfaction of the World Bank. Main Unit is also responsible to implement LARAP, together with LARAP team, which falls within the design and implementation of livelihood restoration programs phase as defined within Table 3.

5.7. Land Due Diligence and Corrective Action Plan (CAP)

A Land Due Diligence and Corrective Action Plan (CAP) is prepared if pre-screening finds that the land acquisition has been conducted in anticipation of respective subprojects have gaps exist in meeting the objective of LARPF and ESS5.

This assessment is part of ESDD and will be undertaken by independent social consultant hired by the Bank. The ESDD process will adhere to the ESDD Terms of Reference (TOR) specified in Annex B of this ESMF. In the ESDD process, the consultants perform a risk screening to identify relevant instruments necessary for the due diligence process. This step will pinpoint potential environmental and social risks

¹⁶ LARAP team, especially community engagement specialist/ facilitator, will engage with affected people throughout land acquisition processes, and ensure that their inputs get reflected in the LARAP on an ongoing basis.

¹⁷ As described within Section VIII of this LARPF

¹⁸ LARAP team will also engage and seek advice from the Land Office on land- ownership issues, compensable assets and valuation processes. LARAP team will work closely with PLN and the city/district government to ensure that operational of LARAP budget will be included in Regional Unit and the district/city development budget (APBD), including ensuring that the proposed plan follows the budget cycle in PLN and district/city, to secure the budgeting for land acquisition implementation.

¹⁹ This is typically defined as when all PAPs have either been resettled and/or received all compensation necessary to relinquish their ownership or claims to the land.

associated with the investment. Following the risk screening, the ESDD consultants will identify any gaps in compliance and recommend corrective actions to address these gaps. This ensures that the investment aligns with the required standards. Then, the ESDD consultants will prepare a comprehensive ESDD report along with a Corrective Action Plan (CAP). This report documents the findings and the actions required to mitigate identified risks. The World Bank and PLN will review and agree on the CAP. This step is crucial for ensuring that both parties are aligned on the necessary corrective measures and their implementation.

All the ESDD reports including the CAP will be disclosed on PLN's website including the annexes.

6. Voluntary Land Donation

PLN has a written guideline on voluntary land donation (VLD) included in the Technical Guidelines for Land Acquisition and Resettlement (Draft Final, November 2019), and allows VLD for constructions of its projects. It was further elaborated and included in the Land Acquisition and Resettlement Management Guideline of the ESMS. For GREFi subprojects, VLD is allowed only under situations described below. In case land acquisition has already been conducted, PLN is required to demonstrate to the World Bank satisfaction that land acquired through VLD followed the procedures below.

Voluntary donation of land (VLD) for a subproject means that there is a transfer of ownership rights from the land donor(s) to sub-project proponents (beneficiaries, community group, local government, or others, depending on the agreement between the land donor and the project). Voluntary in this context means the donation or granting of land and other assets with the full knowledge of the purposes for which the asset is being made available and the economic, social and legal consequences that such an act would have on the person providing the asset. Furthermore, the act must be exercised freely and voluntarily, without any type of coercion. Land acquired by voluntary donation should be supported by donation deeds (or *akta hibah*) prepared and endorsed by a notary. Voluntary land donation for a sub-project will be an acceptable option if: (i) There is an option to adjust the sub-project design or location in the case that the landowners refuse to donate their land; (ii) The impact on the landowners is insignificant and does not result in physical displacement of households, or cause loss of households' incomes and livelihoods; (iii) Land donor will benefit directly from the project; and (iv) Land donors know that they have the right to refuse to donate their land.

When there is VLD under GREFi, PLN will ensure the process include the following:

1. Land identification and consultation:

- Consultations with the land donors or beneficiaries are conducted in a well-informed, free and transparent manner in the presence of community leaders and facilitators, and they wish to donate the land without pressure. Consent from landowners and their spouse and eligible heirs is given. The land donor has been informed clearly of his/her public meeting prior to the decision on donating the land voluntarily, but nevertheless he or she still wishes to donate his/her land without any pressure.
 - The donated land is free from any ownership disputes or any other claims (e.g., tax, retribution) or encumbrances.
 - Processes and results of consultation meetings, grievances and actions taken to address such grievances should be properly documented.
 - Process for land donation should be well recorded and documented in the project document (in the sub-project proposal and/or in the site development plan).
2. Assessment of impacts: the impact on the landowners is less than 10% of the total productive assets and does not result in physical displacement of households, or cause loss of households' incomes and livelihoods. This is to be identified through the scale of land loss, income loss, and ability to adapt to impacts (e.g., through identification of household asset ownership compared to the losses).

3. Documentation of VLD agreement:

- Agreement includes a written statement signed by the community member(s) or land owner who are donating the land (signed by both spouses, if the land is joint property) and witnessed by the head of the neighborhood community ("*kepala desa/RT/RW*") or head of village and signed by heirs and other witnesses. The letter contains, among others, name and address of land donor(s); current use, location and size of the donated land; the purpose of land donation; map of the location of the land; specification whether part of the land rights are donated or subject to a permit for use or permit for passage. Once a sub-project proposal is approved by the facilitator, the landowner who donates the land identifies on the ground the donated land and site where shelter for geophysics devices would be built.
- There is clear information on to PLN the land is donated, and the project should follow-up on the legal process of the status of the donated land as necessary.

4. Subproject will perform verification and ensure that:

- The required criteria for voluntary land documentation have been met, with required documentation and evidence of compliance to the LARPF.
- Land donors have voluntarily agreed to donate his/her/their land for the proposed sub-project, with an understanding that refusal was an option. They also need to ensure that land contribution decision was made by both spouses (husband and wife) or heirs and through participatory mechanisms.
- The originals of the donation deeds should be kept both by Regional Unit and by the land donor.

7. Consultation and Disclosure

Consultations and disclosures for Land Acquisition and Resettlement Planning Framework start from the planning, preparation, and implementation phase. This consultation needs to be driven through the aforementioned SEF and capture actions such as:

- For the pre-preparation, a preliminary land due diligence will be carried out. Regional Unit will conduct a rapid due diligence to assess if significant land acquisition risks and legacy issues exist for respective projects and if a CAP or a LARAP, as relevant, needs to be prepared, based on the assessment of pre-existing land use/ ownership. The result of this preliminary land due diligence will be included in the Annual Work Plan (AWP). During LARAP/CAP preparation, LARAP team will continue to engage with affected people as the inventory of affected assets is prepared and the scope of livelihoods impact assessed. Results of the inventory will be disclosed in the village/*kelurahan* (urban ward) and *kecamatan* (sub-district) offices for 14 days to receive complaints.
- For the planning stage, the plan of the location of physical investments, purpose of the development, steps and time frame for land acquisition, roles of licensed appraisers in the asset valuation, forms of incentives or compensation that would be provided for the PAPs, eligible assets or objects for compensation (physical and non-physical), compensation for community facilities, and responsibility and rights of the eligible PAPs. At this stage, a socio-economic survey, included in SA, will be conducted to identify compensable assets (and to ensure PAPs understanding on this), domicile status of the PAPs, and the proposed additional livelihood measures for PAPs from low-income households [on the top of income loss on the non-physical compensation. Consultations will take forms in community's meetings, disclose of key information on village boards/other accessible media and information in the closest villages/neighbourhoods. Consultations will adopt a dialogue approach, and can take place more than one time, depending on the need and agreement reached. The agreement will be put in writing. The defined physical investment location requiring land will be disclosed to public in the media, websites of the provincial and city government as well as in the website of the agency requiring the land.
- For land acquisition described in this guideline, results of asset valuation done by the licensed appraisers will be provided to the PAPs and used as the basis for negotiations.
- Prior to any civil works with impacts on agricultural land, consultations with affected landowners and/or tillers must be undertaken. Data from census survey will be made available for the public for exercising their right of public-accountability. Affected individuals will be given reasonable time to harvest crops to minimize livelihoods impacts.
- The Indonesian version of the draft and final approved LARAP will be made available in the Regional Unit, field sub-project office and relevant village office, as well as in website of PLN and in the World Bank website.
- Documentation of the land donation and land payment will be available in the Regional Unit.
- Compensation, and other assistance as per LARAP should be received by PAPs prior to any civil work. If follow-up consultation is needed, Regional Unit should conduct another round of consultation with PAPs to clarify outstanding questions on LARAP execution. Feedback and Grievance Redress Mechanism should be in place since the beginning and be made accessible for PAPs to express their grievance.
- Post-implementation assessment will also be consulted with the PAPs. The assessment will include verification of compensation received by PAPs (whether it has been delivered as per agreed LARAP) and the PAPs' livelihoods have been at least restored to pre-relocation stage.

Table 8 Stakeholder Engagement for GREFi Sub-projects

No	Stages and purposes	Topics to be discussed	Stakeholder to be consulted	Approach
1	Preparation stage, engagement to be conducted focusing more on preliminary screening of project exclusion and preparation of LARAP and/or LAP/DPPT	• Information regarding the land status and land use • Legal rights, land tenure and legacy issues • Land survey and inventory of affected assets • Collection of socioeconomic baseline data • Identification of vulnerability and impacts severity	• Local government, including the environmental agency, land agency • Village government • Project affected household/people (PAH/P)	• Consultation and socialization of project plan with the project affected community • Individual stakeholder meeting • Individual interview with each of the PAH • Separate group meeting with vulnerable groups if relevant
2	All stages	• Information regarding the land status and land use • Legal rights, land tenure and legacy issues • Land survey and inventory of affected assets • Collection of socioeconomic baseline data	Land donators	Individual meetings
3	All stages	• Consultation with regards to the potential impacts, livelihood restoration program planning • Engagement during the implementation to provide assistance and monitoring	Vulnerable groups and severely impacted	Small group consultation and individual meetings

8. Grievance Redress Mechanism

The same GRM presented in ESMF will be used to receive and process grievances related to land acquisition and resettlement. PLN, Project Management Consulting and contractors will be trained in its implementation.

The overall project approach in enabling transparency and consultation should allow solutions to local problems locally, quickly, and effectively. If any affected persons or other community members have a complaint regarding the framework or its application in practice, the project will strengthen established systems in PLN that address complaint handling, with dedicated staff in charge of handling and following up on complaints.

The LARAP or CAP should include a clear grievance redress mechanism for land owners and users, as well as communities surrounding the proposed sites. The GRM should specify the contact and/or venue(s) to file complaints, service standards to respond to complaints, and documentation and ensure that the proposed mechanism is widely disseminated.

9. Reporting and Monitoring

In addition to monitoring and reporting requirement of current PLN policies, PLN will be required to monitor and report to the World Bank on each LARAP/CAP semi-annually through the land acquisition and resettlement process, until final completion, as well as the livelihood restoration of the affected people (particularly the vulnerable and the severely impacted people) post compensation. The reports will provide information on progress of the program, including any problems and issues that have been encountered and corrective measures that have been implemented. They will also describe any changes to the LARAP that may be needed to ensure compliance with LARPF.

PLN will also be required to appoint a qualified consultant to conduct third-party monitoring of each LARAP/CAP at mid-term and completion. These reports will describe any corrective actions that need to be taken for full compliance with the LARAP/CAP and the adequacy of corrective measures that PLN has implemented. The completion audit can only be conducted once the sub-project considers LARAP/CAP implementation completed based on indicators specifically developed, with the audit seeking to verify if 1) LARAP/CAP has been fully implemented as intended and 2) with reference to original socio-economic census as baseline, whether PAPs' livelihood have been at least restored to pre-subproject levels.

10. Budget Estimate

LARAPs will need to estimate the costs of implementation. Typical budgets would include the line items into the Table 9 Budget Estimate

A gross estimate, based on experiences under the project and in this sector so, is listed below:

Table 9 Budget Estimate

Activity	Estimated budget (IDR million)	Who is responsible for	Time
Preparation of action plan documents			
Assets valuation			
Assets compensation			

Activitiy	Estimated budget (IDR million)	Who is responsible for	Time
Public infrastructure			
Livelihood restoration/development			
Training/capacity building			
Independent monitoring			
LARAP operations (permits, consultations, PLN monitoring, GRM, etc.)			
Contingency			

PLN will be responsible to finance all costs associated with the LARF implementations.

1. ANNEXES

Annex A: Pre- Screening

Checklist/form to screen project impacts during AWP preparation.

The following provides main criteria which need to be covered as part of the overall preliminary screening processes:

Criteria to be covered as part of the preliminary screening

Criteria	Applicability (Y/N)	Assessment	Document references	Information Source
Legal aspects				
a. State owned land?				
b. Government owned land? If so, which government?				
c. Privately owned land?				
d. Land acquisition, clearance of existing structures and other private assets, already done?				
e. If Yes to d, did affected people physically relocate, and if so, approx. number of relocated HHs? Any simmering disputes or complaints? Documentation of past land acquisition/ clearance available? What support informal occupants incl. those without local ID cards received?				
Physical land uses and ownership				
f. Approx. how many HHS are present on subproject site and affected? If				
g. Physical relocation inevitable? Sufficient space available for in-situ resettlement?				
h. Informal/illegal land uses/occupation observed? If so, approx. number of users?				
i. Economic/livelihoods activities observed? If so, what are types and scale of such activities conducted?				
j. Active land use observed? If so, for what purpose and share of land used for active				
k. Conflicts/land disputes likely to be present?				
l. Many landowners/ occupants without local ID cards?				

Annex B: LARAP Outline

Full LARAP

The scope of requirements and level of detail of the LARAP vary with the magnitude and complexity of land acquisition and potential livelihood impacts. The plan is based on up-to-date and reliable information about (a) the proposed project and its potential impacts on the displaced persons and other adversely affected groups, (b) appropriate and feasible mitigation measures, and (c) the legal and institutional arrangements required for effective implementation of resettlement measures.

At a minimum, a LARAP shall consist of:

- a. *Description of the project.* General description of the project and identification of the project area.
- b. *Potential impacts.* Identification of:
 - The project components or activities that require land acquisition using a negotiated settlement scheme, explaining why the selected land must be acquired for use within the time frame of the project;
 - The zone of impact of such components or activities;
 - The scope and scale of land acquisition and impacts on structures and other fixed assets;
 - Any project-imposed restrictions on use of, or access to, land or natural resources;
 - Alternatives considered to avoid or minimize displacement and why those were rejected; and;
 - The mechanisms established to minimize displacement, to the extent possible, during project implementation.
- c. *Objectives.* The main objectives of the resettlement program.
- d. *Socioeconomic assessments.* Depending on the extent of potential impacts, the assessment may cover the following aspects:
 - Social economic characteristics of displaced households, including a description of production systems, labor, and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities from land use) and standards of living (including health status) of the land owners/users;
 - Information on vulnerable groups or persons for whom special provisions may have to be made;
 - In conjunction with establishment of a cut-off date, providing a basis for excluding ineligible people from compensation and livelihoods assistance; and
 - Establishing baseline conditions for monitoring and evaluation purposes.
 - Land tenure and transfer systems, including an inventory of common property natural resources from which people derive their livelihoods and sustenance, non-title-based usufruct systems (including fishing, grazing, or use of forest areas) governed by local recognized land allocation mechanisms, and any issues raised by different tenure systems in the project area;
 - The patterns of social interaction in the affected communities, including social networks and social support systems, and how they will be affected by the project; and
- e. Legal framework, covering:

- The scope of the power of compulsory acquisition and imposition of land use restriction and the nature of compensation associated with it, in terms of both the valuation methodology and the timing of payment;
 - The applicable legal and administrative procedures, including a description of the remedies available to land and asset owners in the judicial process and the normal time frame for such procedures, and any available grievance redress mechanisms that may be relevant to the project;
 - Laws and regulations relating to the agencies responsible for implementing land acquisition; and
 - Gaps, if any, between local laws and practices covering compulsory acquisition, imposition of land use restrictions and provision of resettlement measures and ESS 5, and the mechanisms to bridge such gaps.
- f. *Institutional framework*: roles and responsibilities for land acquisition and livelihoods assistance.
 - g. *Eligibility*. Definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, including relevant cut-off dates as per the LARPF.
 - h. *Valuation of and compensation for losses*. The methodology and recommendations of the licensed appraisers of any land and assets lost due to land acquisition in conjunction with the LARPF.
 - i. *Community participation*. Involvement of land owners and users, including a description of the strategy for consultation with, and participation of, and grievance mechanism of land owners and users in the overall planning and implementation of LARAPs. Cut-off date of the socioeconomic census must be announced so PAPs are informed about this.
 - j. *Implementation schedule*. An implementation schedule providing anticipated dates for land acquisition, compensation dates, and legal transfer.
 - k. *Costs and budget*. Tables showing categorized cost estimates for compensation in line with the compensation matrix in the LARPF; timetables for expenditures; sources of funds; and arrangements for timely flow of funds.
 - l. *Grievance redress mechanism*. The plan describes available feedback and grievance mechanism, including affordable and accessible procedures for third-party settlement of disputes arising from land acquisition and the availability of judicial recourse and community and traditional dispute settlement mechanisms.
 - m. *Monitoring and evaluation*. Arrangements for monitoring of land acquisition and implementation of livelihoods assistance and involvement of project affected people in the monitoring process.

