

Annex X: Preliminary Environmental and Social Assessment to Complement the Feasibility Study

The Indonesian Sustainable Least-Cost Electrification (ISLE) Project will support the development and piloting of a sustainable and affordable electrification framework in Eastern Indonesia and the preparation of future investments needed to implement the approach. Feasibility studies (FS) and their associated environmental and social (E&S) instruments, such as Environmental and Social Management Plan (ESMP), Resettlement Plan (RAP), Indigenous Peoples Plan (IPP), and Stakeholder Engagement Plan (SEP) will be financed for the identified investments listed under ISLE. Labor Management Plan will also be developed as part of the ESMP.

ISLE has identified the following grid and generation investments (identified investments) in the 10 island provinces participating in the project. The identified investments include:

- a. 6 hybridization systems (solar/battery to existing diesel) in the smaller grids, namely Alor, Rote, Morotai, Buru, Seram and Tual/Kei Kecil
- b. 10 medium-size solar PV projects in Flores, Sumbawa, Ternate and Timor
- c. 5 grid-connected stand-alone battery storage in Flores, Sumbawa and Timor² transmission lines of 80 km each in Timor and Flores
- d. grid upgrades such as capacitor banks, transformers and SCADA systems in all islands to improve grid reliability and resilience.

The precise location of these investments is not yet identified and will be defined by the FS. Additionally, for the hybridization systems solar/battery to diesel, modification to the generation system will be carried out by combining it with the solar battery, thus the diesel powerplant is not considered as Associated Facilities instead as an integral part of the hybridization investment.

In addition to the FS Term of Reference (TOR), this annex provides a simple framework that will help project implementors to conduct a preliminary environmental and social assessment and mainstream environmental and social considerations early in the project. The framework includes a screening mechanism and form, relevant environmental and social legislation, a TOR for the preliminary assessment, as well as general environmental and social considerations for the power sector. The assessment will be carried out during the initial stages of the project and therefore will rely on limited project information, relevant data, as well as available reports.

The preliminary environmental and social assessment, as part of the FS, will reflect the environmental and social impacts that may be associated with the identified investment activities as well as suggest the appropriate mitigation measures. However, the assessment will not substitute necessary environmental assessments, such as AMDAL or UKL-UPL, that is required to obtain the environmental permit later during the investment and physical construction phase. Instead, this assessment will feed information to the investment-specific ESMP that will be carried out in parallel to the FS and the AMDAL/UKL-UPL in a later stage during the preparation of future investments.

I. Project Screening

The environmental and social screening will be done for each project to be developed under ISLE as part of the Feasibility Study. This screening checklist will review and identify potential risks of planned activities to the environment, workers, local communities, presence of Indigenous Peoples, or any land

acquisition that will be assessed as part of the preliminary environmental and social assessment (see Section IV). The project implementor will be responsible for conducting this screening process.

Environmental and Social Screening Form

Name of the Project		
Project location		
Brief Description of Project (project scale and activities)		
Screening #1: Project Eligibility		
Is the project included in the Exclusion List? (Y/N)		Please check with Section II: Exclusion List
Note: If the answer is YES, screening is stopped and should not be continued (project application will be rejected)		
Screening #2: Potential Environmental and Social Impacts		
Will the proposed project activities and its associated facilities ¹ (if any) likely to generate environmental and social impacts? (Y/N)		If the answer is YES, refer to ESS1 Assessment and Management of Environmental and Social Risks and Impacts
Will the proposed project involve a mixed workforce (local and/or external) or lead to Occupational Health and Safety (OHS) risks such as work accidents and/or disruption to the work environment? (Y/N)		If the answer is YES, refer to ESS2 Labor and Working Conditions
Will the proposed project involves the use of chemical and hazardous materials and/or result in the production of solid or liquid waste (e.g. water, hazardous, domestic or construction wastes), or an increase in waste production during construction or operation phase? (Y/N)		If the answer is YES, refer to ESS3 Resource Efficiency and Pollution Prevention and Management
Will the proposed project involve the use of resources, including energy, water and raw material? (Y/N)		If the answer is YES, refer to ESS3 Resource Efficiency and Pollution Prevention and Management
Will the proposed project investment create risks of increased air pollution (e.g. dust, noise, vibration, gas emissions)? (Y/N)		If the answer is YES, refer to ESS3 Resource Efficiency and Pollution Prevention and Management
Will the proposed project affect the quantity or quality of surface waters (e.g. sea, rivers, streams, wetlands) or groundwater (e.g. wells)? (Y/N)		If the answer is YES, refer to ESS3 Resource Efficiency and Pollution Prevention and Management
Will the proposed project create risks of increased soil degradation or erosion? (Y/N)		If the answer is YES, refer to ESS3 Resource Efficiency and Pollution Prevention and Management
Will the proposed project have possible impacts and risks on community health and		If the answer is YES, refer to ESS4 Community Health and Safety

