

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

VOLUME 1: FRAMEWORK

For The
Indonesia Disaster Resilience Initiatives Project (IDRIP)

Prepared By

The National Disaster Management Agency (BNPB)
and The Indonesia Meteorological, Climatology and
Geophysics Agency (BMKG) **Republic of Indonesia**



AUGUST 2020

Acronyms and Abbreviations

AWP	Annual Working Plan (Rencana Kerja Tahunan)
Babinsa	<i>Bintara Bina Desa</i> (Grassroot/village level Indonesian army)
BASARNAS	<i>Badan Nasional Pencarian dan Pertolongan</i> (National Search and Rescue Agency)
BIG	<i>Badan Informasi Geospasial</i> (Geospatial Information Agency)
BMKG	<i>Badan Meteorologi, Klimatologi, dan Geofisika</i> (Indonesian Meteorology, Climatology and Geophysics Agency)
BNPB	<i>Badan Nasional Penanggulangan Bencana</i> (National Disaster Management Authority)
BPBD	<i>Badan Penanggulangan Bencana Daerah</i> (subnational disaster management agency)
BPPT	<i>Badan Pengkajian dan Penerapan Teknologi</i> (Agency for the Assessment and Application of Technology)
CPMU	Central Project Management Unit
DESTANA	<i>Desa Tangguh Bencana</i> (Resilient Village – a community-based disaster preparedness program)
ES COP	Environmental and Social Code of Practice
ES CP	Environmental and Social Commitment Plan
ES F	Environmental and Social Framework
ES HS	Environmental, Social, Health, and Safety
ES MF	Environmental and Social Management Framework
ES MP	Environmental and Social Management Plan (<i>Upaya Pengelolaan Lingkungan Upaya Pemantauan Lingkungan – UKL-UPL</i>)
ES S	Environmental and Social Standard
FGRM	Feedback and Grievance Redress Mechanism
GESI	Gender Equality and Social Inclusion
GIIP	Good International Industry Practice
GOI	Government of Indonesia
IDRIP	Indonesia Disaster Resilience Initiatives Project
IPC	COVID-19 Infection Prevention and Control
IPP	Indigenous Peoples Plan
IPPF	Indigenous Peoples Policy Framework
KATANA	<i>Keluarga Tangguh Bencana</i> (Resilient Family – family-based disaster preparedness program)
KIP	Keterbukaan Informasi Publik (Public Information Disclosure Law)
LARPF	Land Acquisition and Resettlement Policy Framework
LMP	Labor Management Procedure
MHEWS	Multi-Hazard Early Warning Systems
PIU	Project Implementation Unit
PPID	<i>Pejabat Pengelola Informasi dan Dokumentasi</i> (Information and Documentation Unit)
RP	Resettlement Plan

RPF	Resettlement Policy Framework
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
TNI	<i>Tentara Nasional Indonesia</i> (the Indonesian armed forces)
VAC	Violence Against Children
WBG	World Bank Group

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Executive Summary

1. Introduction

The Indonesia Disaster Resilience Initiatives Project (IDRIP) is a World Bank-financed project implemented by the National Disaster Management Authority (BNPB) and the Indonesian Agency for Meteorology and Climatology (BMKG). The project's development objective is to enhance preparedness of the central and selected local governments for future natural hazards. IDRIP will finance critical investments and capacity building priorities for a Multi-Hazard Early Warning System (MHEWS) platform and local emergency management systems, with a focus on geophysical early warning services.

IDRIP has three components:

1. Component 1: Disaster preparedness and emergency management capacity
2. Component 2: Geophysical early warning services
3. Component 3: Project implementation support

Each component includes sub-components and a range of activities such as technical studies, procurement of equipment, civil works, and consulting services. The management and mitigation of the environmental and social risks of these activities need to be aligned with the relevant Environmental and Social Standards (ESSs) under the World Bank's Environmental and Social Framework (ESF). During the project's appraisal and negotiations, the government agreed to certain actions outlined in the project's Environmental and Social Commitment Plan (ESCP). As agreed in the ESCP, BNPB and BMKG have prepared this Environmental and Social Management Framework (ESMF) to assess and mitigate potential environmental and social risks associated with activities/sub-projects funded by IDRIP.

In terms of the legal framework, the majority of national regulations and Standard Operation Procedures (SOPs) of BNPB and BMKG are generally aligned with the ESF, with gap filling measures outlined in the ESMF. IDRIP applies the following ESSs:

- ESS 1 Assessment and Management of Environmental and Social Risks and Impacts
- ESS 2 Labor and Working Conditions
- ESS 3 Resource Efficiency and Pollution
- ESS 4 Community Health and Safety
- ESS 5 Land Acquisition, Restriction on Land Use and Involuntary Resettlement
- ESS 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources
- ESS 7 Indigenous Peoples
- ESS 8 Cultural Heritage
- ESS 10 Stakeholder Engagement and Information Disclosure

2. Environmental and Social Management Framework

This ESMF has been prepared by the National Disaster Management Authority (BNPB) and the Indonesian Meteorology, Climatology, and Geophysics Agency (BMKG) and consists of two volumes:

- **Volume 1: Framework** (Main ESMF Report – this document) – identifies and defines project typologies, assesses the national legal framework for the management of environmental and social aspects, identify gaps in the legal framework, analyzes potential environmental and social impacts of the project/sub-projects, provides guidance for sub-project screening and mitigation measures, and establishes the institutional arrangements; and
- **Volume 2: Implementation Guidelines** (ESMF Appendices – Assessment and Implementation Tools) – provides relevant instruments to address the identified key potential environmental and social risks and impacts of the project in accordance with the applicable ESSs. In addition, a Stakeholder Engagement Plan (SEP) has been prepared and updated to guide the overall management of stakeholder engagement, particularly target communities in disaster-prone areas, and will be used as a reference for the project implementation.

Volume 1 of the ESMF consists of a series of environmental and social management principles, mitigation measures, and instruments that are applicable to activities being financed by IDRIP and are intended to manage potential environmental and social risks. This framework consists of two main processes: 1) environment and social screening processes; and 2) preparation of relevant sub-project environment and social management instruments, namely among others sub-project Environmental and Social Management Plan (ESMP), Land Acquisition and Resettlement Policy Framework (LARPF), Chance Finds Procedure (CFP), Indigenous Peoples Plans (IPP), Labor Management Plan (LMP) and Project Strategy and Action Plan for Sexual Exploitation and Abuse (SEA) and Violence against Children (VAC).

All project activities will perform environmental and social screening, which include:

1. Negative Lists
 - BNPB and BMKG will ensure that the proposed activities under IDRIP are not within the category of investments in the Negative List (refer Annex 2 of Vol 2). Under all circumstances, any proposed activity on the Negative List should not proceed to the next step. A negative list for procurement will be included in the bidding documents.
2. Screening against an Environmental and Social Management Checklist
 - On the basis of the Negative List screening, the Environmental and Social Management checklist guides PMUs in identifying required risk/impact-mitigation action plans. It serves as a tool for the Central Project Management Unit (CPMU) and PMUs to recognize environmental and social risks of planned activities; affected communities, including identification of the presence of Indigenous peoples, other vulnerable groups, and people in remote areas; the presence of

cultural sites and heritages; as well as potential land acquisition and restrictions to land uses.

3. Implementation Arrangements and Feedback and Grievance Redress Mechanism

Implementation arrangements for IDRIP

The ESMF implementation arrangements are designed to ensure that all key parties understand their responsibility in implementing the safeguard screening process as well as preparing relevant instruments for mitigating negative impacts. All activities which may generate environmental and social impacts must follow ESMF guidance. Once potential impacts have been identified, the relevant action plans will be prepared.

The implementation arrangement reflects an integrated approach to environmental and social management under the project, where BNPB is the CPMU, and BNPB and BMKG are both PMUs for Component 1 and 3, and Component 2, respectively. As the coordinator, BNPB is responsible for compiling information related to environmental and social assessment, mitigation, and incidents (if any) during implementation for all project activities and reporting to the World Bank. BNPB, in their role as PMU, also manages, compiles and reports activities under Components 1 3, whilst BMKG in their role as PMU is responsible to manage, compile and report activities under Component 2 to the CPMU (BNPB). Any cost related to of the management, coordination and implementation of this ESMF implementation will be covered by project financing under IDRIP – under Component 3 for BNPB and Component 2 for BMKG.

The environmental and social management team is responsible for monitoring and evaluation, reporting, and documenting the implementation of the ESMF, as well as for addressing issues related to environmental and social management. An ESMF implementation report will form part of the IDRIP progress report submitted to the World Bank.

In collaboration with the CPMU and PMUs, the World Bank environmental and social management team will review the documentation to assess compliance to the provisions in the ESMF. The WB will provide technical support to BNPB and BMKG as needed to assist with implementation of the ESMF.

Feedback and Grievance Redress Mechanism (FGRM)

Feedback and grievance procedures will include performance standards, e.g., agreed and established mechanisms to receive, respond to, and document complaints and feedback (*'sistem penanganan keluhan'*) related to IDRIP activities, as well as agreed timeframe for PMUs to respond to complaints. A project-specific FGRM will be developed and provided to any project-affected people, communities, and project workers (e.g., government staff, consultants, contractors, and local facilitators). The project will ensure that this system is accessible and consider measures to protect confidentiality and safety of individuals.

Since the nature of activities under each component of IDRIP is different and will be managed by two agencies, there will be two separate FGRMs: one for BNPB (related to Component 1 and 3) and one for BMKG (related to Component 2), as further detailed in the document. This system will enhance the existing system within the implementing agencies.

4. Supervision, Monitoring, and Evaluation

Supervision, monitoring and evaluation of environmental and social management will be performed by different levels of organisations responsible for the implementation of IDRIP:

1. Central Project Management Unit (CPMU), or BNPB
2. Project Management Units (PMUs), which include BNPB and BMKG
3. Project Implementation Units (PIUs), which include Directorates in BNPB and BMKG who will implement activities under each Sub-Components

The CPMU shall conduct regular supervision and monitoring of implementation of the environmental and social management performance; and report periodically on findings as part of overall IDRIP project progress reporting to the World Bank.

The PMUs oversee supervision, monitoring and evaluation of the ESMF implementation of the activities carried out by the various implementation parties including project staff, consultants, contractors, and community facilitators.

The PIUs shall report the ESMF implementation from all activities that have been conducted by the various implementation parties including project staff, consultants, contractors, and community facilitators to PMU.

The World Bank will conduct regular project implementation support missions to provide technical capacity building; review the implementation of agreed environmental and social management actions; and recommend follow-up actions to the CPMU and PMUs.