Abbreviated LARAP

An Abbreviated LARAP is required for a Project Activity that affects less than 200 people, or if it creates insignificant and minor impacts on the PAPs. Impacts are considered minor and insignificant if the PAPs physically do not have to be relocated and not more than 10% of their productive assets are acquired by the Project Activity. An Abbreviated LARAP shall include, at minimum, the following components:

1. Description of the Project Activity. General description concerning the Project Activity and identification of the Project Activity's site.

2. Potential various impacts that may occur. The identification includes:
 - i. Components of Project Activities that would require land acquisition; and
 - ii. Areas to be affected by the activity.
3. Census on the PAPs, and inventory of assets affected by the Project Activity. Results of the survey and asset inventory, which will include:
 - i. List of PAPs, which differentiates PAPs who have land rights and land users (tenants) who do not have land rights; and
 - ii. Inventory of land parcels and structures affected by the Project Activity. Information produced by the survey needs to be summarized into a table.
4. Eligibility. Identification of which PAPs will be entitled to receive compensation and explanation of the criteria used to determine eligibility.
5. Compensation, assessment of land and assets valuation, and resettlement assistance to be provided. This includes a description of the compensation options and resettlement assistance that will be offered to the PAPs. Assessment of land and asset values will be determined by the result of an assessment result by licensed appraisers.
6. Public consultation with local community members who will lose their land and other assets. This includes activities to:
 - i. Inform the PAPs about various impacts of the Project Activity, available options for compensation and resettlement assistance, and procedures to obtain compensation, and
 - ii. Provide opportunity for the PAPs to express their opinion or concerns.
7. Institutional Responsibility. Brief description concerning the organizational frameworks to implement the activities of land acquisition.
8. Schedule of Implementation. An implementation schedule shall be made to include all land acquisition activities, including target deadlines for compensation payments. The schedule must describe how land acquisition activities are linked to the overall Project Activity's implementation.
9. Cost and Budget. Costs estimations for land acquisition are required by the Project Activity.
10. Complaints Handling Procedures. A workable procedure must be set up, which can be accessed by complainants for settlement of disputes arising from the land acquisition; such complaints' mechanisms should consider the options to go to the district court as well as community-based and traditional dispute resolution mechanisms.
11. Monitoring. Plan to monitor land acquisition activities and compensation payment to the PAPs.

Annex C: Example of Social Census Instrument of Land Acquisition Process

Disclaimer: Please adjust this template as needed based on the needs/scope for each project and monitoring indicator for each project!

A social census instrument for the land acquisition process is a tool used to gather comprehensive information about the individuals and communities affected by a land acquisition project. This information is crucial for assessing the social impact of the project, determining compensation and resettlement needs, and ensuring that the rights and well-being of affected populations are protected. Social census for land acquisition process should be done to 100% affected households.

Below is a template for a social census instrument:

Title: Social Census Instrument for Land Acquisition

Project Name:

(Insert the name of the land acquisition project)

Date of Census:

(Insert the date when the census is conducted)

Location:

(Provide the geographical coordinates or description of the project area)

Census Team:

(Names and roles of the census team members)

Introduction:

This social census aims to collect information about individuals and communities affected by the [Project Name] land acquisition project. The data collected will be used for project planning, compensation, resettlement, and ensuring the welfare of affected populations. Participation is voluntary, and all information will be treated confidentially.

Section 1: Household Information

1. Household ID: (Unique identification number for each household)

2. Name of the Head of Household:

3. Total Number of Household Members:

4. Address:

- Village/Town:
- District:
- State/Province:
- Country:

Section 2: Demographic Information

5. Name (Full Name):

6. Gender:

- Male
- Female

7. Date of Birth (or Age):

8. Marital Status:

- Single
- Married
- Divorced
- Widowed
- Other (Specify):

9. Relationship to Head of Household:

10. Ethnicity/Caste:

11. Religion:

Section 3: Livelihood and Occupation

12. Main Source of Income:

13. Type of Occupation:

- Agriculture
- Livestock
- Fisheries
- Wage Labor
- Small Business
- Other (Specify):

14. Land Ownership:

- Owned
- Leased
- Tenant
- Other (Specify):

15. Livestock Ownership (if applicable):

Section 4: Impact of Land Acquisition

16. How is your household affected by the land acquisition project?

- Displacement:

- Loss of Livelihood:
- Other (Specify):

17. Do you have legal land titles or documents for the affected land?

- Yes
- No
- Mention the titles or documents owned

18. Have you received any information or compensation related to the project?

- Yes (Specify)
- No
- Mention the source of information

Section 5: Resettlement and Compensation Needs (if applicable)

19. Do you require resettlement assistance?

- Yes
- No
- If yes, please provide suggestion

20. Are you seeking compensation for land and assets?

- Yes
- No
- if yes, please mention expected value

Section 6: Additional Comments and Concerns

21. Please provide any additional comments, concerns, or suggestions related to the land acquisition project:

Declaration:

I, [Name of Enumerator], certify that the information provided in this social census instrument is accurate to the best of my knowledge and that all responses were obtained with the informed consent of the respondents.

Enumerator's Signature: _____

Date: _____

This social census instrument can be customized and adapted to suit the specific needs and requirements of the land acquisition project and the local context. It should be administered by trained enumerators who can communicate effectively with the affected communities and ensure the ethical and respectful collection of data. Additionally, it's important to comply with relevant legal and ethical guidelines for data collection and privacy protection.

Annex D: Example of Voluntary Land Donation Document

Project Information

Sub-projects:.....km

Location

PLN UIP/Wilayah:

Contractor: —

Voluntary Donation Land Agreement

The following agreement was made on the day date between Mr. / Mrs., age....., resident of..... Kelurahan....., sub-district.....

.....(owner) and..... (project recipient/supporter).

1. That land with certificate no..... is part of....., with boundaries to the East....., to the West....., to the North....., and to the South.....

2. That the owner holds the right to the transferable land (area in square meters), with the Field number at the location mentioned above (including a copy certified maps, if available).

3. That the Owner testifies that the land/building is free from squatters or encroachers and is not subject to any other claims.

3.1. That the Owner hereby grants to (name beneficiary) assets listed in the table below for development and development of for the benefit of the community.

Type of Loss (asset)	Total	Unit	Note
Land		M2	
Trees		amount	
Plants		M2	
Building		M2	

3.2. The owner declares that he has previously been notified by(local authorities,

Area) on the right to receive compensation for loss of property (land, buildings, trees/plants, and access) that may be caused by the construction of Project infrastructure on its m2 land section (each map attached).

3.3 That the Owner will not claim any compensation against the gift of such assets or obstruct the development process on his land, if this happens the Owner will be subject to sanctions in accordance with applicable laws and regulations.

3.4 That (name of project initiator) agrees to accept this asset grant for the stated purpose.

4. That the recipient will build and develop and take all possible precautions to avoid damage to adjacent land/buildings/other assets. If the land/building/other adjacent assets are damaged, compensation will be paid to the Owner.

5. That the terms of this agreement shall enter into force from the date of signing this deed.

I also ensure that I do not seek compensation for loss of land, buildings, trees/plants, and access and will ask local authorities to consider this grant as my donation to the Project.

..... Owner's Name and Signature

Witnesses:

1. (Signature, name and address)
2. (Signature, name and address)
3. (Signature of the initiator/representative of the sub-project)

Annex E: Example of Minutes of Consultation

Name of Subproject	
Date of Meeting	
Place of Meeting	
Objective of Meeting	
Attendance list from the Subproject proponents (the government side and contractors)	
Attendance list from communities • Community representative • Community leader • Community member	Total number of communities' participants: If possible, to include gender disaggregated information on the number of participants: Male: Female:
Issues that were raised and/or addressed	Key pointers:
Information provided to the community	
Steps that were agreed upon	
Remarks/ additional note	

Annex F: Grievance Redress Reporting and Monitoring Form

Note: Databases in Excel form can be compiled using the following format:

Notes: Excel databases can be organized using the following format:

Details about the Applicant

1. Name:
2. Address:
3. ID card number:
4. Contact Information (another contact person can be mentioned in case the affected person does not have a cellphone number):
5. Gender
6. Vulnerability status, if any
7. Indigenous People (yes/no)
8. Status: affected people, Intermediary, NGO, Local Authority, other

Details about Complaint

1. Date of registration
2. Details of the focal point/institution that received the complaint (name, position, name of receiving office)
3. Grievance formats: letter, phone call, email, verbal complaint, suggestion box, other
4. Type of issue (e.g. land acquisition, compensation/assessment, construction, other)
5. Problem description (summary)
6. Person/company responsible for causing the problem
7. Action Plan (action, name of person in charge, date)
8. Final resolution (summary)
9. Complainant satisfaction letter and other feedback (summary)

Details on Responsible Person Monitoring

1. Name:
2. Position:
3. Deadline of form completion

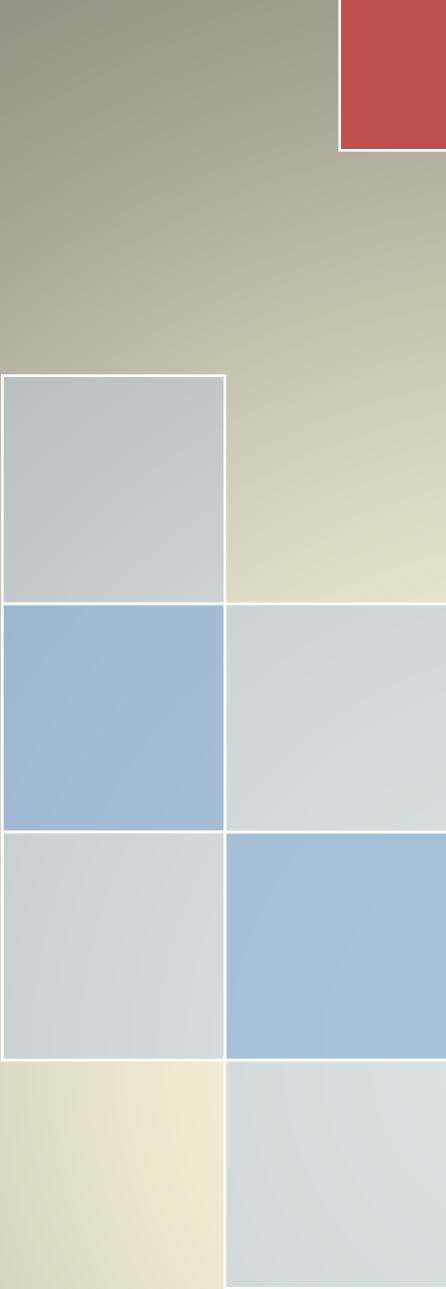
Annex G: Land Due Diligence and Corrective Action Plan (CAP)

Land due diligence report will consist of: (see Annex B, the ESDD TOR in the ESMF)

1. Introduction
 - a. Background
 - b. Sub-project Description
2. Due Diligence Purpose and Methodology
3. Needs and Impacts Land Acquisition (past and present)
4. Consultation and Grievance Redress Mechanism
5. Institutional Arrangements
6. Compliance Assessment
7. Corrective Action Plan

Example of CAP table

No	Findings/Gaps	Corrective Action Description	Parameter	Fulfillment Target	Note



**The Indonesia Grid and Renewable
Energy Financing Facility (GREFi) -
P178788**

**Indigenous Peoples Planning
Framework
(IPPF) as Annex of ESMF**

PT Perusahaan Listrik Negara (PLN)

September 2024



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Outline

1. Introduction

1.1. Introduction to Project

The Indonesia Grid and Renewable Energy Financing Facility (GREFi) (hereby referred as the GREFi Project or the Project) will improve the capacity of PT Perusahaan Listrik Negara (PLN) to use market-based sustainable finance instruments to implement its energy-transition strategy. Under this Project, the World Bank will provide a guaranteed financing to mobilize commercial financing up to US\$ 1.5 - 2 billion for certain types of renewable energy (RE)-enabling projects, with the main focus on energy transmission and storage infrastructure that is critical for the integration of renewable energies, and to support PT Perusahaan Listrik Negara (PLN)'s improvement of its Environmental, Social and Governance (ESG) programs.

With energy investments commonly located in rural areas that are home to a mix of population groups who may have features of Indigenous Peoples (IP) and draw significant livelihoods from natural resources and land under customary management that may be impacted by the Project, it is important to ensure that PLN have processes in place to ensure that risks and impacts to IPs are screened, assessed, and mitigated. This process needs to ensure consistency with the requirements of Indonesian regulatory setting and WB ESS7 up to, and including, securing free, prior, and informed consent (FPIC), if needed. As a result, this Indigenous Peoples Planning Framework (IPPF) has been developed as an integral part of the ESMF to provide PLN with the necessary processes and procedures to meet these requirements.

1.2. Objectives of the Project

The main objective of the Project is to enable the deployment and integration of RE in Indonesia's power sector through private capital mobilization. Investors' emphasis on ESG risks are putting increasing pressure on entities like PLN, who have a large coal-fired power asset base. Combined with corporate ESG capacity improvements supported under a separate Technical Assistance program, this Project aims to pilot and secure PLN's continued access to market-based sustainable financing instruments as a key financing source for Indonesia's long-term energy transition.

1.3. Project Description and Components

As described in Chapter 2 of ESMF the GREFi Project, The GREFi program is planned to be implemented through the IBRD Guarantee scheme worth up to USD 1 billion. This scheme will provide partial credit enhancement to mobilize PLN loans ranging from USD 1.5 to 2 billion from participating commercial lenders and investors through a series of transactions. The Project will create a blended-financing vehicle to enable PLN's access to the Sustainable-Finance market at scale. The IBRD Guarantee is expected to facilitate PLN's access to sustainable-finance markets on improved terms and conditions due to the expected reduction in financing costs or increase in tenor. For each GREFi transaction backstopped by the IBRD Guarantee, PLN will have the flexibility to use the best fit-for-purpose sustainable finance instrument among the ones established in the market. The financing vehicle put in place under the proposed Project would provide incentives to PLN to meet pre-established ESG performance indicators compatible with its corporate commitments and low-carbon development pathway.