¹ Associated Facilities means facilities or activities that are not funded as part of the project and, in the judgment of the Bank, are: (a) directly and significantly related to the project; (b) carried out, or planned to be carried out, contemporaneously with the project; and (c) necessary for the project to be viable and would not have been constructed, expanded or conducted if the project did not exist. For facilities or activities to be Associated Facilities, they must meet all three criteria.

safety from construction and/or operational activities? (Y/N)		
Are there any potential risks of community and worker exposure to water-borne, water-based, water-related, and vector-borne diseases, and communicable and non-communicable diseases that could result from project activities? (Y/N)		If the answer is YES, refer to ESS4 Community Health and Safety
Will the proposed project involve interactions between contractors and the remote local beneficiaries and affected communities? (Y/N)		If the answer is YES, refer to ESS4 Community Health and Safety
Will the proposed project involve any disproportionate impacts and risks on certain groups (vulnerable groups, gender, etc)? (Y/N)		If the answer is YES, refer to ESS4 Community Health and Safety
Will the proposed project require land (public or private) to be acquired (temporarily or permanently)? (Y/N)		If the answer is YES, refer to ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
Will project activities affect people's economic activity/community access to land use? (Y/N)		If the answer is YES, refer to ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
Will the proposed project use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, a fishing location, forests)? (Y/N)		If the answer is YES, refer to ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
Will the proposed project result in the loss of income sources and means of livelihood due to land acquisition? (Y/N)		If the answer is YES, refer to ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
Are there any sensitive natural habitats (forest, riverine, coastal, mangroves, coral reefs, wetlands, peatland) areas or threatened species that could be adversely affected by the project? (Y/N)		If the answer is YES, refer to ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources
Will the proposed project involves harvesting or exploiting a significant amount of natural resources such as marine and aquatic resources, timber and non-timber forest products, freshwater, etc.? (Y/N)		If the answer is YES, refer to ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources
Are there social-cultural groups present in the project area, or who use the project area, who may be considered as “indigenous peoples/ethnic minorities/tribal groups”? (Y/N)		If the answer is YES, refer to ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
Are there community members of the indigenous groups in the project area who will either receive benefits or are adversely impacted by the project? (Y/N)		If the answer is YES, refer to ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
Do such groups use indigenous languages that differ from the national language or		If the answer is YES, refer to ESS7 Indigenous Peoples/Sub-Saharan African

language used by the majority, in the project area? (Y/N)		Historically Underserved Traditional Local Communities
Will the proposed construction activities be implemented in areas known as a cultural heritage site? (Y/N)		If the answer is YES, refer to ESS8 Cultural Heritage

II. Exclusion List

The following project or activities will be deemed ineligible to be developed under ISLE if they:

1. Will cause significant, sensitive, complex, irreversible and unprecedented potential adverse environmental and social impacts.
2. Production or activities involving harmful or exploitative forms of forced labor/harmful child labor. Children between 15 and 18 years old can be employed without permission from their parents or custodians but must not be exploited to perform the worst forms of works².
3. Employment without formal contract agreements in line with the Government of Indonesia (GoI) regulations and World Bank's ESF, including with primary suppliers and sub-contractors.
4. Are located in international waterways, disputed areas and/or unable to prove the clear and clear status of the land.
5. Finance land acquisition resulting in forced eviction or physical displacement of affected communities, or relocation of Indigenous Peoples which as a consequence restrict or cease their access to traditional lands or resources.
6. Will cause adverse impacts on biodiversity and habitats, especially the vulnerable and endangered species listed under the IUCN Red List of Threatened Species. Finance large scale construction in protected areas that involve significant conversion, clearance, or degradation of critical natural habitats, forests, environmentally sensitive areas, significant biodiversity and/or protected conservation zones.
7. Likely to create major or significant adverse impacts to ethnic groups or Indigenous Peoples within the village and/or in neighboring villages, or any activity that is unacceptable to ethnic groups living in a village of mixed ethnic composition.
8. Do not appreciate the traditional knowledge and cultural values of indigenous and local peoples by referring to international legal obligations including the UN Declaration on the Rights of Indigenous Peoples.
9. Will cause, or have the potential to result in, permanent and/or significant damage to non-replicable cultural property, irreplaceable cultural relics, historical buildings and/or archaeological sites.
10. Utilize illegal timber and timber products (cannot show a legal document from the designated supplier).
11. Utilize stone/minerals from illegal mines (cannot show a copy of the mining permit issued by related agencies).

III. World Bank Requirements

Environmental and Social Framework (ESF) is a general guideline to assess and manage environmental and social risks in the World Bank's project-funded activities. There are ten (10) ESS, and the details could be seen as in the table below.

² Ministry of Manpower and Transmigration Decree No. KEP.235/MEN/2003 on Jobs that Jeopardize the Health, Safety and Morals of Children. Indonesia has ratified the ILO Convention on Minimum Age for Admission to Employment (C138) as well as the ILO Convention on the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labor (C182).