5. Capacity building

Capacity development for environmental and social management implementation should include: (i) an institutional development strategy and organizational framework to manage risks on target communities and affected areas; (ii) recruitment of requisite specialists, including environmental and social specialists at the CPMU and PMU levels, (iii) workshops and training programs conducted by BNPB and BMKG lead by the specialists and financed under Component 3 to build capacity in the implementation of environmental and social management of the project.

The World Bank will monitor and provide guidance on the implementation of the agreed capacity building program; and relevant sub-project environmental and social action plans.

6. Public Consultation and Information Disclosure

The project's agreed Stakeholder Engagement Plan (SEP) will be updated at least annually to capture current concerns and feedback from IDRIP-relevant stakeholders. The SEP outlines the broad terms of stakeholder engagement under the project, including for this ESMF. The CPMU and PMUs will make the draft and final version of ESMF publicly available, through online and offline media, both in Bahasa Indonesia and English. The ESMF document including action plans included herein will be disclosed on BNPB and BMKG websites as well as in the World Bank Image Bank.

Project public consultation and ESMF document presentation have been conducted virtually on Tuesday, 14 July 2020 through Zoom platform with 152 participants and online survey participation with 90 respondents from national and local ministry/institution, non-government organization and universities. During project implementation, further project consultations and community engagement at the national and subnational levels will be undertaken as part of the project activities. Such consultations and engagement are intended to allow public feedback on the project implementation, including its risk management aspects. Relevant stakeholders will include government agencies at the national and local levels, representative of affected communities, representative of indigenous communities, academics, non-government organizations (NGOs), civil society organizations (CSOs), and the media. Further details on the Public Consultations are presented in the project SEP.

Furthermore, due to the on-going COVID-19 pandemic, this project has planned a consultation procedure that has been adjusted to COVID-19 infection prevention regulation based on relevant guidance and protocols taken from the World Bank's ESF/Safeguards Interim Note: COVID-19 Considerations In Construction/Civil Works Projects and The Ministry of Public Works and Housing Instructions No. 02/IN/M/2020 on Protocol for Preventing the Spread of Corona Virus Disease 2019 (COVID-19) In Construction Services. Public consultations could be conducted virtually to overcome limitations in convening direct interactions with stakeholders. Further detail on this matter shall refer to Annex 13 of Vol 2.

7. Budget and Financing

IDRIP financing will support implementation of this ESMF and related activities such as monitoring, evaluation, supervision, documentation, dissemination, and capacity building.

Costs related to the provisions of the ESMF will include:

- Recruitment of requisite environmental and social specialists, and additional specialists and community facilitators based on project needs;
- Establishment/appointment of a dedicated environmental and social management team including appropriate personnel and grievance focal points in the CPMU and PMUs.

- Preparation of sub-project environmental and social management instruments (i.e., UKL-UPL, LARPF, IPP, additional TOR for technical assistance, Communication Strategy, FGMR enhancements, etc.) at activity/sub-project preparation stage;
- Monitoring and oversight of environmental and social aspects, covering operational costs, technical assistance, and reporting;
- Capacity building for the implementation and monitoring of environmental and social management and;
- Other costs associated with the overall environmental and social management that may be incurred during project implementation.

Chapter 1: Introduction and Project Description

A Background

In 2018, Indonesia experienced the most loss of life in over a decade caused by natural disasters, particularly from three major catastrophic events. First, in July and August 2018, a series of earthquakes in West Nusa Tenggara (NTB) affected the island's population of around 3.5 million, as well as thousands of tourists. The National Disaster Management Authority (BNPB) reported that the earthquakes caused 561 fatalities and displaced over 396,000 people, damaging almost 110,000 houses, 663 schools, 52 health facilities, 6 bridges, and many roads. Second, in September 2018, a M7.5 earthquake with an epicenter located 81 kilometers north of Palu City in Central Sulawesi caused strong ground shaking and tsunamis that damaged coastal settlements along Palu Bay. This disaster caused an estimated 4,402 fatalities and displaced almost 165,000 people. Third, in December 2018, the eruption and subsequent partial collapse of Anak Krakatau Volcano led to a tsunami that affected coastal settlements in Banten and Lampung provinces along Sunda Strait, causing 437 fatalities, and displacing almost 34,000 people.

The Government of Indonesia is implementing the Indonesia Disaster Resilience Initiatives Project (hereafter IDRIP) through the National Disaster Management Authority (BNPB) and the Indonesian Agency for Meteorology and Climatology (BMKG) as part of a systematic effort to enhance the preparedness of the central government and select subnational governments for future natural hazards. Apart from geophysical hazards, Indonesia is also highly vulnerable to hydro meteorological disasters, which are projected to increase with climate change. Expected sea level rise, changing precipitation patterns, and more intense storms will increase disaster risks across Indonesian metropolitan and urban areas. Sea level rise could threaten 42 million Indonesians who live less than 10 meters above sea level. The sheer scale of Indonesia, with over 17,000 islands, a population of over 250 million, and a geographic diversity spread over 34 provinces and 514 districts, and the multiplicity of disaster risks, requires significant investments and long-term commitments—including through support under IDRIP—to improve multi-hazard early warning systems (MHEWS). In addition, the GoI established an inter-agency working group led by BAPPENAS to develop the *Central Sulawesi Earthquake and Tsunami Post-Disaster Recovery and Reconstruction Master Plan* to serve as a guiding document to stipulate agreed policies and strategies for the recovery of disaster-affected areas. Key objectives of IDRIP are aligned with this Master Plan such as increasing community preparedness against future disasters, establishing early warning systems, and capacity building initiatives. For the sustainability of this project and to conduct an effective disaster management, Pentahelix elements including the government, communities, private sectors, academics, and media will be involved and contributed as its functions and capacities accordingly.

B Project Description

IDRIP will finance critical investments and capacity building priorities for a MHEWS platform and local emergency management systems to enhance preparedness for future disaster events, supporting central and local level government and communities. The Project Development Objective (PDO) is to improve the preparedness of central government and selected local governments for natural hazards. Following the series of catastrophic events in 2018, IDRIP will finance immediate needs for restoration of emergency preparedness and early warning functions in areas affected by recent disasters including West Nusa Tenggara, Central Sulawesi and areas along Sunda Strait. At the national level, the project will help BNPB and its institutional partners to refine the technical design of the MHEWS platform in preparation for further investments, complementing capacity building and technical advisory support by other development partners in this sector (including Australia, Japan, New Zealand, and the United States of America). IDRIP will finance the supporting systems, downstream communication, and instrumentation needed for preliminary strategic investments to help establish the MHEWS platform; and provide support to BNPB, selected subnational disaster management agencies (BPBDs) and communities for improved last-mile communication, starting with the areas affected by the 2018 disasters and followed by identified priority high-risk areas. The project is built upon three components as summarized below.

i. Component 1: Disaster preparedness and emergency management capacity

This component will be implemented by BNPB and strengthen the capacity of the government of Indonesia (GoI) and communities to better prepare for, and respond to, future natural disasters. Activities include:

- Sub-component 1.1 – **Disaster risk knowledge and awareness** will increase knowledge, understanding, and awareness of disaster risk and climate change risks, promoting risk reduction behaviour and climate change adaptation measures to better prepare Indonesians against future natural and climate-related hazards, and inform analyses for the multi-hazard early warning system platform. The project will support: (a) development and integration of multi-hazard risk mapping and modelling to support national and subnational disaster risk management; (b) development of an integrated disaster knowledge and information management and data analysis system; and (c) studies and pilots for the use of innovative technologies for awareness building and outreach programs, including inclusive (accessible and gender-sensitive) considerations.
- Sub-component 1.2 – **Multi-hazard early warning system platform development** will support preparation activities for Indonesia's MHEWS multi-sectoral platform by increasing or developing new capabilities for integrated hazard detection and public warnings system. This will include feasibility studies, detailed development plans, and technical design for MHEWS platform in collaboration with key partner ministries and agencies. The project will support: (a) designing the institutional and regulatory frameworks related to MHEWS with clear roles and responsibilities of all stakeholders;

(b) establishing and operating a national MHEWS coordination platform and implementation through system integration and decision support systems; (c) establishment of data centers and communication networks; and (d) development of trainings and exercises for operating an integrated information technology platform.

- Sub-component 1.3 – **Hazard information and early warning dissemination** will provide support to development of disaster warning information dissemination systems and last mile communication to end users that is timely, accurate, inclusive, understandable, and can be used as a basis for action by the general public, government, and other stakeholders. This will support efforts to save lives, restore economic assets, protect the environment, and ensure business continuity in related sectors. The generated early warning information will serve communities and other relevant stakeholders—such as those managing critical infrastructure and facilities (telecommunications, electricity, transportation), business sector, and others—to be able to take informed actions to reduce the impacts of natural hazards. The project will support: (a) development of an early warning information dissemination system including liaison and portal service system; (b) strengthening dissemination capacities through national and subnational emergency operations centers (EOCs) responsible for early warning and alerts dissemination, and through mobile application platforms; and (c) upgrading and construction of new EOCs, upgrading emergency management information systems, information receiving systems, mass public alert systems for rapid-onset high-risk events, as well as acquisition and installation of communication equipment
- Sub-component 1.4 – **Emergency management, response, and preparedness capacities** will enhance the capacity at subnational levels (starting with the districts affected by the 2018 disasters and prioritized high-risk districts) and communities to manage and prepare for future disaster events, as well as to integrate disaster risk and early warning information in the decision-making process. The project will support: (a) development of improved Standard Operating Procedures (SOPs), local emergency response plans, and streamlining of emergency management processes, especially for tsunami hazard there will be evacuation plans using 1:5000 scale maps and will be implemented directly to Detail Spatial Plan (*Rencana Detail Tata Ruang*, RDTR); (b) capacity building activities such as training of local BPBDs and local key actors involved in disaster response; (c) village and community preparedness planning; and (d) community-based resilience measures (e.g., disaster risk information dissemination, community awareness initiatives, and nature-based measures).

ii. Component 2: Geophysical early warning services

This component will be implemented by BMKG and support GoI to advance its services toward impact-based information services through the strengthening of monitoring capacity for geophysical hazards, development of impact-based forecast and warning products, and institutional strengthening and capacity development. This component will also finance urgently needed support to local governments to restore early warning functions, including

restoration, upgrading and/or replacement of damaged instrumentation in Central Sulawesi, West Nusa Tenggara, and along Sunda Strait. Activities include:

- Sub-component 2.1 – **Service delivery systems**. This sub-component will support (a) development and delivery of impact-based forecast and warning products for earthquake and tsunami hazards; (b) technical guidelines for emergency operations based on BMKG’s warning services; (c) enhancement of service delivery systems and user feedback mechanisms; and (d) development of impact-based decision support systems.
- Sub-component 2.2 – **Monitoring networks and early warning capacity**. This sub-component will support: (a) improvement of seismological information monitoring services through procurement and installation of seismological instrumentation (e.g., short-period, broadband, and strong-motion); (b) feasibility studies and development of earthquake early warning system prototypes; (c) facilitation of seismic data exchange and long-term data archiving; and (d) upgrading of seismic data processing systems and tsunami modeling and local forecast processing through high-performance computing
- Sub-component 2.3 – **Institutional strengthening and capacity development**. This sub-component will support: (a) technical assistance to advise on institutional strategic plans such as planning for development of new geophysical impact products; (b) development of socioeconomic assessments of BMKG’s geophysical early warning services; and (c) capacity development activities.

iii. Component 3: Project Implementation Support

BNPB is the Executing Agency (EA) for IDRIP, with day-to day project management and project coordination under a Central Project Management Unit (CPMU). Project Management Units (PMUs) will be established for each component of the Project: BNPB (for Component 1) and BMKG (for Component 2). Component 3 will be implemented by BNPB to support project implementation through the recruitment of consultants that will help coordinate and implement IDRIP, and to transfer responsibilities in the longer term to BNPB staff, thereby building institutional capacity to manage multilateral financing operations.