1.4. Context and Objectives

This IPPF has been developed to ensure that all sub-projects proposed to be guaranteed are developed in

Outline

a manner that fosters full respect for IPs¹ identity, dignity, human rights, livelihood systems and cultural uniqueness as defined by the IPs themselves. It is intended that the application of this IPPF achieves this through a whole of project cycle approach commencing at screening of positive and negative list through until implementation of Project specific IPPs that address all adverse impacts and ensure that IPs access equitably receive culturally appropriate benefits from the RE projects. The implementation of this IPPF is also supported by the Indigenous Peoples Management Guideline (IP-MG) that has been developed to accompany PLN's primary operational Environmental and Social Management System (ESMS) that is applied universally to all of its projects regardless of whether they are funded through GREFi. Both documents have been normalized against each other and therefore the IP-MG forms part of the IPPF. and is included as Annex A. This is to ensure consistency of approach, with key guidance and procedural aspects provided within the Annexes of the IP-MG and referred to throughout this document.

The specific objectives of this framework document in providing guidance to all activities under Component are:

- Ensure that for each sub-project proposed to be captured in the proposed investment in each tranche, an Indigenous Peoples (IP) screening, identification and due diligence is conducted to identify presence of, and potential impacts to, IPs;
- Seek to guide planning, engagement, impact assessment and development of management measures to avoid or minimize potentially adverse effects of the Project on IPs, and if unavoidable, develop and implement mitigation measures based on good faith consultation and negotiations resulting in broad support from the impacted IP communities;
- Maximize the potential positive effects of the Project on the IPs, based on good faith consultations and negotiations with the IPs ensuring that the design and implementation of the Project incorporate aspirations and needs of the IPs;
- Apply the principles of free, prior, and informed consent (FPIC) where sub-projects will impact IPs in circumstances where it is required²;
- Achieve compliance with the requirements of ESS7 and recognize the various national objectives in empowering indigenous communities through ensuring that local level benefits realization integrates with various development programs available within their location, and if necessary, ensuring their protection, reinforcement, development, through advocating to improve their social prosperity.

1.5. Scope of Impacts

The scope of the GREFi Project will be limited to Sub-projects that are determined to be eligible following the application of the screening process described in Chapter 2 of the ESMF. This screening process is based on the ability of sub-projects to meet World Bank standards for biodiversity, natural disasters, land acquisition, cultural heritage, labor and working conditions, Indigenous Peoples and presence of international waterways.

¹ The term Indigenous Peoples in this IPPF is used in to refer to a distinct, vulnerable, social and cultural group with the following characteristics in varying degrees: a) self-identification as members of a distinct indigenous cultural group and recognition of this identity by others; b) collective attachment to geographically distinct habitats or ancestral territories in the project area(s) and to the natural resources in these habitats and territories; c) customary, cultural, economic, social or political institutions that are separate from those of the dominant society and culture; and d) an indigenous language, often different from the official language of the country or region. Within Indonesia, these are often referred to as "*Masyarakat Adat*" (Customary Communities).

² As defined within Paragraph 24 of ESS7. See Step Two in page 6 below.

Outline

Many proposed sub-projects are situated in rural areas that are home to a mix of population groups many of whom draw significant livelihoods from natural resources including IPs. The potential scope of impacts to IPs from each sub-project would be defined through the screening and process of developing the IPP and may include one or more of the following in varying significance:

- Acquisition and/or voluntary donation of land. The land acquisition may be large scale and involve land that is under the recognized customary ownership or management of IPs.
- Land acquisition as described above can also result in physical or economic displacement to IPs at household level even where land is not recognized as being under customary ownership or management.
- Direct and indirect impacts to IPs customs generated through interactions with construction workforce and informal in-migration into the sub-project area.
- Impacts to health and safety of IPs as a distinct group of sensitive receptors during the construction and operation of sub-projects.
- Impacts to tangible and intangible cultural heritage.

This list is not considered exhaustive and for each RE sub-project where IPs are identified as being present a dedicated impact assessment will need to be conducted as a key component. The ESMF includes processes and procedures to exclude ineligible sub-projects under the guarantee program, submit the list of potential investments for the Bank's prior review together with the required E&S due diligence, and monitor and report their implementation performance.

2. Legal Framework for Indigenous Peoples

2.1. Indonesia Legislations

The Constitution of Indonesia (1945) recognizes customary communities or indigenous peoples' rights are recognized by other laws and regulations. To date there is no statutory law that specifically addresses the matter yet with matters of IP being addressed under various sectoral regulations capturing aspects in respect to land and land acquisition, forestry, coastal areas and small islands, environmental protection and management. This is captured across regulations such as:

- **Law No. 41 Year 1999 on Forestry**, which has been amended by Law No. 19 Year 2004. The Constitutional Court has reviewed the Law No. 41 Year 1999 on the forest rights of MHA through the Constitutional Court Decree No. 35 Year 2012 which confirms that *adat* forests are no longer state forests.
- **Basic Agrarian Law of 1960** determines the applicability of *adat* law over land and customary rights (*hak ulayat*). This is the first law that introduced the concept of conditionality in the recognition of Indigenous Peoples which was further adapted through various laws governing land and natural resources.
- **Village Law No. 6 Year 2014** acknowledges the existence and rights of MHA, provided that they are recognized, and MHA could opt to establish *adat* villages with their own institutional structures and authority. However, this law suffers from a lack of guiding regulations and institutional mandates to make such provisions operational. The Law grants a *desa adat* an authority to conduct *adat*-based public administration. Compared to other laws, the law adopts optional, non-cumulative criteria for recognition of MHAs with the existence of *adat* territory being mandatory.

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- **Law No. 27 Year 2007 on Coastal Zone and Small Island Management** acknowledges the existence of MHA provided they are recognized and requires consultations with MHA for any development in coastal areas. This is the only Indonesian law that explicitly requires free, prior, and informed consultations for affected MHAs.
- **Law No. 23 Year 2014 on Local Government** recognizes the existence of *adat* institutions (lembaga adat) by giving them rights to “empowerment”. Secondly, the Law determines that *adat* law is an additional rule for use in particular purposes, such as village elections. Thirdly, the Law places *adat* or *adat* law as the basis upon which to conduct local development, or as a parameter to measure social cohesiveness.
- **Law No. 11 Year 2010 on Cultural Heritage** recognizes MHA as the owners of their cultural heritage and grants them authority to manage it.
- **Implementing regulations** include PR 186/2014 on Social Empowerment of Remote Indigenous People, MAA Regulation 18/2019 on Procedures for Customary Land Administration as part of a Customary Law Community, Ministry of Home Affairs (MOHA) Regulation 52/2014 on Guidelines for Recognition and Protection of Indigenous People, and MOEF Regulation 17/2020 on Titled Forest and Indigenous Peoples Forest.
- **Provincial Governments** have enacted local regulations regarding the recognition and validation of indigenous peoples. For example, the statutory recognition of the indigenous people in Papua is acknowledged under Law 21 of 2001 on Special Autonomy for Papua Province.

The regulatory system is supplemented by the strong presence of non-governmental organizations and experts. The Indigenous Peoples’ Alliance of the Archipelago (AMAN) has been working towards recognition of indigenous peoples’ rights since the mid-1980s. Thus, it has been often referred for registered data of Indigenous communities across Indonesia. Meanwhile, MOEF engages with the Customary Territory Registration Organization (BRWA, a non-government organization) for the identification and prioritization of customary forest legalization. BRWA’s establishment was initiated by AMAN to ensure proper documentation of Indigenous territory mapping, mostly done with communities through a participative approach. The map provided by BRWA as a reference on potential presence of indigenous peoples’ communities. Additionally, PLN TEK actively manages its own internal database identifying potential IP groups and their location which draws from these legal and database resources.

Efforts have been made in the past to introduce and legislate a statutory law that specifically provides for recognition of the existence of IPs. Bills have been introduced in 2014 and again in 2020 and have not been passed. Throughout the implementation of the GREFi Project, PLN needs to monitor the progress of any new laws and amend this IPPF should their passage into law be secured.

2.2. World Bank ESS7

ESS7 “Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities” recognizes that IP have identities and aspirations that are distinct from mainstream groups in national societies and thus are disadvantaged by traditional models of development. These groups are inextricably linked to the land on which they live and the natural resources they depend on and are therefore particularly vulnerable if their land and resources are transformed, encroached upon or significantly degraded. It also recognizes that these groups may have specific vulnerabilities that need to be addressed when designing Projects in a manner that minimizes impacts while recognizing opportunities to improve quality of life and well-being. The key objectives of ESS7 are to:

- ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture and natural resources-based livelihoods of IPs

Outline

- avoid adverse impacts of projects on IPs or, when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts
- promote sustainable development benefits and opportunities for IP in a manner that is accessible, culturally appropriate, and inclusive
- improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation by IPs affected by a Project, throughout the Project's lifecycle
- To obtain the Free, Prior, and Informed Consent of affected IPs in circumstances described in the ESS
- Recognize, respect and preserve the culture, knowledge, and practices of IP, and to provide them with an opportunity to adapt to changing conditions in a manner and in a time-frame acceptable to them

The ESS will apply wherever IPs are present in, or have collective attachment to a proposed Project area and captures requirements to assess the nature and degree of expected direct and indirect impacts to IPs, ensure that projects are designed that provides affected IP communities with equitable access to project benefits, captures meaningful consultation during project design, ensures that project design avoids impacts to the extent possible, and defines mitigation measures and development benefits clearly and in the context of an IPP.

2.3. PLN Management Framework

PLN has an existing Integrated Management System (IMS/SMT) which covers key principles for environmental and social impact assessment which incorporates compliance requirements to all Indonesia and local laws and regulations, international standardization. The IMS is mainly focused on environmental, health, and safety aspects with limited reference for project impacts on livelihood restoration, Indigenous Peoples, cultural heritage, and meaningful consultations and stakeholder engagement beyond national requirements on public consultations in the impact assessment process. The PLN IMS serves as the basis for the PLN to assess and manage potential significant environmental and social impacts of its operations. Under the IMS and based on the project experience above, PLN has developed various regulations and guidelines to fill gaps in the national legal and regulatory framework.

Most relevant are the Technical Guidelines for Land Acquisition and Resettlement, November 2019 (Draft Final) that explains about the process of community engagement will be carried out according to the existing culture and according to the risks and potential impacts on Indigenous Peoples. Specifically, the process will include the following steps:

- a. Involve Indigenous Peoples Representative Body (IP) (for example, among others village elders' council or village council);
- b. Involve women and men of all ages in a culturally appropriate way;
- c. Provide sufficient time for the Indigenous Peoples Collective Decision-Making Process;
- d. Facilitate Indigenous Peoples to express their opinions, concerns and requests in the language of their choice, without external manipulation, interference or coercion, and without intimidation;
- e. Ensure that a Grievance Redress Mechanism is provided for physical investment, that is culturally acceptable and easily accessible to Indigenous Peoples (IP).

All of these considerations are incorporated into the PLN's ESMS which serves as a basis of this IPPF for the GREFi Project.

Outline

2.4. Gap Analysis

The analysis conducted within the ESMF identified multiple gaps in the current legal and institutional arrangements in terms of multiple definitions of IP communities due primarily to the large number of government agencies involved in addressing matters relating to Indigenous Peoples. This is reflective of a fragmented legal and institutional framework on IP issues which are mostly defined at the sector level and pose significant challenges in coordination and implementation. Another gap exists in the requirements to conduct meaningful consultation beyond the land acquisition therefore limiting pathways to achieving FPIC. The below table provides an objective level analysis of gaps between the Indonesian regulatory system and ESS7 and supplements the detailed gaps evaluation presented within Table 3-3 of the ESMF.

Outline

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
Objective 7.1: To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, cultural and natural resource-based livelihoods of Indigenous Peoples Identification of IP: Regardless of any terminology used, covers a distinct social and cultural group possessing the four characteristics defined within Paragraph 8 in varying degrees.	Minister of Home Affairs Regulation No.54 of 2014; regarding Recognition and Protection of Indigenous Communities. Prevailing laws and regulations recognize the rights of citizens and respect IPs and their traditional rights, including within the Constitution and the Human Rights Law. Ministry of social regulation no 12 of 2015 provides definition on key terms like "KAT," "adat area," "customary law," and "isolated."	The key gap is the coordination challenges that have matters pertaining to the recognition of IP and their rights across sectors and stakeholders within Government. It is difficult to ensure consistency in application at sub-project levels.	The management guideline to establish clear and consistent objectives and mechanisms to ensure that these rights of IP are respected during project screening, impact assessment, IPP development and all forms of engagement. The management guideline needs to establish a screening mechanism to identify IP based on the characteristics as defined within Paragraph 8 of WB ESS7.
Objective 7.2: To avoid adverse impacts on Indigenous Peoples, or if not possible, to minimize, mitigate and/or compensate impacts. To promote sustainable development for IP in a culturally appropriate and inclusive manner.	The Land Acquisition Law (Law 2 of 2012) requires that where a government agency requires land for a public interest development, a land acquisition plan must be prepared, and that notice must be given and public consultation conducted. This law mandates that compensation for customary land shall be given in the form of (i) money, (ii) substitute or replacement land, (iii) resettlement, being a process of providing land at a	There are no measures within the regulations to ensure that they appropriately recognize, respect, and protect the land, territories, environment, health and culture of remote groups with limited external contact. There is no defined objective in any regulatory framework requiring avoidance of adverse impacts on IPs, particularly in relation to land acquisition and	The management guideline needs to clearly define and establish principles pertaining to impact avoidance, impact assessment, impact mitigation, and realization of potential development benefits that are culturally specific and sensitive. This includes any IP groups that may be defined as a remote group with limited external contact. This is captured through the IP screening (intended to avoid impacts to the

Outline

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
	different location from that of the entitled party in accordance with an agreement made during the acquisition process, (iv) share ownership, being equity participation in the relevant public interest development and/or the management thereof based on mutual agreement between the parties, or (v) other forms as agreed between the parties. Ministry of social regulation no 12 of 2015 covers various aspects of KAT empowerment, including identification, data collection, needs assessment, development planning, capacity building, service delivery, and monitoring and evaluation.	related socio-economic studies such as the AMDAL. The law has not addressed collective compensation, being a mechanism to promote the effective distribution to all eligible members or effective use that benefits all members of the IP group, goals and preferences of the people, improving standards of living and livelihood in a culturally appropriate manner and fostering long-term sustainability of resources.	extent possible) and the development of an IPP and FPIC strategy that recognizes both direct and indirect impacts to IPs. The development of IPPs needs to account for collective compensation mechanisms.
Objective 7.3: To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples affected by a project throughout the project's life cycle	The legal framework as it stands across various legal instruments and sectors has generally addressed aspects of general public consultation.	While the legal framework provides for public consultation in the early project planning and land acquisition phase, it does not recognize the concept of meaningful consultation and the development of ongoing relationships based on meaningful consultation are maintained throughout the lifecycle of a sub-project.	The IP management guideline needs to clearly define and establish principles for ongoing and meaningful consultation and relationship development at sub-project level.
Objective 7.4: To obtain Free, Prior, and Informed	The legal framework implementing land acquisition activities (i.e. Law 2 of	Currently, Indigenous Peoples participation in project public	The management guideline needs to introduce a clear requirement for

Outline

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
Consent (FPIC) of affected Indigenous Peoples in important circumstances	2012 and supporting regulations) provides that the agency that requires land must give notice of the development plan and hold public consultation regarding the plan. This demonstrates the intention of the government to facilitate communities and stakeholder engagement in a project.	consultation mainly applies to the land acquisition process. However, this is part of the broader public consultation and there is no specific mechanism or regulation that addresses a requirement to obtain FPIC of IP. It is not clear if there are regional level regulations in place that may address FPIC requirements. There is a need to capture requirements and capacity regarding obtaining FPIC, especially when an investment project involves potential resettlement and relocation. There is room to enhance their participation on other project risks and impacts mitigation measure.	compliance with the requirements of ESS7 as it relates to developing and implementing strategies to secure FPIC.
Objective 7.5: To recognize, respect, and preserve the culture, knowledge, and practices of Indigenous Peoples, and to provide them with an opportunity to adapt to changing conditions in a manner and a timeframe acceptable to them	Matters pertaining to land acquisition and access to land are addressed through Law 2 of 2012 and associated regulations. The Constitution of Indonesia obliges everyone to respect, preserve and maintain knowledge, innovations, and practices of Indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity and promote their wider	There is no specific regulation which addresses measures for legal recognition of IPs perpetual or long-term renewable custodial or use rights. The capacity of IPs to understand their rights and to follow the procedures set out in regulations needs to be accounted for. There is no specific regulation pertaining to FPIC in respect of	The IPP development process to ensure that all sub-projects are developed in a manner that recognizes, respect, and preserve the culture, knowledge and practices of Indigenous Peoples. In instances where FPIC is required, there will be the need to ensure that this is achieved prior to land acquisition being concluded and independent of the timelines defined within Law 2 of 2012 and its

Outline

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
	applications with the approval and involvement of the holders of such knowledge, innovation and practices and encourage equitable sharing of the benefits arising from such consistent with the UN Convention of Biological Diversity. The central and regional governments are required to facilitate the management of cultural heritage areas, which in its implementation should not conflict with the community interest in the cultural heritage and social life.	relocation or other changes in use or access to customary land and resources in a timeframe that is acceptable to the IP. The land acquisition time frame is driven through scheduled working days against steps within the process. This objective is not addressed outside the scope of land acquisition, consistent with the UN Convention on Biological Diversity, having regard for aspects such as respect, preservation, and maintenance of knowledge, innovations, and practices of Indigenous Peoples.	implementing regulations.