Summary of World Bank Environmental and Social Framework (ESF)

Standard	Concerning	Highlights
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	<ul style="list-style-type: none"> • Types of Environmental and Social risks and impacts that should be considered in the environmental and social assessment • To adopt the mitigation hierarchy approach: anticipate and avoid risks and impacts, when avoidance is not possible, minimize or reduce risks and impacts to acceptable levels. Once risks and impacts have been minimized or reduced, mitigate, and where significant residual impacts remain, compensate for or offset them, where technically and financially feasible. • To improve and promote environmental and social performance that recognize and enhance the Government's capacity. • Adoption of differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable and they are not disadvantaged in sharing development benefits and opportunities resulting from the project. • Clear definition of "project" and "Associated Facilities" and how the scope of application • The use and strengthening of the Government's environmental and social framework for the assessment, development and implementation of World Bank financed projects where appropriate • A Common Approach, where the World Bank is jointly financing a project with other development partners • An Environmental and Social Commitment Plan (ESCP), developed in agreement with the World Bank, which sets out a summary of the material measures and actions for risk and impact mitigation and monitoring • Emphasis on non-discrimination and inclusion
ESS2	Labor and Working Conditions	<ul style="list-style-type: none"> • Promotion of safety and health at work in line with the World Bank Group's Environmental, Health, and Safety Guidelines (EHSG), fair treatment, non-discrimination and equal opportunity of project workers • Protection of project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with the ESS 5) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate. • Prevention of the use of all forms of forced labor and child labor. • Support for the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law; • Provisions of accessible means to raise workplace concerns to project workers.
ESS3	Resource Efficiency and	<ul style="list-style-type: none"> • Requires technically and financially feasible measures to improve efficient consumption of energy, water, and raw

	<p>Pollution Prevention and Management</p>	<p>materials, and introduces specific requirements for water efficiency where a project has high water demand</p> <ul style="list-style-type: none"> • Avoidance and minimization of adverse impact on human health and the environment by avoiding or minimizing pollution from project activities • Requires an estimate of gross greenhouse gas emissions resulting from project (unless minor), where technically and financially feasible • Requirements on management of wastes, chemical and hazardous materials, and contains provisions to address historical pollution • Requires management of pesticides, preferring integrated pest management (IPM) and integrated vector management (IVM), and where pesticides are necessary, minimizing risks to human health and the environment • The standard refers to national law and Good International Industry Practice, in the first instance the world Bank EHSs
<p>ESS4</p>	<p>Community Health and Safety</p>	<ul style="list-style-type: none"> • Requirements related to infrastructure, taking into account safety and climate change, and applying the concept of universal access, where technically and financially feasible • Anticipation and avoidance of adverse impact on affected community's health and safety from project activities throughout the cycle, including the routines and non-routine activities. • Requirements on traffic and road safety, including road safety assessments and monitoring • Addresses risks arising from impacts on provisioning and regulating ecosystem services • Measures to avoid or minimize the risk of water-related, communicable, and non-communicable diseases • Requirements to assessment risks associated with security personnel, and review and report unlawful and abusive acts to relevant authorities • Measures to avoid and prevent Sexual Exploitation and Abuse (SEA) and Violence Against Children (VAC), as well as prevent Sexually Transmitted Infections (STI) and HIV-AIDS.
<p>ESS5</p>	<p>Land Acquisition, Restrictions on Land Use and Involuntary Resettlement</p>	<ul style="list-style-type: none"> • Applies to permanent or temporary physical and economic displacement resulting from different types of land acquisition and restrictions on access • Avoidance of involuntary resettlement to the extent possible, or when unavoidable, minimize involuntary resettlement by exploring project design • Avoidance of forced eviction • Provisions of timely compensation for loss of assets at replacement costs, assistance to displaced persons in their efforts to improve, or at least restore their 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 • Efforts to improve living conditions of poor and vulnerable persons who are physically displaced through provisions of