This component will assist BNPB on policy support, project implementation oversight and reporting, including strengthening of the Central Project Management Unit (CPMU), Project Implementation Units (PMUs) and Steering Committee Secretariat to coordinate implementation of the project at the national and subnational levels. The project will support: project management, procurement, financial management activities, technical audits, development of technical specifications, oversight of compliance with agreed social and environmental standards, oversight of compliance with social inclusion targets (e.g., gender and disability action plans), monitoring and evaluation activities, and the establishment and operation of a Technical Advisory Committee to review technical designs, outputs and findings.

A matrix outlining the project typology along with an analysis of potential environmental and social risks and impacts and their respective mitigation measures is presented in Chapter 3 on Assessment and Mitigation of Environmental and Social Risks.

C Environmental and Social Management Framework

The World Bank's Environmental and Social Framework (ESF) and its Environmental and Social Standards (ESSs) will apply to IDRIP activities in order to avoid, minimize, reduce or mitigate the environmental and social impacts and risks that may arise in the project. As part of the requirements under the ESF, a project-specific Environmental and Social Commitment Plan (ESCP) was developed and agreed by the government to set out measures and actions for the project to achieve compliance with the relevant ESSs over a specified timeframe (see further details in Chapter 2). A key action of the ESCP includes a project-specific Environmental and Social Management Framework (ESMF) to be developed as a requirement for project effectiveness and hiring of requisite environmental and social specialists. The ESMF and/or relevant sections in the Project Operations Manual (POM) shall be updated as needed during project implementation.

The Environmental and Social Management Framework (ESMF) outlines the principles, relevant policies, procedures and institutional arrangements to screen, assess, plan and implement the required measures to ensure that the preparation and implementation of IDRIP project activities do not cause, or can minimize adverse environmental and social impacts.

It is necessary to identify potential environmental and social risks and impacts early to enable proper design of project activities along with risk and impact mitigation measures. The ESMF is built on the relevant environmental and social framework in Indonesia (refer Chapter 2), with supplemental measures being incorporated to meet the Environmental and Social Standards (ESSs) as established in the World Bank's Environmental and Social Framework (ESF) that is applicable to this project.

Specific details and locations of project investments will be confirmed during project implementation. As such, a framework approach is established for the project design to guide the overall management of environment and social aspects of the project activities.

The ESMF covers both environmental and social impacts of project activities, such as managing public order as a result of disaster warning, small¹ to medium² scale infrastructure

¹ Small scale infrastructure is defined as construction of Seismic Stations with land size of up to 100 m² (10x10 m) that houses seismic equipment: seismometer, accelerometer, digitizer, communication equipment and GPS receiver, power supply system (regulator, back-up batteries, solar panel), and storage area. Seismic Stations may be constructed inside forest or non-forest (urban) areas.

² Medium scale infrastructure is defined as the renovation and/or re-construction of multi-story building on land owned by BNPB and/or BMKG.

and civil works (including testing of equipment); and impacts related to associated facilities, which may complement project investments. The management of the latter is described in Section D.

This ESMF has been prepared by the National Disaster Management Authority (BNPB) and the Indonesian Meteorology, Climatology, and Geophysics Agency (BMKG) and consists of two volumes:

- **Volume 1: Framework** (Main ESMF Report); and
- **Volume 2: Implementation Guidelines** (ESMF Appendices – Assessment and Implementation Tools).

Volume 1, this document, identifies and defines project typologies, assesses the national legal framework for the management of environmental and social aspects, recommends sub-project screening processes, identifies gaps in the legal framework, analyses potential environmental and social impacts of the project/sub-projects, outlines proposed mitigation measures, and establishes the institutional arrangements.

Volume 2 provides relevant instruments to address the identified key potential environmental and social risks and impacts of the project in accordance with the applicable ESSs. In addition, a Stakeholder Engagement Plan (SEP) has been prepared and updated to guide the overall management of stakeholder engagement, particularly target communities in disaster-prone areas, and should be used as a reference to the ESMF.

This ESMF applies to all components and activities financed by IDRIP including any *associated facilities* (refer Chapter 3). The purpose of the ESMF is to outline how all project stakeholders shall comply with the requirements, procedures and regulations related to environmental and social management in accordance with the prevailing GoI regulations and supplemental provisions of this ESMF in order to fully comply with relevant World Bank ESSs. Specifically, the objectives of the ESMF include:

1. Identify and define project typologies that are eligible to be supported under IDRIP through a screening process.
2. Identify and assess the potential environmental and social impacts of proposed project and sub-project activities.
3. Establish clear standards, procedures and methodologies to guide environmental and social management proportional to risk classification according to the mitigation hierarchy. This includes information disclosure requirements, Feedback and Grievance Redress Mechanism (FGRM), risk oversight and their respective institutional and implementation arrangements.
4. Specify appropriate roles and responsibilities of identified stakeholders and outline the necessary reporting procedures for environmental and social management and monitoring.

5. Determine the training, capacity building measures and technical assistance needed to implement the provisions of the ESMF and associated instruments successfully.
6. Establish a budget for the implementation of the ESMF and associated instruments.

D Limitations

The ESMF does not intend to provide specific action plans for the management of environmental and social aspects of the project since specific activities and implementation will be determined during project implementation. Further procedures guiding management of specific risks and/or impacts will be developed in the sub-project level Environmental and Social Management Plans (ESMPs). This includes potential changes to the project design provided that the general framework and procedures outlined in this ESMF are still relevant.

Furthermore, since IDRIP's geographical focus will be in disaster-prone regions across Indonesia, public consultations for the project's ESMF will be undertaken at the national level and select disaster-prone regions/districts/provinces (exact locations are to be determined). Further consultations at the sub-project level will be undertaken as part of IDRIP implementation in the project's target areas.

Chapter 2: Legal, Policy, and Regulatory Framework

IDRIP activities must be implemented in accordance with the principles of sustainable development, including environmental, social, cultural, and economic considerations, per the GoI's laws and regulations and applicable World Bank's ESSs. Further assessment of the country framework compatibility with the ESSs is presented in this Chapter along with agreed measures to address potential gaps.

A National Policies

This section describes policies and regulations applicable in Indonesia at the time of ESMF preparation, highlighting those that serve as guidelines for managing environmental and social impacts relevant to the sectors supported by IDRIP.

Relevant national policies are listed in *Table 1* and further assessment of their compatibility with the applicable ESSs is presented in Section C.

Table 1. National regulations related to environmental and social risks management

Issue	Policy	Concerning
Guidelines for managing environmental impacts arising from a project/activity	Law No. 32 of 2009	Environmental Protection and Management
	Government Regulation No. 27 of 2012	Environmental Permit
	Regulation of the Minister of Environment No. 16 of 2012	Guidelines for the Preparation of Environmental Documents
	Regulation of the Minister of Environment No. 38 of 2019	Types of Business Plans and/or Activities that Require EIA (AMDAL)
	Regulation of the Minister of Public Work No. 10/PRT/M/2008	Establishment of Types of Business Plans and/or Activities that Require Environmental Management and Monitoring Efforts (UKL-UPL) document
Land Acquisition and Involuntary Resettlement	Law No. 2 of 2012	Land Acquisition for Development in Public Interest
	Basic Agrarian Law No. 5 of 1960	Basic provisions concerning fundamentals of agrarian affairs
	Presidential Regulation No. 71 of 2012	The Implementation of Land Acquisition for Development in the Public Interest
	Presidential Regulation No. 62 of 2018	Handling for Social Impacts in Land Acquisition for the Public Interest
	Regulation of the Head of National Land Agency of the Republic of Indonesia No. 3 of 2007	Provisions for the Implementation of Presidential Regulation No. 36 of 2005 concerning Land Acquisition for Development in the Public Interest as amended by Presidential Regulation No. 65 of 2006 concerning Amendment of Presidential Regulation No. 36 of 2005
Environmental Pollution	Government Regulation No. 101/2014	Management of Hazardous Wastes

	Government Regulation No. 82/2001	Water Quality Management and Water Pollution Management
	Government Regulation No. 41/1999	Control of Air Pollution - specifies ambient air quality standards and emissions standards, as well as noise level standards
Human Rights and Social Welfare	Law No. 39 of 1999	Human Rights
	Law No. 11 of 2005	Ratification of the International Covenant on Economic, Social and Cultural Rights
	Law No. 11 of 2009	Social Welfare
	Law No. 7/1984	Ratification on the Elimination of All Forms of Discrimination Against Women (CEDAW).
	Presidential Decree No. 36/1990	Ratification of the Convention on the Rights of the Child's (CRC)
	Law No. 23/2002	Child Protection
Community Health and Safety	Law No. 32 of 2009	Environmental Protection and Management
	Law No.24 of 2007	Disaster Management
	Law No. 22 of 2009	Road Traffic
	Government regulation No. 32 of 2011	Management and Engineering, Impacts Analysis, and Traffic Needs Management, Requirement of ANDALALIN for projects with potential disturbance to security, safety, order, and flow of road traffic
Community Participation	Law No. 10 of 2004 in conjunction with Law No. 12 of 2011	Formulation of Legislation
	Regulation of the Head of BNPB No. 11 of 2014	Community Participation in Disaster Management
	Regulation of the Head of BNPB No. 13 of 2014	Gender Mainstreaming in Disaster Management
	Presidential Instruction No.9/2000	Gender Mainstreaming in National Development.
	Law No.8/2016	Persons with disabilities
Manpower and Labor Management	Law No. 13 of 2003	Manpower
	Law No. 1/1970	Occupational Health and Safety (OHS) management
	Ministry of Manpower Regulation No. 5/2018	Occupational Health and Safety (OHS) standards for workers and work environments
	Regulation of the Head of BNPB No. 14 of 2014	Handling, Protection and Participation of Persons with Disabilities in Disaster Management
Information Disclosure	Law No. 14 of 2008	Public Information Disclosure
Indigenous Peoples	Law No. 6 of 2014	Village Government
	Regulation of the Minister of Home Affairs No. 52 of 2014	Guidelines for Recognition and Protection of Indigenous Peoples

	Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of National Land Agency No. 9 of 2015	Procedures to Establish Communal Right on Indigenous Peoples' Land in Certain Area
Grievance Redress Mechanism	Regulation of the Head of BMKG No. 13 of 2016	Community grievance handling process and guidelines through direct and/or indirect reporting and grievance handling team responsibilities

B World Bank's Environmental and Social Framework (ESF)

The ESF³ consolidates the World Bank's environmental and social policies for Investment Project Financing (IPF) projects, including IDRIP. It is intended to boost protection for people and the environment; promote capacity and institution-strengthening and country ownership; and to enhance efficiency for both the GoI and the World Bank.