3. Indigenous Peoples Screening, Planning, and Implementation

3.1. Overview

This section describes the key considerations in the application of the IPPF at sub-project level commencing with screening, moving into IPP development and implementation, and monitoring and reporting.

3.2. Screening

The final list of investments to which the Project will provide Guarantees will be determined during implementation and therefore all potential Sustainable Finance Pilot Transactions proposed by PLN need to be screened to assess their eligibility. The screening phase will be conducted as part of the proposed investment process and for approval. Consideration of IP forms an integral component of this decision-making process and consists of three steps, being (a) preliminary screening for presence of IP in the project area, (b) subject to presence of IPs, screening against defined High Risk List attributes, and (c) planning for IPP development. These are described below.

Step One: Indigenous People's PreScreening

At the beginning of consideration of each sub-project within the pre-screening, identification of the presence of IP in all or part of a sub-project area must be carried out³. Known as an Indigenous People Screening this determines if Step Two and Step Three of this Screening Phase is required. In identifying the presence of IP in the Project area, PLN will implement the "Screening for Identification of Characteristics of Indigenous Peoples – Form 2" within the PLN Practical Guidance for Indigenous People and Impact Screening (Section 5 and Annex A of the IP-MG as part of ESMS PLN). The data collection for this identification process will need to include both secondary data (such as checking the PLN TEK IP database) and primary data (such as engagement and consultation with the community surrounding the Project location and the local Social Service department). Where the evaluation indicates no presence of IP, the project can be incorporated into the AWP without further consideration of the IPPF. If the presence of IP is detected, Step Two is to be implemented.

Step Two: Screening against High-Risk List

Should IP be deemed to be present within all or part of the sub-project area, further screening is required against the Project High Risk List to determine if it can be incorporated within the proposed investment. Sub-projects are considered still in preparation with no physical works having commenced being Projects already under construction or operation are required to be undertaken in a manner consistent with this IPPF, which will be defined through the development and implementation of the detailed IPP (refer to Step Three and further below).

Sub-projects are under construction or operation on the High Risk List are defined as an activity with (i) acquisition of IPs traditional territories (ancestral domain) but without a consent from the entire IP community as well as the persons who actually use the land, based on participatory processes, (ii) physical relocation of IP communities, (iii) significant impacts on IPs cultural heritage, and (iv) significant impacts on access to natural resources for IP communities, demonstrated per international standards such as the

³ This recognizes that the list of proposed sub-projects includes transmission lines that will traverse areas occupied by various ethnic groups and villages, some of which may not meet the ESS7 definition of IP. In these cases, Step Two and Step Three may be applied to only portions of the transmission line sub-project impacted IP rather than the entirety.

WB ESF, ADB SPS and IFC PS. Where the sub-projects are proposed for inclusion within the proposed investment, an IP due diligence (IPDD) as part of ESDD is to be conducted (ideally alongside the Land Acquisition Due Diligence described within the LARPF, see Annex B, ESDD TOR of the ESMF) to cover key considerations such as:

- Whether any of the land acquired for the purpose of the sub-projects is under customary ownership, occupation, or management, and if so customary decision making and consultation mechanisms were integrated into the land acquisition process⁴
- Whether any households (HHs) were physically displaced and if any of these HHs include members categorized as IPs
- Whether any of the IPs may be defined as remote groups with limited contact (ESS7) or isolated traditional communities ("*komunitas adat terpencil*")
- If the land acquisition, construction, or operation of the Project has resulted in significant impacts to any natural resources under customary ownership, occupation, or management
- If there are any of the three FPIC triggers were presented during project land acquisition, construction, and operation⁵ and if such as FPIC has been achieved and maintained
- Has the above occurred in the presence or absence of demonstrated compliance with international standards such as WB ESF, ADB SPS, and IFC PS⁶

If it has occurred in the absence of demonstrated compliance with international standards such as WB ESF, ADB SPS and IFC PS, whether the FPIC can be identified as having been effectively and materially obtained through meaningful and prior consultation and good faith negotiations need to be assessed through an IPDD. The IPDD is to be conducted in accordance with a term of reference (TOR) approved by the Bank and undertaken by a suitably qualified specialist. It is to incorporate engagement with relevant stakeholders (such as representatives of local Indigenous Peoples groups and Social Affairs Department), field investigation, participatory mapping, and impact evaluation to determine if any of the above considerations are triggered.

If none of the above are found or are identified to have occurred having regard for the demonstrable application of FPIC principles, the sub-project can be proposed following review of the preliminary IP due diligence and included within the list of proposed investment. Any recommendations arising from the IPDD/ESDD will be integrated into a Corrective Action Plan (CAP) developed in consultation with the World Bank to ensure that material compliance with the IPPF and ESS7 is maintained through the life of the sub-project.

If any of the above considerations are identified and there has been no demonstrable FPIC process implemented, the sub-project will not be considered for inclusion within the list of proposed investment.

Step Three: Confirmation of Impacts and Planning

For any sub-projects proposed for inclusion within the proposed investment, PLN will prepare the

⁴ This includes any land purchased to the development of the sub-project and associated facilities, and any land that was provided through Voluntary Donation as defined within the LARPF

⁵ These are defined as projects which (a) have adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation, (b) cause relocation of IPs from land and natural resources subject to traditional ownership or under customary use or occupation, or (c) have significant impacts on IP cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the communities lives

⁶ Defined through the presence of an IPP covering all IPs impacted by the sub-project, with implementation of the measures contained within the document able to be clearly demonstrated.

following for approval of the Bank:

- Report summarizing the outcomes of the IP Screening undertaken within Step One
- For sub-projects under construction or operation, a report indicating the outcomes of the Indigenous Peoples Due Diligence, an opinion as to whether it may be included within the proposed investment, and the accompanying timebound CAP clearly identifying impacts to IP and available mitigation measures
- For subprojects still in preparation with no physical works having commenced, a Terms of Reference and schedule for the development of an IPP following the template and approach defined in Section 3.3 below. This includes mechanisms for consultation and engagement, FPIC strategy development (if required), social assessment, impact identification and assessment, benefits sharing provisions, and overall IPP development
- Opinion as to whether FPIC will be required and the proposed strategy for ensuring that it can be secured prior to impacts occurring

For any sub-project where impacts to IP are identified through the Three-Step screening process, an IPP must be developed in accordance with the requirements of Section 3.3.

3.3. IPP Development

For all sub-projects confirmed as requiring the development of an IPP, the document is to be developed prior to any activities commencing that would impact upon IPs, this includes land acquisition or limiting access to items of cultural heritage. An IPP is required to be developed specific for the relevant sub-project, account for the local setting, characteristics of the local IPs, impacts identified and benefits sharing opportunities. All sub-projects resulting in impacts on IPs (whether triggering FPIC or not) will require an IPP to be developed, with the complexity of the IPP to be commensurate with the magnitude of impacts arising from the sub-project. The process of development of the IPP is conducted in accordance with the PLN Guideline Template: Indigenous People, Meaningful Consultation with Indigenous People (IP-MG Annex A.2 and Annex A.3) and captures consultation and engagement, FPIC planning, and social assessment prior to drafting the document. The development of the document is to have regard for the outcomes of meaningful consultation with affected IPs, integration of the IPP as a core component of securing and maintaining FPIC with affected IPs, and robust social impact assessment based on thorough understanding of the baseline conditions. Further guidance on these principles is provided within Section 7 of the IP-MG, particularly relating to the risk and impact identification and assessment component .

The IPP is to be developed by appropriately qualified consultants and in accordance with a TOR prepared specifically for the sub-project. It is to account for the principles as described above and within Section 8 of the IP-MG, at a minimum, capture key components such as:

- **Participation, Consultation, and FPIC Processes:** A summary of results of the culturally appropriate consultation and, where required, FPIC processes undertaken with the affected peoples' which led to the indigenous peoples' support for the project. Such a summary will include: (i) information provided to the affected IP communities; (ii) gender and inter-generationally inclusive consultation processes conducted and the feedback received; (iii) mechanisms of inclusive deliberation processes within the affected IP communities and how consent decisions have been reached; (iv) consent conditions, if any; and (v) minutes of consultation meetings including when consent decision is made. The summary will be filed for each subproject for easy reference.

- **Consultation and Consent:** A description of the mechanisms to conduct iterative consultation and consent processes throughout implementation of the project. Identify particular project activities and circumstances that shall require meaningful consultation.
- **Strategy for ongoing consultations to maintain FPIC:** For any sub-project where FPIC has been confirmed as being required, a clear description of the process proposed to secure FPIC, definition of benefits sharing schemes and impact mitigation measures, timelines for achieving FPIC, defining what the form the consent agreement will take, how ongoing consultation will be conducted to ensure that FPIC is maintained, and circumstances and forms in which the IP Community may withdraw their consent.
- **Risks, Impacts and Mitigation Measures:** Where potential risks and adverse impacts to indigenous peoples, their lands, territories and resources are identified, the details and associated timelines for the planned measures to avoid, minimize, mitigate, or compensate for these adverse effects. Include relevant measures to promote and protect the rights and interests of the indigenous peoples including compliance with the affected peoples' internal norms and customs. Where such mitigation measures are part of securing FPIC, this is to be clearly defined and the process through which these were developed and agreed upon in consultation with the impacted IP's is to be described within the IPP.
- **Appropriate Benefits:** Where such benefits distribution is part of an FPIC process, the process through which these were developed and agreed upon in consultation with the impacted IPs is to be described within the IPP.
- **Capacity support:** Description of measures to support social, legal, technical capabilities of indigenous peoples' organizations in the project area to enable them to better represent the affected indigenous peoples more effectively. Where appropriate and requested, description of steps to support technical and legal capabilities of relevant government institutions to strengthen compliance with the country's duties and obligations under international law with respect to the rights of indigenous peoples.
- **Grievance Redress:** A description of the procedures available to address grievances brought by the affected indigenous peoples arising from project implementation, including the remedies available, how the grievance mechanisms take into account indigenous peoples' customary laws and dispute resolution processes, as well as the effective capacity of indigenous peoples under national laws to denounce violations and secure remedies for the same in domestic courts and administrative processes.

The indicative contents for an IPP are provided within **Annex A** and **Annex B** and capture outlines for both full and abridge versions of IPPs accounting for the level and nature of impacts to IPs . The document is to be developed and submitted to the Bank for review and approval prior to any impacts to IPs occurring.

4. Implementation Arrangements

Implementation of the IPPF will follow the GREFi Project's institutional arrangement. The development of sub-project documents such as IP screening, IPDD/ESDD reports, CAP and IPP addressing ESS 7 requirements will be the responsibility of UIP with technical support from the project's social specialist under TEK Division as needed. The Projects social specialists will be responsible for the overall implementation with ground support from the UIPs. An independent expert will be called for based on needs and where circumstances requiring IPDD, CAP and IPP reporting are envisaged under the project and/or sub-project activities.

The safeguards officers at UIP need to ensure that each document developed pertaining to IPs aligns with other project safeguards documents being developed, such as the Land Acquisition and Resettlement Action Plan (LARAP) or Process Framework (PF), and vice versa.

5. Grievance Redress Mechanism

In instances where IP are identified to be present, but not impacted in a manner that requires the development and implementation of an IPP, the Grievance Redress Mechanism (GRM) as detailed within the Stakeholder Engagement Framework (SEF) will include provisions to ensure that IPs are provided with full and culturally appropriate access to the GRM.

Where IPs are noted to be present and either directly or indirectly impacted and an IPP is required to be developed, it will include a GRM specific to IPP implementation. This GRM will be tailored to be socially and culturally appropriate and specific to the requirements of the community surrounding each sub-project. This includes identifying existing grievance channels (e.g. head of village or IP governing body) and extra measures will be provided by the Project to ensure compliance with ESS 7. The GRM will also consider local dispute-resolving mechanisms to ensure that the process entails good will and respects traditional values and practices. Engagement activities, including consultation and dialogues will be designed to be respectful of local values-systems and practices. It is also to include provisions for identifying grievances related to matters that affect any FPIC agreements secured for the sub-project (only in cases where FPIC is applicable).

Terms of Reference for the engagement of any social specialist and/or community liaison officers for specific sub-projects will capture the need for the individuals appointed to be experienced in development and implementation of IPP's and engagement with IPs accounting for the need to respect traditional values and practices.

6. Disclosure

The IPP for each sub-project will be disclosed in accordance with the requirements of international standard, with the document to be made available at:

- PLN and World Bank website
- PLN Regional Unit offices
- Villages offices that are readily accessible to project-affected people
- Sub-project offices

The IPP will be prepared in Bahasa Indonesia and English, plus any other local language as required by the affected IPs. In addition to the IPP, other supporting documents such as FPIC agreements will also be disclosed in accordance with the above requirement. Any aspects of the IPP and FPIC that may be considered commercially, culturally, or personally sensitive will not be disclosed unless agreement has first been sought from the affected IP community.

7. Monitoring and Reporting

In addition to monitoring and reporting requirements of current PLN policies, PLN will monitor and report to the World Bank on each IPP and/or CAP semi-annually through the implementation process for each sub-project. The reports will provide information on progress of the program, including any problems and issues that have been encountered and corrective measures that have been implemented. They will

describe tracking of monitoring indicators contained within the IPP and also describe any changes to the IPP that may be required to ensure ongoing compliance with ESS7.

In addition to monitoring and reporting upon implementation of the IPP, there may be instances where IPs have been identified as being presented within the vicinity of a sub-project, yet not impacted in a manner that requires the development of an IPP or securing FPIC. These cases will be flagged during screening and inclusion with the proposed investment and monitoring mechanisms developed to ensure that unanticipated impacts are able to be identified, addressed, and reconsideration of whether an IPP or FPIC will be required. This is to be captured through mechanisms such as the GRM (e.g. recording whether the individual/community lodging a grievance is potentially an IP) or periodic socio-economic monitoring surveys.

Any grievance, social incident, or interaction with community leaders that indicate that any FPIC that has been secured may be withdrawn, is to be **reported immediately** by the UIP to both PLN and the Bank.

PLN will appoint a qualified consultant to conduct third-party monitoring of each IPP and mid-term and completion. These reports will describe any corrective actions that need to be taken for full compliance with the IPP and the adequacy of corrective measures that PLN have implemented.