		adequate housing, access to services and facilities and security of tenure.
		<ul style="list-style-type: none"> • Resettlement as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant. • Provisions of appropriate disclosure of information, meaningful consultation and informed participation of those affected;
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	<ul style="list-style-type: none"> • Definitions and requirements for modified habitats, natural habitats and critical habitats • Requirements for projects affecting areas that are legally protected, designated for protection or regionally/internationally recognized to be of high biodiversity value • Protection and conservation of biodiversity habitats and promote sustainable management of living natural resources, including primary production and harvesting, distinguishing between small-scale and commercial activities • Provisions for avoiding introduction of and managing the impacts of, invasive alien species • Provisions relating to animal husbandry practices in large-scale commercial farming • Requirements relating to primary suppliers, where a project is purchasing natural resource commodities, including food, timber and fiber.
ESS7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	<ul style="list-style-type: none"> • Applies when Indigenous people are present or have a collective attachment to the land, whether they are affected positively or negatively and regardless of economic, political or social vulnerability • Efforts to ensure that project respect human rights, dignity, aspirations, culture, identity, and natural resource-based livelihoods of Indigenous Peoples • Avoidance of adverse impact of projects on Indigenous peoples, when avoidance is not possible, efforts to minimize, mitigate and/or compensate for such impacts must be in place. • Promotion of sustainable development benefits and opportunities for Indigenous Peoples in a manner that is accessible, culturally appropriate and inclusive; • On-going relationship based on meaningful consultation with Indigenous Peoples throughout the project's life cycle; • Free, Prior and Informed Consent (FPIC) for three circumstances resulting in adverse impacts on Indigenous Peoples (i.e. adverse impacts on land and natural resources, relocation of Indigenous Peoples, and significant impacts to cultural heritage); • Recognition, respect and preservation of culture, knowledge and practices of Indigenous Peoples and provisions of an opportunity to adapt to changing conditions in a manner and in a timeframe acceptable to Indigenous Peoples.
ESS8	Cultural Heritage	<ul style="list-style-type: none"> • Covers both tangible and intangible cultural heritage; Tangible cultural heritage may be located in urban or rural

		<p>settings, be above or below land or under water, and includes natural features and landscapes; intangible cultural heritage includes practices, representations, expressions, knowledge, and skills</p> <ul style="list-style-type: none"> • Protection of cultural heritage from adverse impact of project activities and efforts to support its preservation; • Recognition of cultural heritage as an integral aspect of sustainable development; • Promotion of meaningful consultations regarding cultural heritage; • Promotion of fair and equitable sharing of benefits from the use of cultural heritage;
ESS9	Financial Intermediaries/FI	<ul style="list-style-type: none"> • Not relevant to the project
ESS10	Stakeholder Engagement and Information Disclosure	<ul style="list-style-type: none"> • Requires stakeholder engagement throughout the project lifecycle, and preparation and implementation of a Stakeholder Engagement Plan (SEP) and constructive relationship with stakeholders, in particular, project affected parties; • Promotion of effective and inclusive means of engagement with project-affected stakeholders throughout project lifecycle that could potentially affect them • Requires early identification of stakeholders, both project-affected parties and other interested parties, and clarification on how effective engagement will take place • Stakeholder engagement to be conducted in a manner proportionate to the nature, scale, risks and impacts of the project, and appropriate to stakeholders' interests • Requirements for appropriate disclosure of project information on environmental and social risks and impacts in a timely, understandable, and appropriate manner and format. • An inclusive, accessible and responsive grievance mechanism, accessible to all project-affected parties, and proportionate to project risks and impacts

IV. Terms of Reference (TOR) for Preliminary Environmental and Social Assessment

A. Background

The Indonesia Sustainable Least-cost Electrification project (ISLE) will enable PLN to develop and pilot a sustainable and affordable framework to electrification by reducing the cost of generation, improving grid reliability and mobilizing private investments. ISLE will provide a set of solutions to PLN to (i) reduce the cost of generation in its Eastern Islands by increasing the share of least-cost renewable generation, (ii) improve grid reliability by developing clear guidelines on how to assess electricity losses and lack of reliability and (iii) reduce the financial burden on the public finances by mobilizing private investments. The upstream activities will focus on the development of the electrification and generation roadmap and framework, ensuring its replicability, while the downstream activities financed under this project will focus on piloting such framework, including feasibility studies (FS) and relevant environmental and social (E&S) instruments. Although there are low probabilities of serious E&S risks associated with this project, the potential E&S impacts for future investment will increase if there were poor-quality screening and scoping and inadequate environmental and social

assessment during FS implementation. As such, this Terms of Reference (TOR) is prepared for integrating the preliminary E&S assessment into the FS document.

B. Objectives

Apart from the design, technical, economic and financial analysis, the preliminary environmental and social assessment shall be part of the overall objective of the FS. The aim of this assessment is to provide an initial description of environmental and social conditions and work safety around the project location, identify the potential environmental and social impacts, recommend mitigation measures and to identifying required E&S instruments required for the identified project investment such as AMDAL (or full environmental social assessment or ESIA), UKL-UPL (partial environmental assessment) and ESMPs (including all relevant social instruments such as related to resettlements/indigenous people/labors) in accordance with relevant GoI regulations and the World Bank's ESF, as well as its cost estimation.