As part of the ESF, the GoI is responsible for implementing the ESSs. These standards are designed to help project implementing agencies manage project risks and impacts, and improve environmental and social performance, consistent with national and international obligations and good international practices. Each standard includes objectives that define the environmental and social outcomes to be achieved. They also include requirements that help the GoI achieve objectives of the ESS through means appropriate to the nature, scale and risks of a project. *Table 2* presents applicable ESSs for IDRIP. Specific provisions have been included in this ESMF to address relevant provisions in the following ESSs that are not and/or partially addressed under the Government's laws and regulations.

Table 2. The World Bank Environmental and Social Standards (ESS)

Standard	Concerning	Highlights
ESS1	Assessment and Management of Environmental and Social Risks and Impacts	ESS 1 sets out the Government's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the World Bank in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards.
ESS2	Labor and Working Conditions	ESS 2 recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. The Government 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 as encapsulated in the project's labor management procedures.
ESS3	Resource Efficiency and Pollution Prevention and Management	Requires technically and financially feasible measures to improve efficient consumption of energy, water, and raw materials, and

³ <https://www.worldbank.org/en/projects-operations/environmental-and-social-framework>

Standard	Concerning	Highlights
		introduces specific requirements for water efficiency where a project has high water demand
ESS4	Community Health and Safety	ESS 4 addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of the Government to avoid or minimize such risks and impacts, with particular attention to people who, because of their particular circumstances, may be vulnerable. Requirements related to project investments should take into account safety, climate change adaptation and universal access considerations where technically and financially feasible.
ESS5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Applies to permanent or temporary physical and economic displacement resulting from different types of land acquisition and restrictions on access, which requires community participation and consultation, disclosure of information and a grievance mechanism. 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), including timely compensation at replacement costs, grievance management, livelihoods restoration, and considerations of alternatives will be carefully planned and implemented
ESS6	Biodiversity Conservation and Sustainable Management of Living Natural Resources	ESS 6 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. ESS 6 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 project activities. ESS 6 sets requirements for management of modified habitats, natural habitats and critical habitats.
ESS7	Indigenous Peoples	Applies when the 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, which requires meaningful consultation tailored to affected parties and accessible grievance mechanism. ESS 7 ensures that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples. ESS7 is also meant to avoid adverse impacts and enhance benefits of projects on Indigenous Peoples, or when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.
ESS8	Cultural Heritage	ESS 8 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 both tangible and intangible cultural heritage throughout the project life-cycle. Tangible cultural heritage may be located in urban or rural 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

Standard	Concerning	Highlights
ESS9	Financial Intermediaries	Not relevant
ESS10	Stakeholder Engagement and Information Disclosure in the preparation of ESMF for this project.	ESS 10 recognizes the importance of open and transparent engagement between the Government 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. ESS 10 requires stakeholder engagement throughout the project life-cycle, and preparation and implementation of a Stakeholder Engagement Plan (SEP).

Further detailed information about the World Bank’s Environmental and Social Standards and their respective requirements can be found in **Annex 1** of this ESMF (Volume 2).

C Gap Analysis of National Policies and the World Bank’s Environmental and Social Framework

Indonesia has made sustained progress in enhancing its country system to address international good practices in environmental and social management. Despite a robust regulatory framework pertaining to environmental and social management, key gaps exist in areas related to law enforcement and local capacities on impact assessment and management, particularly on aspects such as OHS, community, health and safety, resource management, prevention of pollution, land acquisition, biodiversity management, and stakeholder engagement. Specific provisions where gaps were identified against the applicable ESSs are presented in **Table 3**. The gap assessment also outlines relevant gap-filing and capacity strengthening measures building on the country system.

In line with the Public Information Law (UU KIP), IDRIP will enhance the implementing agencies’ existing Feedback and Grievance Redress mechanism (FGRM), which includes ensuring dedicated and capable staff in charge of FGRM is on board. The project will also establish a clear and accessible grievance handling and documentation mechanism and strengthen community engagement at the project level. Gap filling measures such as among others land acquisition, particularly on risk management on vulnerable groups, including Indigenous Peoples, compensation for informal land users as a result of land acquisition (if any), SEA/VAC prevention, management of risks related to natural and critical habitats, will be mainstreamed as part of the overall project implementation.

Table 3 presents the identified gaps between GoI relevant laws and regulations and the requirements of the WB ESSs and how the environmental and social management of IDRIP activities will adopt additional measures to address these gaps.

Table 3. Gap identification of national policies with the World Bank's ESS

ESS Topics	Identified Gaps	Measures to Mitigate
ESS 1 – Assessment and Management of Environmental and Social Risks and Impacts. Generally, the relevant laws and regulations on the environmental and social risks and impacts assessment in Indonesia are aligned with the ESS. Identified minor gaps can be addressed directly in the project level planning and implementation		
Environmental and Social Assessment	<p>AMDAL, UKL-UPL and/or SPPL is based on threshold value while ESIA and EMP are based on magnitude of impacts.</p> <p>Indonesia has ratified CEDAW, and there is the Presidential Regulation on Gender Mainstreaming, which provides general guideline on no-violence and no-discrimination against women, and inclusion of women in development. Yet, it’s lacking reference to forms of violence and exclusions and no clear guideline on enforcement.</p>	<p>Environmental and social impact assessment follows the Bank requirements. Outline of Environmental Assessment documents acceptable to the Bank is provided in the ESMF (UKL-UPL and SPPL).</p> <p>Relevant measures addressing social risks are included as part of the ESMF, which include capacity building on gender and Sexual Exploitation and Abuse (SEA) and Violence Against Children (VAC) awareness along with relevant good practice guidelines to the implementing agencies.</p>
Reference to legal and administrative framework such as international environmental treaties, agreement, international standard policies etc	Lack of reference to legal and administrative framework such as international environmental treaties, agreement, international standard policies etc. The current regulation only refers to “other data and information”.	Covered by the Outline of Environmental Assessment documents in this ESMF
Project Area of Influence	Lack of analysis about project area of influence, associated facilities, induced impacts and site selection analysis.	Covered by the Outline of Environmental Assessment documents in this ESMF
Environmental Monitoring Data	<p>Insufficient follow up, analysis, use of environmental monitoring data for evaluation and continual improvement.</p> <p>The environmental monitoring program is not sufficient or is not corresponding to the scale of the impact of the project.</p>	Covered by subproject UKL- UPL implementation reports acceptable to the Bank
Capacity Development and Training	Required under the National Competitive Bidding (NCB) for Construction-ESMP, however, budget allocation for capacity development and training for ESMP implementation is often insufficient.	For the overall environmental and social management, budget for institutional strengthening and capacity building is included under the Component 3. IDRIP will require inclusion of fixed budget for environmental and social management in the bidding documents in the Bill of Quantities (BoQs) or through provisional sums.

ESS Topics	Identified Gaps	Measures to Mitigate
ESS 2 – Labor and Working Conditions. Indonesia has ratified all core conventions of ILO labor and working conditions. No major gaps are identified between Indonesia laws and regulations with the requirements of the ESS 2.		
Grievance Mechanism	The national regulations provide avenue to resolve work-related issues. However, the workers may not feel comfortable to report and resolve such issues through a formal or legal process.	The Project will develop a workers’ grievance mechanism accessible to all workers involved in IDRIP. This procedure will be informed to the workers as part of their induction program and regular toolbox meetings. All submitted grievances will be investigated and resolved in a fair and transparent manner.
Community workers	Not covered in Indonesia legislation system	The labour management procedure will cover the community workers arrangements in accordance with the requirements of the ESS.
ESS 3 – Resource Efficiency and Pollution Prevention and Management. GoI environmental laws and regulations on pollution prevention and management are quite comprehensive covering airshed management and emissions standards, management of hazardous and non-hazardous wastes, and water quality effluent discharge standards. These regulations consider ambient conditions, and through the engineering designs and ESIA, pollution prevention measures will be sought and built into the project. Enhancements in the sourcing and usage of raw materials can be done for the project.		
Efficient use of raw materials	Not specifically covered in Indonesian legislation system.	The project will incorporate into the design requirements for reuse and recycling of materials, wherever possible
Management of Asbestos Containing Wastes/Materials	Note: Annex I of Government Regulation No. 101/2014 regarding Management of Hazardous Wastes acknowledges wastes containing asbestos materials as hazardous wastes. Regulation does not specifically address how asbestos is to be handled/disposed.	The ESMF negative list prohibits use of asbestos containing material in construction and the ESCOP provides guideline on handling asbestos containing waste materials.
ESS 4 – Community Health and Safety. Potential risks and impacts as well as the mitigation measures to the community health and safety are assessed in the ESIA process and covered in the ESIA documents (AMDAL/UKL-UPL/SPPL). No major gaps are identified in the relevant laws and regulations.		
Infrastructure and equipment design and safety	There is no requirement under the national regulation to involve independent expert(s) to review the high-risks structural elements’ design, construction, operation, and decommissioning.	High risk infrastructure is not envisaged under IDRIP. Proposed sites will be screened to ensure their safety and accessibility. Hence the gap is considered not relevant.
Security personnel	Involvement of security personnel is arranged only for national vital objects.	In the event that security personnel will be involved in the project, the requirements stipulated in this ESS will be applied.