ANNEXES

Annex A Indigenous People Management Guideline

Indigenous People Management Guideline as part of PLN ESMS

1. Introduction

This Indigenous People Management guideline explains the main considerations needed in making a management approach related to impacts on Indigenous Peoples (IP). This IP management is highly suggested especially for PLN projects located in remote areas (rural location and nearby forest) of Indonesia and eastern part of Indonesia. This guideline helps PLN to understand the impact of the project on the IP communities who may be present where the project is implemented. PLN ensures that processes are in place to ensure that the presence of IP in any project location is screened and, should they be found to be present, risks and impacts to IPs are screened, assessed, and mitigated in a manner consistent with the requirements of Indonesian regulatory setting, WB ESS7 up to, and including, securing free, prior, and informed consent (FPIC)⁷.

This guidance is developed based on international indigenous people standards as well as main guidance on stakeholder engagement in national regulation. The main reference for Indigenous Peoples Management Guideline (IP MG) is detailed in the chapter 11 References. Additional regulation on IP for specific topics should be referred to depending on the project context.

The guideline aims to ensure that a project or an activity conducted by the PLN achieves the following objectives:

- Ensure that early and robust IP screening and identification is conducted to identify the potential presence of, and potentially impacts to, IP within the area of a proposed Project;
- Conduct planning, engagement, impact assessment and development of management measures to minimize potentially adverse effects of the Project on IPs, and if unavoidable, develop and implement mitigation measures based on free, prior, and informed consultation resulting in broad support from the directly and/or indirectly impacted IP communities;
- Avoid, minimize and/or compensate for adverse impacts on IP communities in a culturally appropriate manner proportionate to the nature and scale of such risks, impacts and the form and degree of vulnerability of the affected IP communities;
- Maximize the potential positive effects of the Project on the IPs, based on free, prior, and informed consultations with the IPs ensuring that the design and implementation of the Project incorporate aspirations and needs of the Ips;
- Conducted having regards for the principles of FPIC in cases of Projects impacting IPs in a manner that triggers such a requirement⁸; and
- Recognize, respect, and preserve the culture, knowledge, and practices of IP, and to provide them with an opportunity to adapt to changing conditions in a manner and in a time frame acceptable to them.

In managing the risk and impact to indigenous people groups, it shall be managed following the mitigation hierarchy: avoid – minimize – compensate/restore.

2. Disclaimer

⁷ Also referred to as PADIATAPA (Persetujuan Atas Dasar Informasi di Awal Tanpa Paksaan)

⁸ As defined within Paragraph 24 of WB ESS7

This guideline provides an overall guidance to the PLN staff when a project or activity is implemented where an IP community is present, however, additional requirements may be applied to respective project or activity depending on the policy or standard of the financier. This guideline will also be updated from time to time based on the changes in applicable policies, standards and regulations.

This guideline should not be taken as a standard, regulation, or manual, and it is not described to a detailed level of a work instruction. In condition that a more relevant or updated standard, regulation, or manual is available and demands for revision of this guideline, then such revision is permitted under the terms and conditions in the ESMS' Management of Change. If any revision is made; references, rationales and amended parts should be clearly defined.

To be able to serve its purpose, this guideline should be reviewed, implemented, and/or enforced by and to PLN staff with relevant authorities and competencies specified in the ESMS Manual Chapter 3. Any changes to this guideline may potentially trigger the need to update other associated guidelines or procedures.

3. Defining Best Practice

The conducting of IP screening, impact identification and assessment, developing and implementing an IPP and securing FPIC (in instances where it is required) is defined through a combination of Indonesian legislation, PLN regulations and policies, international standards. There are differences between international standards and the country's legal framework, particularly with regards to definition of IP due to the large number of government agencies involved in addressing matters relating to IPs. This is reflective of a fragmented legal and institutional framework on IP issues which are mostly defined at the sector level and pose significant challenges in coordination and implementation. Another gap exists in the requirements to conduct meaningful consultation beyond the land acquisition therefore limiting pathways to achieving FPIC. The below table provides an objective level analysis of gaps between the Indonesian regulatory system and international standards then supplements the detailed gaps evaluation presented within the ESMS. The outcomes have been used as the basis of development for this management guideline.

Standard gaps on indigenous people

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
Objective 7.1: To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, cultural and natural resource-based livelihoods of Indigenous Peoples Identification of IP: Regardless of any terminology used, covers a distinct social and cultural group possessing the four characteristics defined within Paragraph 8 in varying degrees.	Minister of Home Affairs Regulation No.54 of 2014; regarding Recognition and Protection of Indigenous Communities. Prevailing laws and regulations recognize the rights of citizens and respect IPs and their traditional rights, including within the Constitution and the Human Rights Law. Ministry of social regulation no 12 of 2015 provides definition on key terms like "KAT," "adat area," "customary law," and "isolated."	The key gap is the coordination challenges that have matters pertaining to the recognition of IP and their rights across sectors and stakeholders within Government. It is difficult to ensure consistency in application at sub-project levels.	The management guideline to establish clear and consistent objectives and mechanisms to ensure that these rights of IP are respected during project screening, impact assessment, IPP development and all forms of engagement. The management guideline needs to establish a screening mechanism to identify IP based on the characteristics as defined within Paragraph 8 of WB ESS7.
Objective 7.2: To avoid adverse impacts on Indigenous Peoples, or if not possible, to minimize, mitigate and/or compensate impacts. To promote sustainable development for IP in a culturally appropriate and inclusive manner.	The Land Acquisition Law (Law 2 of 2012) requires that where a government agency requires land for a public interest development, a land acquisition plan must be prepared, and that notice must be given and public consultation conducted. This law mandates that compensation for customary land shall be given in the form of (i) money, (ii) substitute or replacement land, (iii) resettlement, being a process of providing land at a different location from that of the entitled party in accordance with an agreement made during the acquisition	There are no measures within the regulations to ensure that they appropriately recognize, respect, and protect the land, territories, environment, health and culture of remote groups with limited external contact. There is no defined objective in any regulatory framework requiring avoidance of adverse impacts on IPs, particularly in	The management guideline needs to clearly define and establish principles pertaining to impact avoidance, impact assessment, impact mitigation, and realization of potential development benefits that are culturally specific and sensitive. This includes any IP groups that may be defined as a remote group with limited external contact. This is captured through the IP screening

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
	process, (iv) share ownership, being equity participation in the relevant public interest development and/or the management thereof based on mutual agreement between the parties, or (v) other forms as agreed between the parties. Ministry of social regulation no 12 of 2015 covers various aspects of KAT empowerment, including identification, data collection, needs assessment, development planning, capacity building, service delivery, and monitoring and evaluation.	relation to land acquisition and related socio-economic studies such as the Amdal. The law has not addressed collective compensation, being a mechanism to promote the effective distribution to all eligible members or effective use that benefits all members of the IP group, goals and preferences of the people, improving standards of living and livelihood in a culturally appropriate manner and fostering long-term sustainability of resources.	(intended to avoid impacts to the extent possible) and the development of an IPP and FPIC strategy that recognizes both direct and indirect impacts to IPs. The development of IPPs needs to account for collective compensation mechanisms.
Objective 7.3: To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples affected by a project throughout the project's life cycle	The legal framework as it stands across various legal instruments and sectors has generally addressed aspects of general public consultation.	While the legal framework provides for public consultation in the early project planning and land acquisition phase, it does not recognize the concept of meaningful consultation and the development of ongoing relationships based on meaningful consultation are maintained throughout the lifecycle of a sub-project.	The management guideline needs to clearly define and establish principles for ongoing and meaningful consultation and relationship development at sub-project level.
Objective 7.4: To obtain Free, Prior, and Informed Consent (FPIC) of affected	The legal framework implementing land acquisition activities (i.e. Law 2 of 2012 and supporting regulations) provides that the agency that requires	Currently, Indigenous Peoples participation in project public consultation mainly applies to	The management guideline needs to introduce a clear requirement for compliance with the requirements of

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
Indigenous Peoples in important circumstances	land must give notice of the development plan and hold public consultation regarding the plan. This demonstrates the intention of the government to facilitate communities and stakeholder engagement in a project.	the land acquisition process. However, this is part of the broader public consultation and there is no specific mechanism or regulation that addresses a requirement to obtain FPIC of IP. It is not clear if there are regional level regulations in place that may address FPIC requirements. There is a need to capture requirements and capacity regarding obtaining FPIC, especially when an investment project involves potential resettlement and relocation. There is room to enhance their participation on other project risks and impacts mitigation measure.	ESS7 as it relates to developing and implementing strategies to secure FPIC.
Objective 7.5: To recognize, respect, and preserve the culture, knowledge, and practices of Indigenous Peoples, and to provide them with an opportunity to adapt to changing conditions in a manner and a	Matters pertaining to land acquisition and access to land are addressed through Law 2 of 2012 and associated regulations. The Constitution of Indonesia obliges everyone to respect, preserve and maintain knowledge, innovations, and practices of Indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity and promote their wider applications with the approval and involvement of	There is no specific regulation which addresses measures for legal recognition of IPs perpetual or long-term renewable custodial or use rights. The capacity of IPs to understand their rights and to follow the procedures set out in regulations needs to be accounted for.	The IPP development process to ensure that all sub-projects are developed in a manner that recognizes, respect, and preserve the culture, knowledge and practices of Indigenous Peoples. In instances where FPIC is required, there will be the need to ensure that this is achieved prior to land acquisition being concluded and

ESS7 Objectives	Indonesia Regulations	Gap	Gap Filling Mechanism
timeframe acceptable to them	the holders of such knowledge, innovation and practices and encourage equitable sharing of the benefits arising from such consistent with the UN Convention of Biological Diversity. The central and regional governments are required to facilitate the management of cultural heritage areas, which in its implementation should not conflict with the community interest in the cultural heritage and social life.	There is no specific regulation pertaining to FPIC in respect of relocation or other changes in use or access to customary land and resources in a timeframe that is acceptable to the IP. The land acquisition time frame is driven through scheduled working days against steps within the process. This objective is not addressed outside the scope of land acquisition, consistent with the UN Convention on Biological Diversity, having regard for aspects such as respect, preservation, and maintenance of knowledge, innovations, and practices of Indigenous Peoples.	independent of the timelines defined within Law 2 of 2012 and its implementing regulations.

4. Process Overview

In overall the management of Indigenous People aspect will follow through the E&S safeguard process as regulate in the ESMS, which includes the screening and categorization process, impact assessment, mitigation planning and monitoring, whereas in every step of the process, the mitigation hierarchy (avoid – minimize – restore – offset) will be taken into consideration.

In order to achieve the objectives of each step of E&S safeguard process, the Indigenous People Management aspect will follow the following process:

- Conduct Indigenous People Screening;
- Developing and implementing strategies for consultation with IP, up to and including FPIC;
- Identification of risk and impacts, defining avoidance, mitigation and benefits sharing measures, and capturing these within an Indigenous Peoples Plan (IPP);
- Monitoring and Review of the mitigation measure implementation.

5. Screening

The site selection process, the project design, pre-feasibility and feasibility study assessment must be informed as to the presence of IPs. Known as an Indigenous People's Screening, this is to be conducted in accordance with the "Screening for Identification of Characteristics of Indigenous Peoples". This screening format is provided within Annex A.1 and defines whether the community or distinct groups within the community have characteristics in varying degrees as follows:

- a) Self-identification as members of a distinct indigenous social and cultural group and recognition of this identity by others;
- b) Collective attachment⁹ to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation, as well as to the natural resources in these areas;
- c) Customary cultural, economic, social, or political institutions that are distinct or separate from those of the mainstream society or culture; and
- d) A distinct language or dialect, often different from the official language or languages of the country or region in which they reside.

The preliminary screening step can be done by reviewing secondary information sources such as the PLN project database, and other readily available sources such as those held by the Indonesian government register under BRWA and KAT¹⁰. If BRWA or KAT do not mention the community group as Indigenous people in the potential project location, in recognising that IP or Masyarakat Adat are not always formally registered or recorded PLN should consult with community figure and/or NGO (non-government organisation) and AMAN (Aliansi Masyarakat Adat) to determine if IP groups are actually absent from the area of if further detailed screening based on primary data is required. Such primary data needs to capture engagement and consultation with the community surrounding the Project location and the local Social

⁹ "Collective attachment" means that for generations there has been a physical presence in and economic ties to land and territories traditionally owned, or customarily used or occupied, by the group concerned, including areas that hold special significance for it, such as sacred sites.

¹⁰ The two main official sources to consult are: a) bwra.or.id (Badan Registrasi Wilayah Adat) for obtain information on the status of customary land (certified, verified or registered), b) liaise with Ministry of Social affairs which provides a list of indigenous peoples communities remote areas (KAT) see the last available data [Data Masyarakat Adat 2019.xlsx](#). In addition, the AMAN website can also be a reference.

Service Department and should be conducted by an Indigenous People's expert from the province or region in which the Project is to be situated.

Where the evaluation against the four criteria defined within Appendix 1 indicate no presence of IP, the reason for the decision must be documented after which no further consideration of this Guideline is required by PLN.

6. Consultation, Grievance Mechanism and FPIC Circumstances

6.1. Consultation Planning and Implementation

Consultation with IP can support, strengthen the impact assessment process and help in identifying their development priorities and preferences regarding both project benefits and mitigation measures. Upon confirmation that IP are present within a Project location, consultation must commence as early as possible to support and strengthen assessment, help in identifying their development priorities and preferences regarding both project benefits and mitigation measures and define potential FPIC requirements. Consultation must be carried out in a manner that is culturally appropriate and based upon inputs from the IPs during project design and IP engagement strategy/document. Consultations continue throughout project design and implementation and are conducted in accordance with a participation and consultation strategy defined within the IPP. In addition to the matters below, detailed guidance for consultation planning and engagement is provided within Annex A.2.

6.2. Grievance Mechanism

In instances where IPs are identified to be present, but not impacted in a manner that requires the development and implementation of an IPP, the Grievance Redress Mechanism (GRM) for the Project will include provisions to ensure that IPs are provided with full and culturally appropriate access to the GRM.

Where IPs are noted to be present and either directly or indirectly impacted and an IPP is required to be developed, it will include a GRM specific to IPP implementation. This GRM will be tailored to be socially and culturally appropriate and specific to the requirements of the community surrounding each Renewable Energy sub-project. This includes identifying existing grievance channels (e.g. head of village or IP governing body) and extra measures will be provided by the Project to ensure compliance with ESS 7 if necessary. The GRM will also consider local dispute-resolving mechanisms to ensure that the process entails good will and respects traditional values and practices. Engagement activities, including consultation and dialogues will be designed to be respectful of local values-systems and practices. It is also to include provisions for identifying grievances related to matters that affect any FPIC agreements secured for the sub-project (only in cases where FPIC is applicable).

6.3. Free, Prior and Informed Consent

Where the initial phases of the risk and impact identification process as defined within Section 6 found that any one of the circumstances described below exists, a Free, Prior and Informed Consent (FPIC) needs to be obtained before project activities affecting them can start:

- (a) Have adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation;
- (b) Cause relocation of Indigenous Peoples from land and natural resources subject to traditional ownership or under customary use or occupation; or
- (c) Have significant impacts on Indigenous Peoples' cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected Indigenous Peoples' lives.