C. Applicable Government Legislations and World Bank Environmental and Social Framework (ESF)

The preliminary environmental and social assessment should include a review or screening of the requirements and application of relevant Government of Indonesia (GoI) legislations and World Bank Environmental and Social Framework (ESF) that are applicable to the Project. The following lists the key GoI legislation and World Bank's ESF for the power sector:

Environmental and Social Legislations related to the Power Sector:

- Law No. 32 Year 2009 regarding Environmental Protection and Environmental Management;
- Law No. 13 Year 2003 regarding Manpower;
- Law No. 1 Year 1970 regarding Occupational Health and Safety (OHS) management;
- Government Regulation No. 27 Year 2012 regarding Environmental Permit;
- Government Regulation No. 41 Year 1999 regarding Control of Air Pollution;
- Government Regulation No. 82 Year 2001 regarding Management of Water Quality and Water Pollution Control;
- Government Regulation No. 101 Year 2014 regarding Management of Hazardous Waste;
- Ministry of the Environment and Forestry Regulation No. P.38 Year 2019 regarding Types of Business and/or Activities that are Mandatory to have Environmental Impact Assessment (AMDAL);
- Ministry of the Environment and Forestry Regulation No. P.25 Year 2018 regarding Types of Business or Activities which shall have UKL-UPL and SPPL;
- Ministry of the Environment and Forestry Regulation No. 1 Year 2012 regarding Community Involvement in the AMDAL and Environmental Permit Process
- Ministry of the Environment Regulation No. 12 Year 2010 regarding Implementation of Air Pollution Control at District Level;
- Ministry of Environment Regulation No. 5 Year 2014 regarding Wastewater Quality Standard;
- Ministry of Manpower Regulation No. 5 Year 2018 regarding Occupational Health and Safety (OHS) standards for workers and work environments; and
- Ministry of Home Affairs Regulations No. 52 Year 2014 regarding Guidelines for Recognition and Protection of Indigenous Peoples.

Key Legislations on Land Acquisition:

- Law No. 5 Year 1960 regarding the Agrarian Basic Principles;

- Law No. 2 Year 2012 regarding Land Acquisition for the Development of Facilities for Public Use;
- President Regulation No. 36 Year 2005 regarding Land Acquisition for the Development of Facilities for Public Use;
- President Regulation No. 65 Year 2006 regarding Change to President Regulation No. 36 Year 2005 regarding Land Acquisition for the Development of Facilities;
- President Regulation No. 71 Year 2012 regarding Implementation of Land Acquisition for the Development of Facilities for Public Use;
- President Regulation No. 40 Year 2014 regarding Change to President Regulation No. 71 Year 2012 regarding Implementation of Land Acquisition for the Development of Facilities for Public Use;
- President Regulation No 99 Year 2014 regarding Second Change to President Regulation No. 71 Year 2012 regarding Implementation of Land Acquisition for the Development of Facilities for Public Use;
- President Regulation No. 30 Year 2015 regarding Third Change to President Regulation No. 71 Year 2012 regarding Implementation of Land Acquisition for the Development of Facilities for Public Use;
- Ministry of Agrarian Affairs and Spatial Planning/Head of National Land Agency Regulation No. 9 of 2015 regarding Procedures to Establish Communal Right on Indigenous Peoples' Land in Certain Area; and
- Head of National Land Agency (BPN) Regulation No. 3 Year 2007 regarding Implementation of the provisions of Presidential Regulation No. 36 of 2005 as amended by Presidential Regulation No. 65 of 2006.

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- Head of National Land Agency (BPN) Regulation No. 3 Year 2007 regarding Implementation of the provisions of Presidential Regulation No. 36 of 2005 as amended by Presidential Regulation No. 65 of 2006.

- Presidential Regulation of the Republic of Indonesia No 62 of 2018 concerning Handling of Social Impacts in the Context of Provision of Considering Land for National Development.
- Minister of Agrarian Affairs and Spatial Planning / Head of the National Land Agency of the Republic of Indonesia regulation No 6 of 20 2020 Regarding Provisions for Implementing Presidential Regulation Number 62 of 2018 Concerning Handling of Social Impacts in the Context of Provision of Land for National Development.
- Minister of Energy and Mineral Resources regulation of the Republic of Indonesia No 27 of 2018 regarding Compensation of Land, Buildings, and/or Plants Under the Space Free Electricity Transmission Network.
- Minister of Energy and Mineral Resources Regulation No. 33 of 2016 Concerning Technical Settlement of Land, Building and / or Plants Controlled by Communities in Forest Areas in the Framework of the Acceleration of Electricity Infrastructure Development

World Bank ESF:

- ESS1 Assessment and Management of Environmental and Social Risks and Impacts;
- ESS2 Labor and Working Conditions
- ESS3 Resource Efficiency and Pollution Prevention and Management
- ESS4 Community Health and Safety
- ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
- ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
- ESS8 Cultural Heritage
- ESS10 Stakeholder Engagement and Information Disclosure

D. Scope of Work

The minimum scope of work for the preliminary environmental and social assessment includes:

1. Reviewing the legislation for environmental and social management, including but not limited to environmental permits, waste management, pollution control, land acquisition, and stakeholder engagement that are applicable to the identified project investment.
2. Conducting a preliminary survey on location of the project investment and putting forward recommendations in relation to National and/or Regional Development, in the context of:
 - Alignment with the National Policy and Strategic plan as indicated by the Map on Deferment of New Project Licenses (*Peta Indikatif Penundaan Izin Baru - PIPIB*) or Moratorium Map;
 - Alignment with the National and/or Regional Spatial Plan(s) specifying protected areas and land designated for other use (*Area Penggunaan Lain – APL*); and
 - Assessment on whether the project is located on or goes through government-protected areas.
 - Assessment on potential natural disaster occurrences in the project location.
3. Screening of the project to determine the required environmental document based on the Ministry of Environment and Forestry Regulation No. P.38/2019. For the power sector, AMDAL is mandatory for the development of high voltage overhead transmission lines with a capacity of > 230 kV and power plants using solar power with a capacity of ≥ 50 MW (in one location). Power projects having a scale smaller than the mentioned, will need to develop a UKL-UPL study.

4. Initial environmental permitting plan on schedule, estimated cost and party responsible for developing the required environmental document and obtaining the environmental permit.
 5. Initial desktop study or survey of environmental and social baseline conditions in the project location. This shall include, but not limited to, air, soil, and water quality, socio-economic conditions, natural habitats and endangered species (if any), and presence of indigenous peoples. When the available information is not sufficient, further efforts may be required to obtain the necessary baseline information to enable adequate environmental and social risks and impacts assessment.
 6. Initial assessment and recommended mitigation measures on potential environmental and social impacts of the project based on recent and available data of the baseline conditions. The assessment should cover all activities relating to impacts of potential investment, sourcing aggregates and management of contractors and their workforce. The mitigation measures will be prioritized based on the mitigation hierarchy and may include the development of specific management plans or other studies. The assessment will also include the estimated cost(s) for the mitigation measures. The potential environmental and social impacts may include impacts or changes to the following:
 - Air quality;
 - Water quality;
 - Soil quality;
 - Noise and vibration levels;
 - Waste generation and hazardous substances handling;
 - Hydrology or Oceanography;
 - Natural resources;
 - Biodiversity (flora and fauna, terrestrial, avian and aquatic species) and natural habitats, including identification of sensitive receptors in the location;
 - Occupational and Community Health and Safety;
 - Socio-economic conditions;
 - Land ownership and land use;
 - Indigenous peoples; and
 - Cultural heritage.
 - Climate resilience considerations
 7. Initial desktop study on stakeholder mapping for the project to identify all stakeholders, their level of interest and authority over the project.
 8. Initial desktop study on land acquisition, which includes:
 - Estimated land area required for the Project based on design data;
 - Initial identification of land ownership and identification of any potential risks related to the land acquisition process. Land ownership include: land under the management of the Minister of Environment and Forestry, land used for religious purposes (*Tanah Wakaf*), land owned by village authority (*tanah carik atau desa*) or other government-owned lands such as land used for public school and/or public facilities, and land under traditional rights or land owned by indigenous peoples or land that has cultural values;
 - Initial identification for any potential voluntary or involuntary relocation of houses or settlements and/or squatters, and development of Resettlement Plan that includes mitigation measures;
 - Assessment of any land acquisition document or activity which may have already been executed and identification of potential risks and mitigation measures;
 - Determine party responsible for executing the land acquisition and/or resettlement activities; and
- Estimated costs and the timeline for developing the land acquisition document as required by regulations and executing the land acquisition activities that may include resettlement.

E. General Methodology

The general approach to the methodology for the preliminary environmental and social assessment for the FS is performing a desktop study based on recent and available data that is sourced from reliable and trustworthy sources such as other scientific studies, maps, and literature, and meetings and discussions with experts. When secondary data is not available, reasonable efforts should be made to collect primary data from the field for the assessment. The field surveys should be designed to meet the purpose of the preliminary environmental and social assessment and do not substitute baseline surveys required for a full environmental impact assessment (i.e. AMDAL or UKL-UPL).

F. Expected Deliverables

The expected deliverables of the preliminary environmental and social assessment of the identified project investment is a written section of the FS report in both Bahasa and English reviewed by PLN and the World Bank, which includes the following:

- Review of GoI legislations and World Bank applicable Environmental and Social Standards to the Project and identification of required permits or licenses and valued environmental components that are relevant;
- Review of location of the project investment in the context of National and Regional Spatial Plans and Protected Areas, disaster-prone areas, and include any recommendations for obtaining land clearance;
- Review of environmental and social baselines of location of the project investment;
- Environmental Permitting Plan which describes the cost for developing the AMDAL or UKL-UPL and obtaining the environmental permit for the identified project investment, and the cost for developing the ESF requirements for ESMP (that includes LMP), RAP, IPP, and SEP; or AMDAL meeting full ESIA requirements if necessary.
- Initial environmental and social impact assessment and mitigation measures which may include recommendations for additional studies. Mitigation measures should include an estimation of the costs. The preliminary environmental and social assessment does not substitute an AMDAL or UKL-UPL for the identified project investment;
- Summary of stakeholder mapping including a description of their level of interest and authority on the identified project investment (stakeholder identification and analysis), communication strategy, proposed action plans; and
- Initial assessment on land acquisition, which includes identification of land ownership, land acquisition process and documents, and any requirements for resettlement including proposed action plans and estimated costs.
- Initial assessment on Indigenous Peoples (IPs) present in the locations of the identified project investment, which includes any potential impacts to IPs, requirements for a Free, Prior, Informed Consent (FPIC), and proposed mitigation action plans and estimated cost.