ESS Topics	Identified Gaps	Measures to Mitigate
Universal design	No major gaps. The concept of universal design, has been embodied in various ministerial regulations and technical guidelines of the Ministry of Public Works and Housing (MPWH).	The project will refer to relevant existing regulations and guidelines. Community views will also be sought on matters pertaining to universal access and inclusive design.
Community exposure to health issues	National regulations have envisaged community health aspects, both physical and psychosocial, as important in civil works and disaster preparedness activities. Community health aspects are included in the UKL-UPL in accordance with national regulation requirement. However, reporting and enforcement of the mitigation measures may be constrained by limited capacities of the local authorities.	To comply with the requirements of ESS1, the Project will review relevant UKL-UPL. Any gaps, when identified, will be addressed through additional mitigation measures to meet the requirements of the ESS. The implementation of the measures will be regularly monitored and reported.
ESS 5 – Land Acquisition, Restrictions on Land Use and Involuntary Resettlement. Applicable laws and regulations in Indonesia have covered main topics of the ESS5 however, some gaps are identified in terms of detail explanations and arrangements of the issues, particularly with regards to compensation and livelihood restoration of affected individuals who do not have recognizable/legal land rights.		
Sustainable development program	Different modes of compensation other than cash, particularly relocation and land-for-land, are not sufficiently elaborated	Land acquisition is expected to be small-scale ⁴ and mostly required for minor civil works and installation of equipment. ESMF for the program will provide details on entitlements and compensation procedures based on willing seller and willing buyer arrangements.
Direct and indirect impacts	Adverse social and economic impacts due to restrictions of access and land use are not explicitly covered under the Law 2/2012	Impacts related to restrictions of access and land use are not envisaged under IDRIP. Indirect impacts due to land acquisition (if any) will be covered by Environment and Social Management Plan for the program

⁴ Land acquisition intended for installation of Seismic Stations with land size of up to 10x10 meters.

ESS Topics	Identified Gaps	Measures to Mitigate
Associated facilities and legacy issues	Not covered	Legacy issues and Due Diligence on the process of land acquisition of associated facilities need to be carried out in accordance with the applicability and procedures covered under the ESMF.
Replacement costs	No gaps. Independent appraisal team determines compensation for loss of physical and non-physical assets and premium/solatum.	ESMF for the program and land acquisition plans for respective project/subproject will provide entitlement matrix for the land owners based on replacement costs.
Compensation for loss of income sources or means of livelihood	Legal provisions are deficient to recognize entitlements for loss of incomes and means of livelihood due to land acquisition, particularly for informal land users/squatters.	An entitlement matrix, which covers informal land users/squatters has been included as part of the LARPF. Under IDRIP, loss of income and means of livelihoods due to land acquisition is expected to be minor.
Support for affected persons who have no recognizable legal right or claim to the land they are occupying	Perpres 62/2018 does require to provide compensation and assistance for those who do not own the land but have occupied or utilized the land with a set of criteria.	ESMF specifies the eligibility criteria and entitlement for each category of PAPs, including the informal land users/squatters.
Eligibility for vulnerable groups, including Indigenous Peoples	Law 2/2012 and the Implementation Regulations (Perpres 71/2012) provide criteria for <i>Masyarakat Adat</i> (Article 22). However, formal recognition is a requirement and there is no further elaboration on special measures related to management of impacts on <i>Masyarakat Adat</i> , particularly on Free, Prior, and Informed Consent (FPIC).	ESMF includes provisions for culturally and socially appropriate consultations with Indigenous Peoples if their land will be affected. No scenario under which FPIC is required as per ESS 7 is envisaged under IDRIP.
Forced eviction	Not explicitly covered. Ownership rights to land and its associated properties will be relinquished upon compensation payments or court decisions.	No involuntary resettlement and/or physical displacement is envisaged under IDRIP.
Host community	Host communities are not explicitly covered in the Law 2/2012 and its Implementation Regulations (Perpres 71/2012).	No involuntary resettlement and/or physical displacement is envisaged under IDRIP.
Resettlement Planning Instruments	Perpres 71/2012 on the Implementation of Land Acquisition for Public Interest covers provisions related to the development of Land Acquisition Plans. The law requires socio-economic survey, social and environmental impact assessments, feasibility assessments, budget, land value, and timeframe (Article 6). Consultations with potentially affected people are required prior to the location determination (<i>Penlok</i>).	IDRIP does not envisage the application of Law No. 2/2012 on Land Acquisition for Public Interest since land will be acquired through willing seller and willing buyer arrangements. No involuntary resettlement and/or physical displacement is envisaged under IDRIP.

ESS Topics	Identified Gaps	Measures to Mitigate
Costing	Land acquisition planning covers costs for land acquisition and related compensation but does not cover costs related to resettlement and livelihoods restoration.	Overall costs for land acquisition is included as part of land acquisition planning and covers costs related to land compensation and livelihoods assistance where relevant.
Disclosure and engagement	<p>Law 2/2012 and implementation regulations require dissemination of information on affected land and other assets, and applicable compensation amounts to affected households. Public announcement of inventory results is required at the ward/village government offices, sub-district offices and at the place where land acquisition is conducted. However, such disclosure is often available at specific venues which may not be accessible to the wider audience.</p> <p>The Public Information Disclosure Law No. 14/2008 (<i>UU Keterbukaan Informasi Publik</i>) also requires government agencies to provide information required by the public, including planned activities, budget and spending, and other data relevant for public understanding.</p>	All documents will need to be disclosed to public in suitable form to meet the Bank's disclosure requirements.
Grievance Mechanism	Provisions of the Law No. 2/2012 and implementation regulations (Perpres 71/2012) have elaborate and time-bound procedures for filing complaints by affected households and process to address complaints and grievances. It is however, does not explicitly require due documentation of grievances.	ESMF and land acquisition for specific project / subproject will specify Feedback and Grievance Redress Mechanism (FGRM) documentation requirements.
Monitoring and Evaluation	The Law 2/2012 does 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.	Monitoring and evaluation of land acquisition will be integrated as part of project monitoring.
ESS 6 – Biodiversity Conservation and Sustainable Management of Living Natural Resources. GoI regulation on forestry and biodiversity conservation, in general, supports ESS6 for protecting biodiversity. The main gap is that GoI regulations do not recognize the requirements for assessing project impacts on natural and critical habitats.		
Classification, criteria for Significant conversion (loss) and degradation of Critical and Natural Habitat	The regulations do not mention specifically about protection of natural and critical habitats as per ESS6.	The negative list and E&S risk checklist in the ESMF will provide screening to identify government protected areas and high biodiversity/environmentally sensitive areas,

ESS Topics	Identified Gaps	Measures to Mitigate
		including critical habitats of key species specified under the International Union for Conservation of Nature (IUCN) Red List of threatened species.
ESS7 – Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. One major gap between ESS7 and relevant Indonesia 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.		
Assessment and Consultation; Avoidance of adverse impacts; Mitigation and development benefits; Meaningful consultation tailored to indigenous peoples/ Sub-Saharan African historically underserved traditional local communities	<i>Masyarakat Adat</i> may potentially face difficulties to obtaining legal recognition through the sub-national and central government processes, In addition, there are vulnerable communities that may not qualify under the GoI's framework as <i>Masyarakat Hukum Adat</i> but do meet the policy criteria under ESS 7.	The project is not expected to create adverse impacts on Indigenous Peoples. Circumstances whereby FPIC is required are not envisaged under IDRIP. The project will treat communities possessing characteristics as per ESS 7 as Indigenous Peoples regardless of their legal recognition. Identification of these groups based on the identification criteria under ESS 7 will continue as part of the screening processes during the project implementation.
ESS 8 – Cultural Heritage. No specific regulations on intangible cultural heritage. The Project will develop a chance find procedure and provide relevant training for the construction workers.		
Protection of both tangible and intangible cultural heritage as part of sustainable development, meaningful consultations and equitable sharing of benefits	Law 11/2010 does not cover intangible cultural heritage, nor further elaborate on benefit sharing and meaningful consultations, including with Indigenous Peoples.	IDRIP is not expected to cause adverse impacts on both tangible and intangible cultural heritage. Local wisdoms on disaster prevention and management may be promoted as part of project activity in consultations with communities. A chance find procedure will be used to guide management of potential impacts on tangible cultural heritage during construction activities/excavation.
ESS9 – Financial Intermediaries. Not relevant for IDRIP.		
ESS 10 – Stakeholder Engagement and Information Disclosure. Relevant laws and regulations of Indonesia have covered the requirements of the ESS 10.		
Engagement with stakeholders; Information disclosure; Grievance Mechanism	Consultations are required under environmental assessments and land acquisition planning. However, there is no a specific guideline for undertaking and requirements for consultations. Furthermore, quality of such consultations often varies.	The Project has developed and will implement a Stakeholder Engagement Plan (SEP) throughout the project cycle. Grievance mechanism has been developed as part of this ESMF and will be implemented

Chapter 3: Assessment and Mitigation of Environmental and Social Risks

A General Assessment

The project overall is expected to generate positive environmental and social benefits in building disaster awareness activities through strengthening disaster risk management systems for faster and more effective disaster response. For the operational sustainability of implemented instruments, security strategy for vandalism will be applied involving local community empowerment and socialization to the community through SMS, social media, or TV and radio as well as informing local BPBDs and government.

The sub-project activities under component 1, 2 and 3, (community-based disaster risks awareness and preparedness, small⁵ to moderate⁶ scale infrastructure development, geophysics instrumentation procurement and installation, and internal PMUs capacity building activities) informs the preparation of the ESMF appropriate to the nature and scale of the activities and proportionate to the level of environmental and social risks and impacts.

While the social development outcome is positive, a critical factor for the project success is active involvement of relevant stakeholders including disaster-prone communities on awareness raising about emergency management information systems and response mechanisms. IDRIP is expected to strengthen community-based disaster risk management systems for enhanced effectiveness and hence, potential issues related to social inclusion and accessibility of information dissemination and social appropriateness were identified during project implementation. The project will enhance BNPB and BMKG's institutional capacities on aspects related to community engagement and resilience. The establishment and upgrading of selected emergency operation centres, integrated data centres and related infrastructure is likely to involve limited land acquisition and minor civil works, which warrant risk management and oversight as guided through this ESMF. An assessment of potential risks is provided in Section B (*Table 4*) along with the proposed environmental and social management process in Section C.

In general, environmental and social management for IDRIP sub-project activities will implement the existing procedures and national regulations to the extent that they achieve objectives materially consistent with the ESSs. The majority of activities related to environmental and social management is part of the overall project design and hence, will be implemented as part of the project. For instance, on component 1 and sub-component 2.1,

⁵ Small scale infrastructure for installation of Seismic Stations. Refer footnote 2 for complete definition.