When the project is identified to have these FPIC circumstances, PLN will engage independent specialists

to assist in the identification of the project risks and impacts. An FPIC strategy must be developed and integrated into the required IPP. Detailed guidance for steps to be conducted in planning an FPIC strategy are provided within Annex A.3.

a. Free

Free in FPIC context refers to the absence of external manipulation, interference, coercion, discrimination, and intimidation in the decision-making process. It implies that indigenous Peoples have the freedom to express their opinions and make decisions without external pressure or intimidation. In other words, they should be able to participate in the process voluntarily, without any form of constraint or threat to their rights or well-being.

b. Prior

"prior" in FPIC context means that the **consultation** and decision-making process must occur before any project or development activity begins. It emphasizes the importance of engaging with affected communities early in the planning stages to ensure their input and concerns are taken into account from the outset.

In instances where FPIC is required, there will be the need to ensure that this is achieved prior to land acquisition being concluded and independent of the timelines defined within Law 2 of 2012 and its implementing regulations.

c. Informed Consent

Consent is defined as the collective support of affected indigenous peoples for the project activities that affect them, reached through a culturally appropriate process. Consent may exist even if some individuals or groups explicitly object to such project activities. So that, informed consent is described as making collective decision with prior available information related to: (i) their land rights under national law, including any national law recognizing customary use rights; (ii) the scope and nature of the project; and (iii) the potential impacts of the project.

Confirming FPIC process

Achieving FPIC requires attention to and documentation of both process and outcome. During the initial engagement, a Consent Process Agreement will be prepared and agreed upon between the affected indigenous communities and the PLN representative, which will clarify processes, procedures and protocols that should be followed during the FPIC process, as well as the conditions under which a consent is considered to have been achieved by both parties (e.g. minimum votes, absence of strong objections to voting results, endorsement by intra-community groups, etc.). Local government representatives will be encouraged to mediate the preparation of the Consent Process Agreement. Where and as relevant, PLN will consult the financier on the draft Consent Process Agreement so the consent processes and conditions are agreeable to the financier. The Consent Process Agreement may be adjusted from time to time during the FPIC process if both parties consider as necessary. In the Indigenous Peoples' FPIC plan, records of objections from each group and individual are included as part of the FPIC process documentation. Strategies are then designed to continuously engage and find resolutions for groups that object to project activities.

The FPIC process begins early in the project stage to ensure that Indigenous peoples have sufficient time to understand project information. Once the information is analyzed and FPIC is deemed necessary, circumstances are identified (See **FPIC circumstances** above), and the planning and implementation of the FPIC process commence. Ideally, Indigenous Peoples' consent should be obtained before the construction stage and maintained continuously throughout the project lifecycle.

Achieving consent in FPIC process

An FPIC is considered to have been achieved if conditions set out in the Consent Process Agreement have been met including on the project design and locations, and impact mitigation and benefit sharing measures. IPP will describe how the agreed-upon consent conditions have been met. When full or partial consent is not achieved against the conditions agreed upon in the Consent Process Agreement, it's crucial to undertake efforts aimed at building trust, fostering dialogue, and addressing the concerns of the affected community. Some efforts that can be taken to improve the chance of obtaining consent in the future are:

1. **Engage in Meaningful Dialogue:** Initiate sincere and transparent dialogue with the affected community to understand their concerns, needs, and aspirations regarding the proposed project. Actively listen to their perspectives and demonstrate a genuine commitment to addressing their interests.
2. **Provide Additional Information:** Offer more information and accessible information about the proposed project, including its potential impacts, benefits, and risks. Ensure that the information is presented in a clear, culturally appropriate manner, and allow sufficient time for the community to review and understand it.
3. **Address Grievances and Mitigate Impacts:** Take concrete steps to address any grievances or negative impacts identified by the community. Develop and implement robust mitigation measures, compensation mechanisms, or alternative livelihood programs to minimize adverse effects and enhance the overall well-being of the community.
4. **Respect Indigenous Rights and Customary Practices:** Recognize and respect the rights, traditions, and customary practices of indigenous peoples and local communities. Incorporate indigenous knowledge and perspectives into decision-making processes and project designs to ensure alignment with community values and priorities.
5. **Build Capacity and Empower Communities:** Invest in capacity-building initiatives that empower communities to participate effectively in decision-making processes and engage in negotiations with project proponents. Provide training and support for community leaders and representatives to strengthen their advocacy skills and negotiation abilities.
6. **Establish Mechanisms for Continuous Engagement:** Establish formal mechanisms for ongoing consultation, participation, and feedback throughout the project lifecycle. Foster a collaborative relationship between the project proponent, government agencies, and the affected community to facilitate open communication and mutual understanding.
7. **Seek Mediation or Third-Party Facilitation:** In cases of significant disagreement or conflict, consider involving impartial mediators or third-party facilitators to help facilitate constructive dialogue and negotiation. Mediation can help bridge differences, build consensus, and find mutually acceptable solutions that address the interests of all parties involved.

When consent is not achieved with some parts or entire community in the Free, Prior, Informed Consent (FPIC) process, it typically means that the affected community has not given their explicit agreement or approval for the proposed subproject or development activity to proceed on their land or territory. In such cases, the subproject will modify locations and/or designs to achieve their FPIC, before the subproject can start activities that affect them. In the event that an FPIC cannot be achieved after all efforts made to modify locations and/or designs, such a subproject will be dropped.

7. Defining Risks, Impacts, Mitigation Measures and Benefits Sharing

7.1. Avoidance

As a first principle, PLN will seek to avoid adverse impacts on IP will be avoided where possible. Conducted as part of site selection and preliminary project design, it will capture principles such as avoiding areas of residence, cultural heritage and/or access to natural resources for indigenous peoples or indigenous communities (See Screening section to identify IP presents). Where alternatives have been explored and adverse impacts are unavoidable, PLN will minimize and/or compensate for these impacts in a culturally appropriate manner proportional to the nature and scale of such risks, impacts and the form and degree of vulnerability of the affected IP.

7.2. Risk and Impact Identification and Assessment

Targeted social assessment for the purpose of understanding the project impact to indigenous people is conducted as part of the environmental and social assessment. A key aspect of the assessment is understanding the relative vulnerabilities of the affected IP and how the project may affect them. The assessment is proportional to the nature and scale of the proposed projects potential risks to, and impacts on, as well as the vulnerability of the IP. The social assessment includes the following elements, as needed:

- a. A review of the legal and institutional framework applicable to IP.
- b. Gathering of baseline data on the demographic, social, cultural, vulnerability (that might be exacerbated by the project implementation) and political characteristics of the IP; the land and territories that they have traditionally owned or customarily used or occupied; and the natural resources on which they depend.
- c. Taking the review and baseline data into account, the identification of project-affected parties and the elaboration of a culturally appropriate process for involving and consulting with the IP at each stage of project preparation and implementation.
- d. An assessment, based on meaningful consultation tailored to IP local context, of the potential adverse and positive effects of the project. Critical to the determination of potential adverse impacts is an analysis of the relative vulnerability of, and risks to, the affected IP, given their distinct circumstances and close ties to land and natural resources, as well as their potential lack of access to opportunities relative to other social groups in the communities, regions, or national societies in which they live. The assessment should consider differentiated gender impacts of project activities and impacts on potentially disadvantaged or vulnerable groups within the community of IP.
- e. The identification and evaluation of measures necessary to avoid adverse impacts, or if such measures are not feasible, the identification of measures to minimize, mitigate, or compensate for such impacts, and to ensure that the IP receives culturally appropriate benefits under the project. This is based on meaningful consultation tailored to IP and, where relevant, pursuant on FPIC.

Example:

Potential indicative negative impact to indigenous people such as:

- Extensive land or forest acquisitions that prevent indigenous peoples from being able to continue their traditional livelihood patterns;
- Restrictions on indigenous peoples' access to forests that have been used for generations hunting, harvesting fruit, rattan and other non-timber forest products, or access to inheritance the culture that is usually visited;
- Restriction on indigenous peoples' access to cultural heritage;
- Resettlement of indigenous people to areas far from their places of origin.

Input from qualified specialists and accompanying meaningful consultations with IP are important to inform and support the assessment. The assessment also evaluates the capacity of the PLN / Project Implementing Partner (independent power producer) to involve IP in project design and implementation.

7.3. Key Components of Mitigation Measure

Based on the impact assessment process, all sources of adverse impact to Indigenous People that require mitigation measures and/or to be managed should be identified. Related information on the activity and impact, such as when the impact occurs, the location of the impact, the impact magnitude, and the impact receptor should be also listed. When land acquisition process triggers any of the FPIC circumstances above, FPIC process is considered along the project activities and mitigation measures design as well as implementation.

As previously described, the mitigation measures to be developed must follow the mitigation hierarchy (manage when avoidance is not possible). Each risk/impact towards indigenous people that is required to be mitigated should specify detailed mitigation activities, the implementation schedule and measurable criterion of the targets to be achieved. These must be integrated into the IPP as described within Section 8 below.

8. Indigenous Peoples Plan Development

For any project where risk and impact identification and assessment has identified that the Project will result in direct and/or indirect economic, social, cultural (including cultural heritage) or environmental impacts to IPs (whether triggering FPIC or not) an Indigenous People Plan (IPP) is to be developed with the complexity to be commensurate with the magnitude of impacts arising. A full scope IPP must be prepared where IPs will experience direct impacts (refer to Annex A.1 for guidance). For Projects where the nature of direct impacts resulting in the need to secure FPIC is confirmed, the IPP must clearly describe how FPIC will be secured, the management, mitigation and benefits packages that form the basis for any FPIC agreements, and how FPIC will be maintained. In circumstances where IPs will receive only positive benefits and/or indirect impacts, an abridged version of an IPP can be developed (refer to Annex A. 2 for guidance)

The IPP is to be developed in accordance with the sample contents as provided for Annex A.4 (Full IPP) and Annex A.5 (Abbreviated IPP) and developed by appropriately qualified consultants and in accordance with a TOR prepared specifically for the Project. It must capture the following as a minimum:

- **Participation, Consultation, and FPIC Processes:** A summary of results of the culturally appropriate consultation and, where required, FPIC processes undertaken with the affected peoples' which led to the indigenous peoples' support for the project.

- **Consultation and Consent:** A description of the mechanisms to conduct iterative consultation and consent processes throughout implementation of the project. Identify particular project activities and circumstances that shall require meaningful consultation.
- **Strategy for ongoing consultations to maintain FPIC:** For any sub-project where FPIC has been confirmed as being required, a clear description of the process proposed to secure FPIC, definition of benefits sharing schemes and impact mitigation measures, timelines for achieving FPIC, defining what the form the consent agreement will take, how ongoing consultation will be conducted to ensure that FPIC is maintained, and circumstances and forms in which the IP Community may withdraw their consent.
- **Risks, Impacts and Mitigation Measures:** Where potential risks and adverse impacts to indigenous peoples, their lands, territories and resources are identified, the details and associated timelines for the planned measures to avoid, minimize, mitigate, or compensate for these adverse effects. Include relevant measures to promote and protect the rights and interests of the indigenous peoples including compliance with the affected peoples' internal norms and customs. Where such mitigation measures are part of securing FPIC, this is to be clearly defined and the process through which these were developed and agreed upon in consultation with the impacted IP's is to be described within the IPP.
- **Appropriate Benefits:** vi Where such benefits distribution is part of an FPIC process, the process through which these were developed and agreed upon in consultation with the impacted IPs is to be described within the IPP.
- **Capacity support:** Description of measures to support social, legal, technical capabilities of indigenous peoples' organizations in the project area to enable them to better represent the affected indigenous peoples more effectively. Where appropriate and requested, description of steps to support technical and legal capabilities of relevant government institutions to strengthen compliance with the country's duties and obligations under international law with respect to the rights of indigenous peoples.
- **Grievance Redress:** A description of the procedures available to address grievances brought by the affected indigenous peoples arising from project implementation, including the remedies available, how the grievance mechanisms take into account indigenous peoples' customary laws and dispute resolution processes, as well as the effective capacity of indigenous peoples under national laws to denounce violations and secure remedies for the same in domestic courts and administrative processes.

The document must be developed and approved prior to any impacts to IPs occurring.

9. Mitigation Measure Implementation, Monitoring and Review

The implementation of mitigation measures and its monitoring results should be reported. The report should be within the Environment Social Management Plan (ESMP) document. ESMP should specify to whom the reports are to be submitted for review, and the length of time records will be kept. This will include summary reports at intervals and to which institution the monitoring report should be submitted.

When the impact to Indigenous peoples is deemed significant, the implementation of the FPIC process as part of mitigation measures must be integrated into the IPP and further monitoring and reporting measures also defined. All mitigation measures requirements may vary depending on the project, context and to be tailored for the project specific circumstances. It is expected all mitigation measures implemented are documented and updated regularly.

Each of the activities implemented as mitigation measures should be monitored, periodically (at least every 6 months or annually) or at the end of the activity, depending on the type and time span. The frequency of monitoring should be specified for each activity, including the resource/person in charge required for monitoring, and the record that must be kept.

Regular mitigation measures review schedule should be determined, which is likely considering the nature of the management system planned, the legal requirements applied and E&S management plan as a whole. In minimum the indigenous people plan should be reviewed annually. Persons responsible for activities related with the mitigation measures review should also be determined.

10. Disclosure

The IPP for each sub-project will be disclosed in accordance with the requirements of international standard, with the document to be made available at:

- PLN and World Bank website
- PLN Regional Unit offices
- Villages offices that are readily accessible to project-affected people
- Sub-project offices

The IPP will be prepared in Bahasa Indonesia and English, plus any other local language as required by the affected IPs. In addition to the IPP, other supporting documents such as FPIC agreements will also be disclosed in accordance with the above requirement. Any aspects of the IPP and FPIC that may be considered commercially, culturally, or personally sensitive will not be disclosed unless agreement has first been sought from the affected IP community.

11. References

National Standards

- Law No. 41 Year 1999 on Forestry, which has been amended by Law No. 19 Year 2004. The Constitutional Court has reviewed the Law No. 41 Year 1999 on the forest rights of MHA through the Constitutional Court Decree No. 35 Year 2012 which confirms that adat forests are no longer state forests.
- Basic Agrarian Law of 1960 determines the applicability of adat law over land and customary rights (hak ulayat). This is the first law that introduced the concept of conditionality in the recognition of Indigenous Peoples which was further adapted through various laws governing land and natural resources.
- Village Law No. 6 Year 2014 acknowledges the existence and rights of MHA, provided that they are recognized, and MHA could opt to establish adat villages with their own institutional structures and authority. However, this law suffers from a lack of guiding regulations and institutional mandates to make such provisions operational. The Law grants a desa adat an authority to conduct adat-based public administration. Compared to other laws, the law adopts optional, non-cumulative criteria for recognition of MHAs with the existence of adat territory being mandatory.
- Law No. 27 Year 2007 on Coastal Zone and Small Island Management acknowledges the existence of MHA provided they are recognized and requires consultations with MHA for any development in coastal areas. This is the only Indonesian law that explicitly requires free, prior, and informed consultations for affected MHAs.
- Law No. 23 Year 2014 on Local Government recognizes the existence of adat institutions (lembaga adat) by giving them rights to “empowerment”. Secondly, the Law determines that adat law is an additional rule for use in particular purposes, such as village elections. Thirdly, the Law places of adat

or adat law as the basis upon which to conduct local development, or as a parameter to measure social cohesiveness.

- Law No. 11 Year 2010 on Cultural Heritage recognizes MHA as the owners of their cultural heritage and grants them authority to manage it.
- Implementing regulations include PR 186/2014 on Social Empowerment of Remote Indigenous People, MAA Regulation 18/2019 on Procedures for Customary Land Administration as part of a Customary Law Community, Ministry of Home Affairs (MOHA) Regulation 52/2014 on Guidelines for Recognition and Protection of Indigenous People, and MOEF Regulation 17/2020 on Titled Forest and Indigenous Peoples Forest.
- Provincial Governments have enacted local regulations regarding the recognition and validation of indigenous peoples. For example, the statutory recognition of the indigenous people in Papua is acknowledged under Law 21 of 2001 on Special Autonomy for Papua Province.