G. Required Expertise

The selected Consultants will be required to have extensive experience in Indonesia with regards to conducting environmental and social assessment in compliance with the World Bank's Environmental and Social Framework (ESF) and national regulations. The Consultant's team will need to have:

- Senior environmental specialists with a minimum of 10 years of experience in conducting environmental assessments and has sufficient knowledge of World Bank's Environmental and Social Framework (ESF) or IFIs standards (International Financial Institutions) on environmental qualities (air, water, and soil), biodiversity, and health and safety aspects;

- Senior social specialists with a minimum of 10 years of experience in conducting social impact assessment and has sufficient knowledge of the World Bank’s Environmental and Social Framework (ESF) and national regulation on land acquisition, indigenous peoples, cultural heritage, and socio-cultural aspects.

H. Timeline

The timeline for performing the preliminary environmental and social assessment for the FS depends on the nature and scale of the identified project investment. It is estimated that the development of the preliminary environmental and social assessment is completed within 3 (three) to 6 (six) months.

V. Generic Environmental and Social Considerations

The following table provides typical environmental and social considerations that shall be taken into account in the preliminary environmental and social assessment as part of the feasibility study.

Solar Power

Pre-Construction:

- resettlement and land acquisition
- illegal occupant in PLN land
- impacts on IPs, including impact on customary land
- exclusion of IPs and vulnerable peoples in the consultation process

Construction: (Please consider a possible hybrid project scheme e.g. with diesel)

- Site preparation and land clearance;
- Emissions from construction vehicles;
- Particulate matter and erosion;
- Alteration to drainage channels;
- Habitat loss and land degradation;
- Access road construction and habitat fragmentation;
- Transmission line construction and habitat fragmentation;
- Noise and vibration; and
- Construction of labour camps and waste management.
- Sexual exploitation and abuse, STI and HIV/AIDS
- Connection with the diesel generators – secondary containment for diesel storage 110% of its volume is required.

Operations

- Minor NOx, SOx, CO, VOCs and GHG emission;
- Particulate matter;
- Particulates in transfer and storage;
- Water use for cooling and washing;
- Solid and liquid waste;
- Chemical spills; for the hybrid system using diesels.
- Hazardous waste from used battery handling;
- Storage and transport of fuels and replacement of panels;

Occupational Health;

- Heat;
- Working at height;

	<ul style="list-style-type: none"> ○ Electrical hazards; ○ Exposure to toxic metals and chemicals; and ○ Falling materials. ○ Flammable materials handling for workers <p>Community Health and Safety</p> <ul style="list-style-type: none"> ○ Spread of disease; ○ Electrical hazards ○ Exposure to hazardous materials; flammable materials ○ Labor influx; and ○ Sexual exploitation and abuse. <p>Decommissioning</p> <ul style="list-style-type: none"> ○ Hazardous waste. ○ Diesel storage ○ Clean up of the contaminated site
Transmission Lines	<p>Pre-Construction:</p> <ul style="list-style-type: none"> ○ Resettlement and land acquisition ○ Illegal occupant in PLN land ○ Impacts on IPs, including impact on customary land ○ Exclusion of IPs and vulnerable peoples in the consultation process <p>Construction:</p> <ul style="list-style-type: none"> ○ Waste generation; ○ Soil Erosion; ○ Fugitive dust and other emissions, such as construction vehicles; ○ Noise pollution; ○ Hazardous materials such as oil spills.; ○ Habitat alteration (terrestrial as well as aquatic); ○ Electric magnetic fields; ○ Hazardous Materials; ○ Right of way construction causing habitat fragmentation, and loss of wildlife habitats; ○ Introduction of non-native invasive species; ○ Visual and noise disturbance by maintaining equipment in that locality. ○ Worker camps and associated waste; ○ Impacts of construction of bridges, and roads for access on aquatic habitats (both in construction and maintenance phases).; and ○ Impacts from laying ocean cables on seagrasses, localized plumes and impacts on coral areas. ○ Sexual exploitation and abuse, STI and HIV/AIDS <p>Operational issues:</p> <ul style="list-style-type: none"> ○ Maintenance of rights of way vegetation controls in the form of land clearance. ○ Overhead risks to birds and bats; ○ Hazardous materials Sulfur Hexafluoride (SF6); ○ Fuels for construction vehicles; and ○ PCBs' handling and disposal for retrofitting old transmission lines.