⁶ Medium scale infrastructure related to renovating and/or re-constructing multi-story buildings on land owned by BNPB and/or BMKG.

where majority of the activities are related to community awareness raising and response to future disasters, inclusion of vulnerable groups and Indigenous Peoples and provisions of appropriate information dissemination services and engagement will be addressed as part of project implementation and will be covered under the project's Stakeholder Engagement Plan, which seeks to mainstream principles of inclusivity, participation, gender and disability-sensitiveness. The same also applies to the management and maintenance, including calibration of equipment and instrumentation to ensure they serve their intended purposes in the project design.

Risks associated with land acquisition, management of minor civil works, including labour and community health and safety aspects, Indigenous Peoples and Sexual Exploitation and Abuse (SEA) & Violence against Children (VAC), were elaborated in specific environmental and social management instruments, which are provided as Annexes in the ESMF Vol. 2.

The following section further details potential risks and impacts at the sub-project level along with their proposed mitigation measures, responsibilities and specific references to appropriate instruments and tools in the ESMF (refer *Table 4*).

B Risk Assessment and Mitigation Plan

The risk matrix below outlines potential environmental and social risks for each sub-component along with their proposed mitigation measures and responsible institutions. Relevant instruments/tools can be found in Volume 2 of the ESMF.

Table 4. Matrix E&S Risk Assessment and Mitigation Plan

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
Component 1: Improvement of disaster risk management and preparedness for disasters - BNPB							
1.1 Disaster risk knowledge and awareness	<ol style="list-style-type: none"> 1. Strengthening data, information, and analysis of multi hazard early warning system (MHEWS) 2. Development of an integrated disaster knowledge management platform 3. Disaster risk analysis and technical assessments 	<p>Technical Assistance for data and knowledge sharing system development, assessments, capacity building. This may include procurement of relevant supporting ICT hardware and software</p> <p>No civil works components.</p>	<p>Risk: low</p> <ul style="list-style-type: none"> • Potential e-wastes from unused ICT hardware. • Personal safety and discrimination at work (for facilitator and/or outreach workers) • Potential COVID-19 spreading on the community and workers 	<p>ESS 2 ESS 3 ESS 7 ESS 10</p>	<ul style="list-style-type: none"> • Screening of project and sub-project activities based on the Negative List and E&S risks • Mainstreaming personnel safety considerations for outreach workers/facilitators (as relevant). • Application of e-waste management procedure (including disposal procedures). • Ensuring accessible FGRM for communities in all the 	<ul style="list-style-type: none"> • FGRM (ESMF chapter 3) • Negative list (Annex 2) • E&S Risk screening form (Annex 3) • SOP for e-waste management (Annex 6) • IPPF (Annex 9) • LMP (annex 10) 	<p>Directorate of Mapping and Risks Assessment</p> <p>Directorate of Disaster Management Strategy Development</p>

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
					<ul style="list-style-type: none"> target areas and project workers. Ensuring that PIU and responsible personnel is trained and sensitized to undertake these mitigation measures. Applying COVID-19 prevention protocols during activities involving stakeholders (including public consultations or communicating with the communities), and community-based activities 	<ul style="list-style-type: none"> COVID-19 Infection Prevention and Control (Annex 13) 	
1.2 Quality improvement of Multi-hazard early warning system platform development (MHEWS)	1. (a) Technical assessments and Detailed Engineering Design (DED) for Integrated Data and Information Center (new building) of MHEWS	Technical Assistance for data and knowledge sharing platforms development, capacity building, coordination and planning.	Risk: low <ul style="list-style-type: none"> Minor Labor and community health and safety risks (i.e. dust, noise, traffic); Potential pollution from construction wastes and minor demolition of existing structure 	ESS 1 ESS 2 ESS 3 ESS 4 ESS 5 ESS 8 ESS 10	<ul style="list-style-type: none"> Screening of project and sub-project activities based on the Negative List and E&S risks, including land due diligence Implementing Labor Management Procedure (LMP), particularly related to OHS and community 	<ul style="list-style-type: none"> FGRM (ESMF chapter 3) Negative list (Annex 2) E&S Risk screening form (Annex 3) ESCOPs (annex 5) 	Directorate of Early Warning

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
	<p>(b) Construction of integrated data and information center of MHEWS</p> <p>2. (a) Development of multi hazard data integration system in collaboration with relevant stakeholders</p> <p>(b) Development of integrated impact-based disaster risk analysis platform (including use of Big Data)</p> <p>(c) Development of decision support system</p>	<p>This may include procurement of consulting services, relevant supporting ICT hardware and software and small to medium⁷ scale civil works related to building construction, upgrading, and renovation</p> <p>Sensitivity of the environments in sub-projects' location is</p>	<p>(for rehabilitation);</p> <ul style="list-style-type: none"> • Potential COVID-19 spreading on the community and workers • Potential pollution from construction waste and minor demolition of existing structures (for rehabilitation) • Small-scale land acquisition. Impacts on Indigenous Peoples is not likely as potential sites will be adjacent to existing facilities and/or offices. 		<p>health and safety management</p> <ul style="list-style-type: none"> • Application of e-waste management procedure (including disposal procedures). • Preparation of UKL-UPL or SPPL (environmental assessment and management plan) or enforcement of ESCOPs as relevant • Ensuring that PIU and responsible personnel, including contractors is adequately trained and sensitized to undertake the above mitigation measures. • Applying COVID-19 prevention protocols during activities 	<ul style="list-style-type: none"> • SOP for e-waste management (Annex 6) • LARPF (annex 7) • Chance Find Procedure (annex 8) • LMP (annex 10) • Incident Reporting Toolkit (annex 12) • COVID-19 Infection Prevention and Control (Annex 13) 	

⁷ Small to medium scale construction of single-story MHEWS data centres.

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
		varied: natural habitat (greenfield) and modified habitat (brownfield)	<ul style="list-style-type: none"> • Potential e-wastes from unused ICT hardware. • Potential discoveries of cultural heritage around the project area 		involving stakeholders (including public consultations or communicating with the communities), community based activities, and construction activities		
1.3 Hazard Information and early warning dissemination and outreach	<ol style="list-style-type: none"> 1. Development of delivery service system component of MHEWS 2. Development of mobile application component for MHEWS Information Dissemination System 3. Development and upgrading of emergency operation centers (PUSDALOPS) of BNPB and select BPBDs 	<p>Technical Assistance (system development and/or strengthening, SOP development, capacity building)</p> <p>Procurement of consulting services, relevant supporting ICT hardware</p>	<p>Risk: low</p> <ul style="list-style-type: none"> • Insufficient consideration of the needs and conditions of vulnerable groups, including women, children, people with disabilities, elderly and Indigenous People in the context of disaster prevention and information dissemination • Community apprehension (unnecessary 	ESS 1 ESS 2 ESS 3 ESS 4 ESS 7 ESS 10	<ul style="list-style-type: none"> • Screening of project and sub-project activities based on the Negative List and E&S risks, including land due diligence • Strengthening communication, outreach strategy and stakeholder consultations as guided by the SEP • Implementing LMP as above • Application of e-waste management procedure (including disposal procedures). 	<ul style="list-style-type: none"> • SEP (standalone) • FGRM (ESMF chapter 3) • Negative list (Annex 2) • E&S Risk screening form (Annex 3) • ESCOPs (annex 5) • SOP for e-waste management (Annex 6) • LARPF (annex 7) 	Directorate of Early Warning Centre for Emergency Operations (PUSDALOPS PB)

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
		<p>Medium⁸ scale civil works related to building upgrading or renovations</p> <p>Geographic scope/target areas not identified yet</p>	<p>panic/public disorder) following dissemination of imminent disasters</p> <ul style="list-style-type: none"> • No involuntary land acquisition is envisaged upgrading or renovations • Minor labor and community health and safety risks (i.e. dust, noise, traffic) • Potential pollution from construction wastes • Potential e-wastes from unused ICT hardware.Potential COVID-19 		<ul style="list-style-type: none"> • Preparation of UKL-UPL or SPPL or enforcement of ESCOPs as relevant • Ensuring that PIU and responsible personnel is adequately trained and sensitized to undertake the above mitigation measures. • Applying COVID-19 prevention protocols during activities involving stakeholders (including public consultations or communicating with the communities), community based activities, and construction activities 	<ul style="list-style-type: none"> • LMP (annex 10) • Project Strategy and Plan for SEA/VAC (annex 11) • Incident Reporting Toolkit (annex 12) • COVID-19 Infection Prevention and Control (Annex 13) 	

⁸ Medium scale renovation and/or re-construction of multi-story buildings on land owned by BNPB.

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
			spreading on the community and workers				
1.4 Emergency management, response and preparedness capacities	<ol style="list-style-type: none"> Capacity building for MHEWS Operational System Evacuation routes, shelters, and signages Emergency response exercises (including evacuation drills, Table top exercises, command post exercises) Strengthening community resilience through community-based preparedness programs (e.g., <i>Ketangguhan Masyarakat Berbasis Lingkungan, Komunitas, dan</i> 	<p>Technical assistance (i.e. capacity building, planning, community mobilization)</p> <p>Providing inputs and suggestions for escape routes and rehabilitation of existing structures for shelters i.e. schools in both existing or new locations.</p> <p>Facilitation of local communities to raise awareness and</p>	<p>Risk: low to medium</p> <ul style="list-style-type: none"> Lack of appropriate, inclusive and accessible means of communication and consultations with vulnerable groups, including women, children, people with disability, Indigenous Peoples in community facilitation and outreach Personal safety and discrimination at work (for facilitators and outreach workers) Sexual harassment standard (low) 	ESS 1 ESS 2 ESS 3 ESS 5 ESS 6 ESS 7 ESS 10	<ul style="list-style-type: none"> Screening of project and sub-project activities based on the Negative List and E&S risks Ensuring appropriate and accessible, gender- and disability-sensitive communication and consultations measures with vulnerable groups, including Indigenous People, women, children and the elderly as guided by the SEP. Pilot testing of emergency response design features and communication channels with diverse groups to assess accessibility and appropriateness 	<ul style="list-style-type: none"> SEP (standalone) FGRM (ESMF chapter 3) Negative list (Annex 2) E&S Risk screening form (Annex 3) ESCOPs (annex 5) LARPF (annex 7) IPPF (annex 9) LMP (annex 10) Project Strategy and Plan for SEA/VAC (annex 11) Incident Reporting 	Directorate of Prepared-ness Centre for Education and Training

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
	<i>Keluarga – KATANA</i>	<p>preparedness of disasters at village and family level</p> <p>Nature-based measures (e.g. landscaping, greening measures, mangrove plantation, and trees planting)</p> <p>Geographic scope/target areas not identified yet</p> <p>Potential involvement of grassroots' organisations and sub-district/village level government agencies, such as <i>Tagana</i>,</p>	<ul style="list-style-type: none"> • Potential pollution from the use of harmful pesticides in tsunami resilience initiatives such as rehabilitation of mangrove forests. • Potential COVID-19 spreading on the community and workers 		<ul style="list-style-type: none"> • Aligning LMP to existing HR SOPs relevant to IDRIP • Ensuring that PIU and responsible personnel is adequately trained and sensitized to undertake the above mitigation measures. • Applying COVID-19 prevention protocols during activities involving stakeholders (including public consultations or communicating with the communities), and community-based activities 	<p>Toolkit (annex 12)</p> <ul style="list-style-type: none"> • COVID-19 Infection Prevention and Control (Annex 13) 	