International Standards

- ESS7 Worldbank Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities
- Guidance Note Environmental & Social Framework for IPF Operations ESS7: Indigenous Peoples/ Sub-Saharan African Historically Underserved Traditional Local Communities

PLN internal Standards

- PerDir 153/2019 regulates that risk screening and document preparation on land acquisition and resettlement issues should be based on meaningful consultations with affected people, especially vulnerable groups including Indigenous Peoples and other relevant stakeholders throughout project stages, from project planning to construction and operational stages.
- IP Management Guideline of PLN ESMS.

Annexes

Annex A.1: Form Screening for Identification and Characterisation of IP

Introduction:

There are Indigenous Peoples (IP) in all provinces of Indonesia who have a diversity of traditions and customs expressed in different languages, dialects, local wisdom, and arts. IP territorial boundaries can be identified in several spaces, namely settlement/residential areas, farming areas, sacred areas or areas for traditional ceremonies, tombs, reserve forests, hunting range areas. These boundaries can often only be understood by the IP group itself e.g. trees, rivers, rocks, monuments etc. IP settlements are located outside forest areas with small groups of settlements located in production forest areas. Indigenous groups also live in protected forest areas on a limited basis for certain purposes only, while other public settlements are prohibited in protected forest areas under National Legislation.

The design and implementation of PLN projects/activities are carried out while maintaining full respect for the dignity, human rights, and cultural uniqueness of Indigenous Peoples and so that they (1) can receive social and economic benefits, and (2) do not suffer negative impacts during the development process and project operations. Therefore, at the beginning of the project/activity feasibility study process, initial identification of the presence of indigenous peoples in the project area needs to be carried out (Indigenous People Screening). And if the presence of indigenous peoples is found in the project area, PLN is expected to design and implement a plan for the involvement / consideration of indigenous peoples in project activities through the FPIC (Free Prior Informed and Consent) process.

In allocating international funding, the following projects/activities (exclusion list) will not be funded:

A project with (i) acquisition of IP traditional territories (ancestral lands/customary lands)¹¹ but without the consent of the entire IP community as well as the people who actually use the land, based on participatory processes; (ii) physical relocation of IP communities; (iii) significant impacts on indigenous peoples' cultural heritage; and (iv) significant impacts on access to natural resources for indigenous peoples.

Directions:

1. Scope of Application:

This Code of Practice is a reference that must be used and adhered to by all PT PLN (Persero) staff working in project planning and implementation. It is intended that PLN will be able to minimise the negative impacts of projects on indigenous peoples, better document and involve indigenous peoples in the consultation process. If necessary, the application of the Practical Guidelines can also be extended to each PLN subcontractor to increase its capacity to plan, implement and manage social safeguards systems in PLN projects.

¹¹ PLN uses both government maps and AMAN maps to identify IP areas. Also, in practice, PLN consults with local communities and aims to avoid the acquisition of lands that are considered by local communities to be communal or ancestral values and should not be separated.

2. UIP/UIW Responsibilities and Measures to accommodate indigenous peoples in the project area as follows:

No.	Step	Description
	Pre-Construction	
1	Initial identification of the presence of indigenous peoples in the project area in the pre-feasibility study stage	From the outset, PLN understands who the affected indigenous peoples are and how much impact is expected.
2	Further community consultations to understand the characteristics of indigenous peoples (primary data collection) and the impacts of activities	After knowing the location of activities in identifying indigenous peoples, PLN is expected to discuss with indigenous peoples to understand their adaptability to impacts and their vulnerability to impacts.
3	Identify mitigation and impact management measures	Impact mitigation measures can be adapted to local wisdom and the needs of indigenous peoples.
4	Consultation with affected indigenous peoples	If necessary, the language used to communicate with indigenous peoples may be customised in local languages and the assistance of an indigenous designee may be allowed during consultations.
5	FPIC to obtain indigenous peoples' consent regarding the implementation of activities	If indigenous peoples' locations are affected by PLN's land acquisition activities, FPIC approval needs to be obtained from indigenous peoples' representatives. In the FPIC document, a joint decision is written regarding the project/activity endeavour involving indigenous peoples in decision-making on the location of the project/activity and the type of resolution of land affected by the project.
	Construction begins	
6	Implementation of impact management related to indigenous peoples	Monitor progress of mitigation of impacts during land acquisition and post land acquisition on indigenous peoples (if any Livelihood Restoration is implemented)
7	Impact monitoring related to affected indigenous peoples	Livelihood restoration implementation programme, discussions with indigenous peoples and monitoring process throughout the loan commitment (if any Livelihood Restoration is implemented)

3. Forms that can be used by activity implementers (PLN, IPP, Consultant)

Project Description information required

No.	Screening Questions	Internal project information based on pre-FS
1	Name the project	
2	State the year of project implementation!	
3	What type of project (Generation, Transmission, Distribution, Substation)?	a. Generation: Solar PV, Wind Power b. Transmission line c. Distribution Network d. Substation

No.	Screening Questions	Internal project information based on pre-FS
4	Name the key person responsible for Corporate Planning/UIP Land Acquisition/UIW Land Acquisition?	a. PLN Centre: Division b. UIP c. UIW
5	What is the required project footprint in square metres?	
6	How much new access road is required in metres per square? The road in question is a government-owned access road and land acquisition is the responsibility of the local government, not PLN.	
7	Design drawing of the required land in metres per square?	
8	List the types of impacts that indigenous peoples will experience e.g. land acquisition, closure of access roads - state the size of the affected land and the pattern of use of the affected land (gardens/fields/tombs/sacred places/roads) prior to PLN's use. Select one in the list of impacts or add other types of impacts identified.	a. Impact on residential land (....m2) i. Residential land area before and after impact ii. Landforms of affected dwellings b. Impact on agricultural land (...m2) i. Land area before and after impact ii. Crop types of affected farmland c. Resulting in impacts to community land that must be physically relocated d. Impacts to cultural heritage assets, please specify e. Impact on limited access to land (forest/garden) water, hunting and gathering areas,

Screening for Identification of Characteristics of Indigenous Peoples

In identifying the presence of indigenous peoples in the project footprint area, PLN needs to understand and seek information related to the 4 characteristics of Indigenous Peoples below. Data collection for this identification process can come from secondary data and primary data. If possible, coordination with the local Social Service can be carried out to understand the vulnerability of affected indigenous peoples due to the identified characteristics. The information collected below is for PLN's internal data and is not to be shown to indigenous peoples.

Characteristics	Questions to find information	Describe the findings of related information
1. Self-identification as a member of a group and recognition of this distinct social and cultural identity by others;	What is the name of the tribe/indigenous people found in the activity location? Provide references from the Remote Indigenous Peoples Map ¹² or non-profit organisation indigenous peoples map ¹³ or Ministry of Social Affairs data on Remote Indigenous Peoples Groups or Local regulations on specific indigenous peoples.	Summarise the answers so as to understand the characteristics of this socio-cultural identification 'present or not in the society'.

¹² List of Remote Indigenous Groups from the Ministry of Social Affairs or Social Service Office relevant to the activity.

¹³ <https://brwa.or.id/wa/> or <https://archive.aman.or.id/peta/>

Characteristics	Questions to find information	Describe the findings of related information
	Are there any migrant tribes in the PLN sub-project/activity area? What is the name of the tribe and where did they come from? If so, ask how they obtained land in the area, e.g. permission from local traditional leaders and/or the village head. How much land does the migrant tribe own? - Do the indigenous and migrant tribes mix well or do each still have certain land boundaries? - Do indigenous and migrant tribes use the same local language? - Are there any traditional leaders or figures? What is their role in the community? - Are there still traditional ceremonies that are determined and led by traditional leaders? Please mention any ceremonies. - Are there any customary ownership land boundaries in the area in the form of forests, plantations, agricultural land that are jointly owned by the customary group? If so, please specify the type of land and what kind of boundary markings, e.g. trees, rivers, stones etc., are present.	
2. Collective attachment ¹⁴ to geographically distinct habitats, ancestral territories, or areas of seasonal use or occupation, as well as the natural resources in these areas;	Where is the area/land used as typical village land/traditional ritual place/sacred place? Is the location of PLN activities within the area? How are land management patterns and customary land certificates (SKTA) used? How long (years/historically) have people lived in the project affected area? Draw a map of the customary area and explain.	Summarise the answers to understand whether or not this characteristic of collective ownership 'exists in the community'.
3. Customary cultural, economic, social, or political institutions that are distinct or separate from those of the mainstream society or culture;	How is the village governed? Are there customary community leaders other than the appointed village head/assigned village head? Do you have written/unwritten customary laws or fines (especially on land use)? Describe the government structure in the village and explain.	Summarise the answers so that it can be understood whether or not this institutional characteristic 'exists in the community'.
4. Different languages or dialects, often different from the national language or the region in which they live.	Is there a colloquial language used other than Bahasa Indonesia? What is the name of this language? How many people in the village use the local/traditional language? Do people have difficulty communicating in Indonesian?	Summarise the answers so as to understand the characteristics of this language 'present or not in the community'.

¹⁴ "Collective attachment" means that for generations there has been a physical presence and economic ties to the lands and territories traditionally owned, or customarily used or occupied, by the group concerned, including areas of special significance to it, such as sacred sites.

After filling in the answers in the 4 criteria above, conclude which criteria are most visibly present in the community. If you do not see any of the above 4 criteria present in the community, then it can be concluded that 'The community is not a vulnerable indigenous community affected by the project/activity' and vice versa. Therefore, mitigation measures towards the project impact for IP is adjusted to the criteria associated with the IP group identified (vulnerable indigenous community impacted by the project or not). Please see the considerations below in filling out form above.

Notes to consider in completing form above:

1. Please add information not only from primary data (70% of data, asking indigenous people) but also from secondary data (30% of data) journals found on the internet.
2. Many indigenous peoples in Indonesia are not registered with the Ministry of Social Affairs.
3. Local regulations of certain indigenous peoples sometimes also provide information on the type of traditions, language, government structure, and location of customary lands recognised by the local government.
4. Consultation with community organisations, such as AMAN, can be done via email or the call centre on their website/social media pages. Please ask to be directed to the indigenous representative council of the region where the PLN activity/project is taking place.
5. If people drive vehicles, use *mobile phones*, wear normal clothes, go to school; this cannot be taken as a sign that they are not indigenous.
6. Consider including information that may be used to understand the vulnerability of the community such as 'the community does not speak Indonesian in their daily lives - this indicates the community/affected people (PAPs) need help discussing/language adjustment'.
7. The above form is expected to be answered in 1-3 pages only.

IPP Development Practical Guidance

Consultations and Engagement

Project implementers with assistance from the UIW/UIP and/or expert consultants will engage in a process of meaningful consultation with affected IPs. This engagement is to be an iterative process until common understanding have been reached on matters such as presence of customary land and natural resources under customary management, processes to be followed to enable for customary decision-making norms to be respected (regardless of whether FPIC is required), and ongoing participation and consultation during important Project steps such as land acquisition.

The extent, frequency, and degree of engagement required during the consultation process will vary with each project and should be commensurate with the identified potential risks and concerns raised by respective IP's. Meaningful consultations need to be built on mutually accepted processes by IP community representatives and their legitimate and recognized. Such consultation needs to serve two key purposes:

- Provide a platform to enable community participation to express their concerns, views on the project's benefits, risks, impacts, and mitigation measures and explore ways to ensure project implementation is culturally and socially acceptable; and
- Enable decision making processes based on local/customary mechanisms.

IP community participation needs to be based on gender-sensitive and intergenerationally inclusive approaches. Effective consultations are built upon a two-way process that should:

- Involve members of affected communities and their recognized representative bodies and organizations in good faith;
- Capture the views and concerns of men, women and vulnerable community segments including the elderly, youth, displaced persons, children, people with special needs, etc., about impacts, mitigation mechanisms, and benefits where appropriate. If necessary, separate forums or engagements need to be conducted based on their preferences;
- Begin early in the process of identification of environmental and social risks and impacts and continue on an ongoing basis as risks and impacts arise;
- Be based upon the prior disclosure and dissemination/socialization of relevant, transparent, objective, meaningful, and easily accessible information that is in a culturally appropriate language(s) and format and is understandable for affected communities. In designing consultation methods and use of media, special attention needs to be paid to include the concerns of Indigenous women, youth, and children and their access to development opportunities and benefits;
- Place greater emphasis on inclusive engagement for people directly affected by the project, rather than people affected indirectly;
- Ensure that the consultation processes are free of external manipulation, interference, coercion and/or intimidation. The consultations' design should create enabling environments for meaningful participation, where applicable. In addition to the language(s) and media used, the timing, venues, participation composition need to be carefully thought through to ensure everyone could express their views without repercussions; and
- Be documented.

Consultation must be conducted during planning and design phase with IPs, with the outcomes integrated into the IPP which, as described further below, needs to incorporate IP stakeholder identification and analysis, description of historical stakeholder engagement related to the RE sub-project, and a proposed stakeholder engagement and consultation programme specific to IP's.

Free, Prior and Informed Consent

There may be instances where projects are required to obtain FPIC from impacted IP communities, such circumstances include projects that:

- have adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation;
- cause the relocation of IP from land and/or natural resources subject to traditional ownership or under customary use or occupation; or
- have significant impacts on IPs cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected IP community

No project in these circumstances will be approved unless it can be demonstrated that FPIC has either been acquired, or that there is a plan in place that has been developed in consultation with IP to secure and maintain FPIC. The FPIC process therefore needs to be established as follows:

- The scope of FPIC applies to project design, implementation arrangements, and expected outcomes related to risks and impacts on the affected Indigenous Peoples;

- FPIC builds on and expands the process of meaningful consultation described in meaningful consultation process and will be established through good faith negotiation between the PLN and affected Indigenous Peoples;
- PLN will document the negotiation and consent process: (i) The mutually accepted process to carry out good faith negotiations that has been agreed upon by the PLN and Indigenous Peoples; and (ii) the outcome of the good faith negotiations between the PLN and Indigenous Peoples, including all agreements reached as well as dissenting views; and
- FPIC does not require unanimity and may be achieved even when individuals or groups within or among affected Indigenous Peoples/ explicitly disagree.

Where FPIC has been identified as being required, the IPP is to include specific provisions to describe how PLN will ensure that FPIC is attained and maintained.

Social Assessment

Commensurate to the potential risks and impacts, social assessments will be required as part of the broader ESIA and LARPF process to identify the presence and understand the nature of project's impacts on IPs. In all cases where impacts to IPs are identified, a stand-alone assessment that can be integrated into the IPP must be undertaken.

The assessment is expected to provide a more informed understanding and analysis of risks as well as opportunities through which mitigation measures can be tailored to specific contexts and needs. In this circumstance, both qualitative and quantitative data will inform the assessment, including baseline information on the demographic, social, cultural, and political characteristics of the affected Indigenous Peoples, the land, and territories that they have traditionally owned or customarily used or occupied, and the natural resources on which they depend. Main areas to be covered include:

- Nature of vulnerability and attachments to land and natural resources;
- Specific risks and potential adverse impacts as a result of project and/or sub-project implementation;
- Level of community acceptance to the activities and/or initiatives supported by the project and/or sub-project activities;
- Analysis of relevant stakeholders, either who will be impacted or who have interest to the activities in question and the elaboration of a culturally appropriate process for consulting with the Indigenous Peoples and *Masyarakat Adat* at each stage of activity preparation and implementation;
- Opportunities to enhance participation of the communities concerned as well as benefit sharing arrangements; and
- Approach to participation, including specific measures to promote participation and inclusion of vulnerable groups in risk management and overall project implementation.

The approach and engagement with affected communities for the social assessment purposes are based on meaningful consultations in good faith. The outcomes of this assessment are to drive the development of the IPP.