	<p>Occupational Health Considerations:</p> <ul style="list-style-type: none"> ○ Live Power; ○ Working at Height; ○ Electrical hazards; ○ Falling materials; ○ Electric magnetic fields; and ○ Chemical exposure. <p>Community Health:</p> <ul style="list-style-type: none"> ○ Electrocutation; ○ Electromagnetic interference; ○ Visuals, noise and ozone; ○ Aircraft navigation; ○ Labor influx; and ○ Sexual exploitation and abuse.
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VI. Generic Requirements for Environmental and Social Management and Monitoring Plan

As part of the scope of work, the assessment will include initial assessment on potential environmental and social impacts of the project based on recent and available data of the baseline conditions and recommendation of mitigation measures that will be presented in a typical Environmental and Social Management Plan and Environmental and Social Monitoring Plan. These mitigation measures may also include recommendations for additional studies. These impact assessment and mitigation measures will feed into the development of detailed ESMP to be prepared by other consultant.

- a. Introduction

An overview of the project investment and the proponent including information such as i) project investment name and general description; ii) background; iii) objectives of the ESMP.
- b. Policy and Legal Framework

Brief outline relevant policies, guidelines and laws and regulations that apply to the identified project investment and the approvals that need to be obtained from different government agencies.
- c. Project description and Justification
 - Brief description of the development proposal including project investment location and footprint (including maps), a summary of key design features, resource requirements and source, predicted type and quantify of waste outputs, workforce size and accommodation, and implementation schedule;
 - Brief justification including benefits accruing to the local area, island, country or region; and project investment relevance in light of local or national development needs
- d. Description of the area of the identified project investment

A brief description of the environmental, socio-economic and cultural characteristics relevant to the project investment and its area of influence (i.e. focus on sensitive receptors).
- e. Process for reviewing/assessing environmental and social risks relating to technical advisory;
- f. A summary of consultation, stakeholder engagement, and information dissemination activities during the ESMP process and including general issues raised, and responses to those issues.
- g. Summary of environmental and social risks and impact assessment results (based on the preliminary E&S assessment that carried out as part of the FS). When the available information is not sufficient, further efforts may be required to obtain the necessary assessment of significant environmental and

social risks and impacts.

- h. IPs risk and impact assessment with the provisions equivalent to IPP.
- i. Identification of measures and actions in accordance with the mitigation hierarchy that reduce potentially adverse environmental and social impacts to acceptable levels. The ESMP will include compensatory measures, if applicable. Specifically, this section will include:
 - (i) identifies and summarizes all anticipated adverse environmental and social impacts (including those involving indigenous people or involuntary resettlement);
 - (ii) 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;
 - (iii) estimates any potential environmental and social impacts of these measures; and
 - (iv) takes into account, and is consistent with, other mitigation plans required for the project (e.g., for involuntary resettlement, indigenous peoples, or cultural heritage).

The impact mitigation measures will be concluded in the environmental and social mitigation plan matrix.

- j. Identification of monitoring plan and reporting activities. This will include identify monitoring objectives and specify 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) 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 (b) monitoring and reporting procedures to (i) ensure early detection of conditions that necessitate particular mitigation measures, and (ii) furnish information on the progress and results of mitigation. The monitoring plan will be concluded in a matrix.
- k. Procedures for inclusion of the ESMP requirements in bid documents;
- l. 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).
- m. Capacity building plan: To strengthen institutional environmental and social management capability, the ESMP recommends the establishment or expansion 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.
- n. Labor Management Plan, including an assessment of the potential labor management requirements under the project investment will be carried out. This assessment will include reviewing the existing national laws and regulations for consistency with the objectives and requirements under the ESS2.
- o. Grievance Redress Mechanism
- p. Chance Finds Procedure
- q. Estimation of Schedule and Budget for implementation
- r. Supporting data/information

Recommended template for Environmental Management Plan

	Project Activity	Potential Environmental/Social Impacts	Proposed Mitigation Measure(s)	Success Indicator(s)	Location of mitigation measure(s)	Period and Frequency of Mitigation	Institutional Responsibilities (incl. Enforcement and coordination)	Cost Estimates for Implementation
Pre-Construction Phase	1) 2) 3)							
Construction Phase	1) 2) 3)							
Operation and Maintenance Phase	1) 2) 3)							
Decommissioning phase (if applies)	1) 2) 3)							

Recommended template for Environmental Monitoring Plan

Proposed Mitigation Measure	Parameters to be Monitored	Location	Measurements (incl. Methods & equipment)	Frequency of Measurement	Responsibilities (incl. review and reporting)	Cost (equipment & individuals)
Pre-Construction Phase						
Construction Phase						
Operation and Maintenance Phase						
Decommissioning phase (if applies)						