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
		<p><i>Babinsa</i>, Dinsos (Social Affairs Agency), dan <i>Dinkes</i> (Health Agency).</p> <p>Note: Babinsa is usually local people who lives in the sub-district where they are assigned (that is why despite they are armed forces, babinsa feels more like a part of the community)</p>					
Component 2: Geophysical early warning services (BMKG)							

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
2.1 Service delivery system	<p>1. Earthquake monitoring instruments:</p> <p>i. Libra Mini Regional Sensor Rejuvenation</p> <p>ii. Libra Sensor Rejuvenation Broadband Seismograph</p> <p>iii. Broadband Seismograph Installation</p> <p>iv. Mini Regional Short Period Seismic Station Installation</p> <p>v. Stationary Accelerograph Installation</p>	<p>Small⁹ to medium¹⁰ scale infrastructure in both existing or new locations</p> <p>Sensitivity of the environments in sub-projects' location is varied: natural habitat (greenfield) and modified habitat (brownfield)</p>	<p>Risk: low to moderate</p> <ul style="list-style-type: none"> • Low to moderate labor and community health and safety risks due to civil works (i.e. dust, noise, traffic) • Small-scale¹¹ land acquisition/land donation for instrument installation; • Equipment installation in areas where there are Indigenous Peoples, with potential access restriction risks for the purpose of 	<p>ESS 1 ESS 2 ESS 3 ESS 4 ESS 5 ESS 6 ESS 7 ESS 8 ESS 10</p>	<ul style="list-style-type: none"> • Screening of project and sub-project activities based on the Negative List and E&S risks, including land due diligence • Implementing LMP as above • Strengthening Feedback and Grievance Redress Mechanism/Refinement of BNPB's complaints handling mechanism • Ensuring appropriate and accessible, gender-sensitive communication and community engagement as guided by the SEP. • Preparation of UKL-UPL or SPPL or enforcement of ESCOPs for civil works and handling of e-wastes as above • Ensuring that PIU and responsible agencies, 	<ul style="list-style-type: none"> • SEP (standalone) • Negative list (Annex 2) • E&S Risk screening form (Annex 3) • ESCOPs (annex 5) • LARPF (annex 7) • Chance Find Procedure (annex 8) • LMP (annex 10) • Project strategy and action plan for SEA/VAC (annex 11) • Incident Reporting 	<p>Centre for Earthquake and Tsunami</p> <p>Centre for Seismology technics, Potential Geophysics and Time Mark</p>

⁹ Small scale infrastructure for installation of Seismic Stations in forest and/or non-forest land with land size of up to 100 m² (10x10m). Refer footnote 2 for complete definition.

¹⁰ Medium scale infrastructure related to renovating and/or reconstructing multi-story buildings on land owned by BMKG.

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
	vi. Stationary Intensity Meter Installation vii. Portable Seismograph Procurement viii. Portable Accelerograph Procurement ix. Strong Motion Processing System 2. Disposal of disused earthquake monitoring instrumentation 3. Pilot Earthquake Early Warning System (EEWS) design and installation 4. Procurement of Warning Receiver Server (WRS) Dissemination System 5. Renovation and/or expansion of		<p>protection and community health and safety;</p> <ul style="list-style-type: none"> • Inadequate maintenance of early warning services that can lead to malfunction/failure. • Inadequate security measures can lead to criminal act/theft and vandalism in and around facilities • Risk of soil erosion and sedimentation in waterways during construction works • Potential pollution from construction wastes 		<p>including contractors is adequately trained and sensitized to undertake the above mitigation measures.</p> <ul style="list-style-type: none"> • Ensuring Land Acquisition and Resettlement Policy Plan is developed and implemented, as per Land Acquisition and Resettlement Policy Framework • Ensuring there is consultation with local communities where shelters are located, with aims to raise awareness and cultivate community's sense of belonging. • Applying COVID-19 prevention protocols during activities involving stakeholders (including public consultations or communicating with the communities), community based activities, and construction activities 	<p>Toolkit (annex 12)</p> <ul style="list-style-type: none"> • FGRM (ESMF chapter 3) • Stakeholder Engagement Plan (SEP) • COVID-19 Infection Prevention and Control (Annex 13) 	

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
	<p>building for Indonesia Tsunami Early Warning System (INATEWS) control and operational support</p> <p>1. Development/renovation of the Regional Earthquake Center Unit (PGR3) in Denpasar, Bali</p>		<ul style="list-style-type: none"> • Potential generation of hazardous e-waste • Potential disturbance to biodiversity if construction takes place in Protected Areas¹¹ • Potential discoveries of cultural heritage around the project area • Personal safety and discrimination at work • Sexual Exploitation and Abuse 				

¹¹ May involve requirement for installing small scale Seismic Stations with land size of up to 100 m² (10x10 m) to house seismic equipment. The ESMF requires preparing an environmental and social assessment acceptable to the bank, refer Annex 4, and for the Bank to review the assessment.

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
			<ul style="list-style-type: none"> Potential COVID-19 spreading on the community and workers 				
2.2 Monitoring Network and Early Warning Capacity	2. Collection and development of Big Data, Data Rescue (i.e. back up of data), and strengthening of Data Center ICT system 3. Procurement of High-Performance Computers (HPC) 4. Procurement of ICT for the development of communication infrastructure networks	Procurement of relevant consulting services, technical assessment, and supporting ICT hardware and software No physical construction.	Risk: low <ul style="list-style-type: none"> Potential e-wastes from unused ICT hardware Potential noise generation in workplace from HPC Potential COVID-19 spreading on the community and workers 	ESS 1 ESS 3	<ul style="list-style-type: none"> Screening of project and sub-project activities based on the Negative List and E&S risks Application of e-waste management procedure (including disposal procedures) Ensure proper maintenance of HPC equipment to maintain noise level within the safe-standard¹² Applying COVID-19 prevention protocols during activities 	<ul style="list-style-type: none"> Negative list (Annex 2) E&S Risk screening form (Annex 3) SOP for e-waste management (Annex 6) LMP (Annex 10) COVID-19 Infection Prevention and Control (Annex 13) 	Centre for Database Centre for Communication Networks

¹² Refer to Ministry of Health Regulations No. 48/2016 on Office Occupational Health and Safety Standards

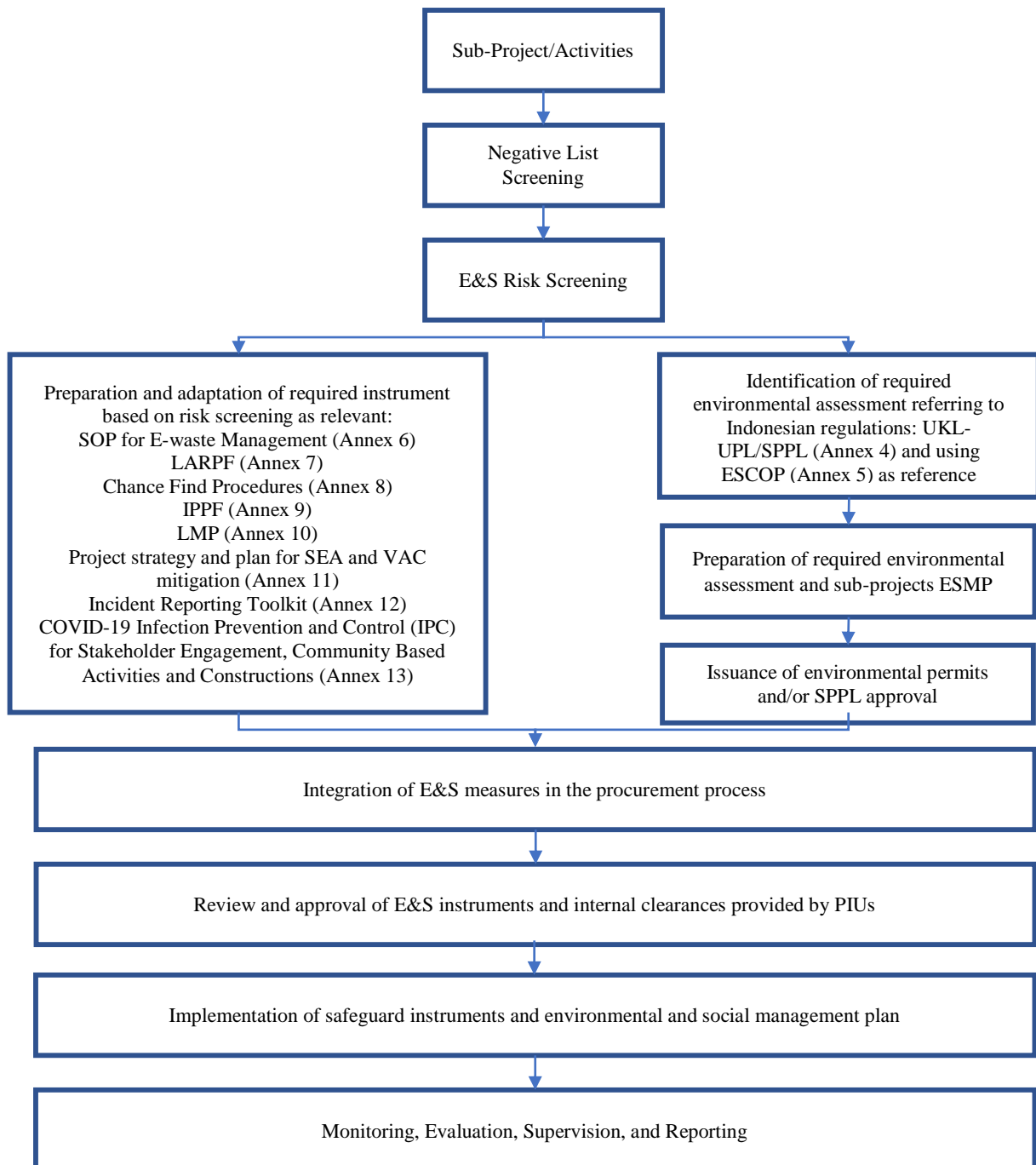
Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
	5. Communication network rent				involving stakeholders (including public consultations or communicating with the communities)		
2.3 Institutional strengthening and capacity building	<ol style="list-style-type: none"> 1. Project management 2. Technical studies and assessment to support INATEWS 3. Assessment for the enhancement of earthquake information dissemination (SOP development) 4. Procurement of Microtremor array monitoring aftershock and seismo geodetic 5. Laser distance meter 6. Capacity building and training 7. Procurement of supporting equipment for 	<p>Technical Assistance (institutional capacity building and regulatory strengthening)</p> <p>Procurement of instruments</p> <p>No physical infrastructure</p>	<p>Risk: Low</p> <ul style="list-style-type: none"> • Potential generation of hazardous e-waste • Labor safety risk: when consultant/staff/local facilitators perform task in the field, they are exposed to safety issue • Lack of gender sensitivity • Potential COVID-19 spreading on the community and workers 	ESS 1 ESS 3	<ul style="list-style-type: none"> • Screening of project and sub-project activities based on the Negative List and E&S risks, including land due diligence • Application of e-waste management procedure (including disposal procedures). • Implementing LMP as above • Implementing Gender sensitization and awareness raising • Applying COVID-19 prevention protocols during activities involving stakeholders (including public consultations or communicating with the communities, field works) 	<ul style="list-style-type: none"> • Negative List (Annex 2) • Screening Check List (Annex 3) • Project strategy and action plan for SEA/VAC mitigation (annex 11) • Stakeholder Engagement Plan (SEP) • COVID-19 Infection Prevention and Control (Annex 13) 	<p>Division of Planning</p> <p>Centre for Research & Development (Puslit-bang)</p> <p>Centre for Education and Trainings (Pusdiklat)</p> <p>School of Meteorology, Climatology and Geophysics</p>