Annex A.2: Additional Guidance in Conducting Engagement and Consultation

Consultations and Engagement

On the basis of outcomes of screening, RE sub-project implementers with assistance from the UIW/UIP and/or expert consultants will engage in a process of meaningful consultation with affected IPs. This engagement is to be an iterative process until common understanding have been reached on matters such as presence of customary land and natural resources under customary management, processes to be followed to enable for customary decision-making norms to be respected (regardless of whether FPIC is required), and ongoing participation and consultation during important Project steps such as land acquisition.

The extent, frequency, and degree of engagement required during the consultation process will vary with each RE sub-project and should be commensurate with the identified potential risks and concerns raised by respective IP's. Meaningful consultations need to be built on mutually accepted processes by IP community legitimate and recognized representatives. Such consultation needs to serve two key purposes:

- Provide a platform to enable community participation to express their concerns, views on the project's benefits, risks, impacts, and mitigation measures and explore ways to ensure project implementation is culturally and socially acceptable;
- Enable decision making processes based on local/customary mechanisms.

IP community participation needs to be based on gender-sensitive and intergenerationally inclusive approaches. Effective consultations are built upon a two-way process that should:

- Involve members of affected communities and their recognized representative bodies and organizations in good faith;
- Capture the views and concerns of men, women and vulnerable community segments including the elderly, youth, displaced persons, children, people with special needs, etc., about impacts, mitigation mechanisms, and benefits where appropriate. If necessary, separate forums or engagements need to be conducted based on their preferences;
- Begin early in the process of identification of environmental and social risks and impacts and continue on an ongoing basis as risks and impacts arise;
- Be based upon the prior disclosure and dissemination/socialization of relevant, transparent, objective, meaningful, and easily accessible information that is in a culturally appropriate language(s) and format and is understandable for affected communities. In designing consultation methods and use of media, special attention needs to be paid to include the concerns of Indigenous women, youth, and children and their access to development opportunities and benefits;
- Place greater emphasis on inclusive engagement for people directly affected by the project, rather than people affected indirectly;
- Ensure that the consultation processes are free of external manipulation, interference, coercion and/or intimidation. The consultations' design should create enabling environments for meaningful participation, where applicable. In addition to the language(s) and media used, the

timing, venues, participation composition need to be carefully thought through to ensure everyone could express their views without repercussions; and

- Be documented.

Consultation must be conducted during planning and design phase with IPs, with the outcomes integrated into the IPP which, as described further below, needs to incorporate IP stakeholder identification and analysis, description of historical stakeholder engagement related to the RE sub-project, and a proposed stakeholder engagement and consultation programme specific to IP's.

Free, Prior and Informed Consent

There may be instances where RE sub-projects are required to obtain FPIC from impacted IP communities, such circumstances include RE sub-projects that:

- have adverse impacts on land and natural resources subject to traditional ownership or under customary use or occupation;
- cause the relocation of IP from land and/or natural resources subject to traditional ownership or under customary use or occupation; or
- have significant impacts on IPs cultural heritage that is material to the identity and/or cultural, ceremonial, or spiritual aspects of the affected IP community

The project has acquired consent through FPIC, or that there is a plan in place that has been developed in consultation with IP to secure and maintain FPIC. The FPIC process therefore needs to be established as follows:

- The scope of FPIC applies to project design, implementation arrangements, and expected outcomes related to risks and impacts on the affected Indigenous Peoples;
- FPIC builds on and expands the process of meaningful consultation described in the general meaningful consultation process and will be established through good faith negotiation between the PLN and affected Indigenous Peoples;
- PLN will document the negotiation and consent process: (i) The mutually accepted process to carry out good faith negotiations that has been agreed upon by the PLN and Indigenous Peoples; and (ii) the outcome of the good faith negotiations between the PLN and Indigenous Peoples, including all agreements reached as well as dissenting views; and (iii) FPIC does not require unanimity and may be achieved even when individuals or groups within or among affected Indigenous Peoples/ explicitly disagree.

Where FPIC has been identified as being required, the IPP is to include specific provisions to describe how PLN will ensure that FPIC is attained and maintained.

Social Assessment

Commensurate with the potential risks and impacts, social assessments will be required as part of the broader ESIA and LARPF process to identify the presence and understand the nature of project's impacts on IPs. In all cases where impacts to IPs are identified, a stand-alone assessment that can be integrated into the IPP must be undertaken.

The assessment is expected to provide a more informed understanding and analysis of risks as well as opportunities through which mitigation measures can be tailored to specific contexts and needs. In this circumstance, both qualitative and quantitative data will inform the assessment, including baseline

information on the demographic, social, cultural, and political characteristics of the affected Indigenous Peoples, the land, and territories that they have traditionally owned or customarily used or occupied, and the natural resources on which they depend. Main areas to be covered include:

- Nature of vulnerability and attachments to land and natural resources;
- Specific risks and potential adverse impacts as a result of project and/or sub-project implementation;
- Level of community acceptance to the activities and/or initiatives supported by the project and/or sub-project activities;
- Analysis of relevant stakeholders, either who will be impacted or who have interest to the activities in question and the elaboration of a culturally appropriate process for consulting with the Indigenous Peoples and *Masyarakat Adat* at each stage of activity preparation and implementation;
- Opportunities to enhance participation of the communities concerned as well as benefit sharing arrangements; and
- Approach to participation, including specific measures to promote participation and inclusion of vulnerable groups in risk management and overall project implementation.

Annex A.3: Additional FPIC Participation Guidance

Indigenous Peoples or Masyarakat Adat (Customary Communities) may be vulnerable to the loss of, alienation/resettlement from or exploitation to natural and cultural resources. IPs communities are often among the poorest of the poor in the community and closely tied to their settlements, lands and related natural resources upon which the sustenance of their livelihoods depends. Frequently, these lands and settlements are traditionally owned or under customary use and often not legally recognized by national laws. In recognition of this vulnerability, interventions introduced through this project with the objectives to improve land administration and address informal settlements may potentially alienate and/or displace IPs if the mechanisms for Free, Prior and Informed Consent (FPIC) to obtain broad support are not built into project design and implementation.

Objective.

The extent, frequency and degree of engagement required by the consultation process should commensurate with the identified project risks and adverse impacts and with the concerns raised by affected IPs. FPICs are built on mutually accepted process between affected communities and project actors. FPICs serve at least two purposes:

- a. Provide a platform to undertake a process of **consultation** in good faith and in a manner that provides affected IPs with opportunities to express their concerns and views on the sharing of development benefits, risks, impacts, and mitigation measures and explore ways to leverage culturally and socially acceptable benefits.
- b. Provide a two-way mechanism for village apparatus especially PLN staff to engage with IPs and their organizations, including Adat councils, community groups to consider and respond to the views and concerns expressed by affected IPs prior to project execution.

Procedures. FPICs should be orientated towards obtaining broad community support and by which, broad community support consists of a collection of expressions by affected community members and/or their recognized representatives in support of the proposed project/sub-project activities. Although FPICs do not necessarily require unanimity and in some instances, decisions may be achieved even individuals or groups within the community disagree, FPICs lay out organized and iterative processes through which decisions and measures adopted by the project incorporate the views of the affected IPs on matters that affect them directly.

The Community Participation Framework needs to be built on gender-sensitive and intergenerationally inclusive approaches. Effective FPICs are built upon two-way processes that should:

- a. Involve members of affected communities and their recognized representative bodies and organizations in good faith.
- b. Capture the views and concerns of men, women and vulnerable community segments including the elderly, youth, displaced persons, children, people with special needs, etc. about impacts, mitigation mechanisms, and benefits where appropriate as reflected in sub-project design. If necessary, separate forums or engagements need to be conducted based on their preferences.
- c. Begin early in the process of identification of environmental and social risks and impacts and continue on an ongoing basis as risks and impacts arise.
- d. Be based on the prior disclosure and dissemination/socialization of relevant, transparent, objective, meaningful, and easily accessible information which is in a culturally appropriate language(s) and format and is understandable to affected IPs. In designing consultation methods

and use of media, a special attention needs to be paid to include the concerns of Indigenous women, youth, and children and their access to development opportunities and benefits.

- e. Focus on inclusive engagement on those directly affected than those not directly affected;
- f. Ensure that the consultation processes are free of external manipulation, interference, coercion and/or intimidation. The ways the consultations are designed should create enabling environments for meaningful participation, where applicable. In addition to the language(s) and media used, the timing, venues, participation composition need to be carefully thought through to ensure everyone could express their views without repercussions.
- g. Be documented

In deciding whether to proceed with the sub-project, PLN should ascertain on the basis of social assessment and FPICs whether affected IPs provide their broad support to the project. Where there is such a support, the PLN should prepare:

- a. Documented evidence of FPICs as well as measures taken to avoid and minimize risks to and adverse impacts of the affected IPs. This includes list of participants, meeting minutes and other documentation (e.g., photos, video, etc.);
- b. Additional measures, including project design modification, alternative locations, and where applicable compensations to address adverse effects on affected IPs and to provide them with culturally and socially appropriate benefits;
- c. Action plan and recommendations for FPICs during project implementation, monitoring, and evaluation, and
- d. Any formal agreements reached with affected IPs and/or their representative organizations.

The PLN and financiers will review the process and the outcome of the consultation carried out by the village apparatus to confirm that the affected IPs have provided their broad support to the project.

Requirements. To ensure that FPICs can be ascertained, the following requirements are needed to determine whether:

- a. The level of engagement in a way that enables informed participation of affected IPs is acceptable;
- b. The level of support and dissent among affected IPs for the project is taken into account into decision making and development of mitigation measures.

Annex A.4: Indigenous Peoples Plan Template (Full)

Depending on the scale and nature of potential risks and impacts on Indigenous Peoples and/or *Adat* Communities, an Indigenous Peoples Plan (IPP), or elements of such a planning instrument, is required for all project and subproject activities with impacts on Indigenous Peoples and/or Masyarakat Adat.

The following provides the key elements of a full-blown IPP, to be applied where IPs will experience direct impacts. These elements include:

- a. **IPP Executive Summary.** This section concisely describes the critical facts, significant findings, and recommended actions (required for a standalone IPP);
- b. **Assessments of project and/or sub-project activities with impacts on Indigenous Peoples and/or Masyarakat Adat.** This section provides analysis of the nature and scale of such impacts, should:
 - i. Review the legal and institutional framework applicable to Indigenous Peoples and/or *Masyarakat Adat* in the project context.
 - ii. Provide baseline information on the demographic, social, cultural, and political characteristics of the affected communities; the land and territories that they have traditionally owned or customarily used or occupied; and the natural resources on which they depend.
 - iii. Identify key project stakeholders and elaborate a culturally appropriate and gender-sensitive process for meaningful consultation with Indigenous Peoples and/or *Masyarakat Adat* at each stage of project preparation and implementation, taking the review and baseline information into account.
 - iv. Assess, based on meaningful consultation with the affected communities, the potential adverse and positive effects of the project and subproject activities. Critical to the determination of potential adverse impacts is a gender-sensitive analysis of the relative vulnerability of, and risks to, the affected Indigenous Peoples and/or *Masyarakat Adat*, given their circumstances and close ties to land and natural resources, as well as their lack of access to opportunities relative to those available to other social groups in the communities, regions, or national societies in which they live.
 - v. Include a gender-sensitive assessment of the affected Indigenous Peoples and/or *Masyarakat Adat*'s perceptions about the project and its impact on their social, economic, and cultural status.
 - vi. Identify and recommend, based on meaningful consultation with the affected communities, the measures necessary to avoid adverse effects or, if such measures are not possible, identify measures to minimize, mitigate, and/or compensate for such effects and to ensure that Indigenous Peoples and/or *Masyarakat Adat* receive culturally appropriate benefits under the project.
- c. **Assessments of circumstances requiring FPIC and alternative project design/siting to avoid adverse impacts (refer to the Section on Free, Prior and Informed Consent).**
- d. **Information disclosure, consultation and participation.** This section should:

- i. Describes the information disclosure, consultation and participation process with the affected communities that can be carried out during project preparation;
 - ii. Summarize their comments on the results of the social impact assessment and identify concerns raised during consultation and how these have been addressed in project design;
 - iii. In the case of project activities requiring FPIC, document the process and outcome of consultations with affected communities and any agreement resulting from such consultations for the project activities and risk management measures addressing the impacts of such activities;
 - iv. Describe consultation and participation mechanisms to be used during implementation to ensure Indigenous Peoples and/or *Masyarakat Adat* participation during implementation; and
 - v. Confirm disclosure of the draft and final documents to the affected Indigenous Peoples and/or *Masyarakat Adat*;
- e. **Benefit sharing arrangements.** this section specifies the measures to ensure that the affected communities receive social and economic benefits that are culturally appropriate, and gender responsive.
- f. **Mitigation measures.** this section specifies the measures to avoid adverse impacts on Indigenous Peoples and/or *Masyarakat Adat*; and where the avoidance is impossible, specifies the measures to minimize, mitigate and compensate for identified unavoidable adverse impacts for each affected community.
- g. **Capacity building.** This section provides measures to strengthen the social, legal, and technical capabilities of (a) government institutions to address Indigenous Peoples and/or *Masyarakat Adat*'s issues in the project area; and (b) affected communities' organizations in the project area to enable them to represent their communities more effectively and participate in the management of risks and impacts.
- h. **Feedback and Grievance Redress Mechanism.** This section describes the procedures to redress grievances by affected Indigenous Peoples and/or *Masyarakat Adat* communities. It also explains how the procedures are accessible to Indigenous Peoples and/or *Masyarakat Adat*' and culturally appropriate and gender sensitive.
- i. **Monitoring, reporting and evaluation.** This section describes the mechanisms and benchmarks appropriate to the project for monitoring and evaluating the implementation of the IPP. It also specifies arrangements for participation of affected Indigenous Peoples and/or *Masyarakat Adat* in the preparation and validation of monitoring, and evaluation reports.
- j. **Institutional arrangements.** This section describes institutional arrangement responsibilities and mechanisms for carrying out the various mitigation measures in the IPP. It also describes the process of including relevant local organizations and/or NGOs in carrying out the measures of the IPP.
- k. **Budget and financing.** This section provides an itemized budget for all activities described in the IPP.

Annex 5: Indigenous Peoples Plan Template (Abbreviated)

In circumstances where IPs and/or Masyarakat Adat will either result in only positive benefits or indirect impacts, an abridged IPP will be prepared that captures the following:

- i. Identify the relevant IP, provide baseline information on the demographic, social, cultural and political characteristics of the community.
- ii. Present outcomes of impact identification and assessment process, including a statement as to whether the characteristics of the IP community makes them more vulnerable to indirect impacts in comparison to other non-IP members. This is to capture elements such as whether given their circumstances, close ties to land and natural resources, and historic lack of access to opportunities relative to those available to other social groups in the communities will mean that they may be differentially impacted
- iii. Describe any specific measures to avoid these adverse impacts on IPs and, where avoidance is impossible, specify the measures to minimize, mitigate, and compensation for identified unavoidable adverse impacts for each affected community. This is capturing any additional specific measures required to address differential impacts to IPs and also describe any additional measures that may be required to ensure that they are able to access sub-project culturally appropriate benefits
- iv. Describe procedures to redress grievances by IPs, explaining how these are accessible, culturally appropriate and gender sensitive
- v. Describe the monitoring, reporting and evaluation benchmarks appropriate to the sub-project for monitoring and evaluating the implementation of the abridged IPP. It is to specify any specific arrangements for participation of IPs in the preparation and validation of monitoring and evaluation reports
- vi. Describing the arrangements and responsibilities for implementation of the measures described within the abridged IPP. This may include integrating these measures into other instruments prepared for the sub-project including, but not limited to, the Stakeholder Engagement Plan or Environmental and Social Management Plan