Sub-Comp	Activities	Sub-project typology	Potential Environmental and Social Risks	ESS	Mitigation Measures	Reference to relevant tools/instruments	PIU
	geophysics laboratory 8. Project management 9. Technical advisory 10. M&E 11. Knowledge sharing						
Component 3: Project implementation support							
3. Project Implementation Support	<ul style="list-style-type: none"> • Project management support • Technical advisory • Monitoring and Evaluation • Knowledge sharing 	<ul style="list-style-type: none"> • Project coordination • Monitoring and evaluation 	Environmental and social risks are presented in Component 1 and Component 2	Explained in relevant ESSs	Presented in Component 1 and Component 2	Presented in Component 1 and Component 2	BNPB Main Secretary (Planning Bureau, Financial Bureau, Legal and Organizational Cooperation Bureau, and Human Resource and General Bureau)

C Environmental and Social Management Process

Sub-projects financed under the project are required to be screened to: a) determine eligibility for financing; and b) identify key environmental and social risks and potential impacts and determine the appropriate E&S instrument for assessing and managing these risks. Based on these screening processes, decisions will be made by the E&S specialists in the PMU with regards to the types and scope of the assessment and instrument required for each sub-project investment/activity. Figure 1 outlines the key steps for all sub-projects.

Figure 1: The Environmental and Social Management Process



i. Step 1: Sub-Project Eligibility Screening

IDRIP sub-project activities identified by BNPB for Component 1 and BMKG for Component 2 as formulated in the Annual Work Plans (AWPs) shall be screened based on the Negative List for the AWPs. A negative list for civil works will be included in Bidding Documents (refer to Annex 2 in Vol. 2). Such a screening process is expected to ensure ineligible subproject activities or investments will not be processed and activities with significant, complex, irreversible and/or unprecedented adverse environmental or social impacts are excluded from the project (refer *Table 5* for definition of risk categories).

Initial screening will apply as part of land due diligence in the event new construction or sites are proposed for infrastructure investments. This land due diligence process is further elaborated in LARPF (refer Annex 7 in Vol. 2)

Such an initial screening activity will be carried out by relevant PMUs, in this case BNPB and BMKG for Component 1 and Component 2 respectively.

ii. Step 2: Environmental and Social Risk Screening

At the activity level and once locations for specific investments have been confirmed, E&S risk screening will be conducted to determine the level of assessment and planning required for eligible sub-project proportionate to the level of associated risks and potential impacts. This will take into account i) the type, location, sensitivity and scale of the activity; ii) the nature and magnitude of the potential E&S risks and impacts; iii) the capacity of the responsible agency to manage such risks and impacts in a manner consistent with the ESSs; and iv) other areas of risk that may be relevant to the delivery of E&S mitigation measures and outcomes, depending on the specific sub-project activities and the context in which it is being developed.

Such risk screening will also inform engagement approaches and information dissemination channels appropriate to specific contexts and communities. This risk screening can be undertaken as part of community consultations during project implementation.

Once the level of assessment and risk has been determined by the PMU, relevant E&S instruments will be identified and developed for the sub-project activity.

Table 5. Sub-project Risk Classification

Risk Classification	Description	Instrument(s)
High*	Wide range of significant adverse risks and impacts on human populations or the environment including i) long term, permanent and/or irreversible and impossible to avoid entirely due to the nature of the project; ii) high in magnitude and/or in spatial extent; iii) significant adverse cumulative impacts or transboundary impacts; and iv) a high probability of serious adverse effects to human health and/or the environment (e.g., due to accidents, toxic waste disposal, etc.)	Not applicable Note: High risk sub-projects will not be permitted under IDRIP.

Risk Classification	Description	Instrument(s)
	Some of the significant adverse ES risk and impacts of the Project cannot be mitigated or specific mitigation measures require complex and/or unproven mitigation, compensatory measures or technology, or sophisticated social analysis and implementation.	
Substantial	<p>The Project may not be as complex as High-Risk Projects, its ES scale and impact may be smaller (large to medium) and the location may not be in such a highly sensitive area, and some risks and impacts may be significant. This would take into account whether the potential risks and impacts have the majority or all of the following characteristics: i) mostly temporary, predictable and/or reversible and the nature of the project does not preclude the possibility of avoiding or reversing them; ii) adverse social impacts may give rise to a limited degree of social conflict, harm or risk to human security; iii) medium in magnitude and/or spatial extent; iv) there is medium to low probability of serious adverse effects to human health and/or the environment (e.g., due to accidents, toxic waste disposal, etc.), and there are known and reliable mechanisms available to prevent or minimize such incidents.</p> <p>Mitigatory and/or compensatory measures may be designed more readily and be more reliable than those of High-Risk Projects.</p>	Not applicable Note: Substantial risk sub-projects will not be permitted under IDRIP.
Moderate	<p>Potential adverse risks and impacts on human populations and/or the environment are not likely to be significant. This is because the Project is not complex and/or large, does not involve activities that have a high potential for harming people or the environment, and is located away from environmentally or socially sensitive areas. As such, the potential risks and impacts and issues are likely to have the following characteristics: i) predictable and expected to be temporary and/or reversible; ii) low in magnitude; iii) site-specific, without likelihood of impacts beyond the actual footprint of the Project; and iv) low probability of serious adverse effects to human health and/or the environment (e.g., do not involve use or disposal of toxic materials, routine safety precautions are expected to be sufficient to prevent accidents, etc.).</p> <p>The Project's risks and impacts can be easily mitigated in a predictable manner.</p>	Environmental and Social Assessment (ESA) as part of environmental permitting processes (UKL/UPL), and other management plans guided by the ESMF as relevant. A TOR for UKL/UPL that meets the ESSs is presented as part of the ESMF to guide assessment and mitigation of potential impacts.
Low	Potential adverse risks to and impacts on human populations and/or the environment are likely to be minimal or negligible. These Projects, with few or no adverse risks and impacts and issues, do not require further ES assessment following the initial screening.	Screening checklist, SPPL, Environmental Code of Practices (ESCOPs)

* High risk projects are expected to be screened out during eligibility screening process.

iii. Step 3: Preparation of Environmental and Social Management Instruments

Sub-project E&S instruments will be prepared by qualified specialists in accordance with the GoI's environmental permitting laws supplemented with the relevant ESS requirements. These instruments are further detailed in the following sections.

Stakeholders Engagement Plan

Stakeholder Engagement Plan (SEP) guides overall stakeholder and community engagement during IDRIP preparation and throughout project implementation. The SEP seeks to mainstream the principles of participatory and inclusive development through engagement with

broad stakeholders, including vulnerable groups, such as women, youth and children, people with disability, remote and isolated populations and Indigenous Peoples and/or Masyarakat Adat. The SEP is presented as a stand-alone instrument to complement the ESMF and its associated instruments and tools. Region or context-specific consultation plans may be developed during project implementation as guided by the SEP. Due to limitations during the COVID-19 pandemic, the planned engagement of stakeholders during the project implementation needs to be adjusted to the procedures and protocols for COVID-19 disease prevention as detailed in Appendix 13. These procedures and protocols are based on the World Bank's ESF/Safeguards Interim Note: COVID-19 Considerations In Construction/Civil Works Projects and The Ministry of Public Works and Housing Instructions No. 02/IN/M/2020 on Protocol for Preventing the Spread of Corona Virus Disease 2019 (COVID-19) In Construction Services.

Environmental and Social Assessment Instruments

Based on the technical screening in Step 2, the PMUs with support from the environmental and social specialist and/or consultants will prepare the following instruments, depending on risk levels:

1. Preparation of an environmental and social assessment and/or Environmental and Social Management Plan (ESMP) (i.e. UKL-UPL¹³) – for infrastructure investments falling within GoI's threshold for environmental permitting. Draft TORs, assessments and relevant E&S management plans for medium scale civil works and/or subprojects located in government protected areas are to be reviewed by the World Bank. No Objection from the World Bank is required prior to any civil works; OR
2. Preparation of SPPL that includes relevant information using reference from the Environmental and Social Code of Practices (ESCOPs). The SPPL constitutes the E&S commitment of the PMU – for projects with low E&S risks, including e-waste handling and disposal. Under this circumstance, a standalone environmental and social assessment or ESMP is not required and hence, prior review and No Objection from the World Bank is not required.

The term 'environmental and social assessment' (ESA) is a generic term that describes the process of analysis and planning used by the PMUs to ensure the environmental and social impacts and risks of a project are identified, avoided, minimized, reduced or mitigated. Proposed measures to avoid, reduce or mitigate potential adverse impacts/risks or to enhance benefits will be specified in the UKL-UPL (ESMP) or SPPL for the design, construction and operation phases.

¹³ A UKL-UPL package contains a summary of activities and potential impacts, and an ESMP. UKL-UPL is required when non-significant impacts are predicted.

The breadth, depth and type of assessment will be commensurate with the nature, scale and complexity of the proposed sub-project identified during technical screening. Some activities under Sub-Component 2.2 includes installations of seismic monitoring instrumentation and minor civil works such as construction of small-scale shelters or supporting infrastructure for these instruments which may be located in a sensitive and/or isolated area (e.g. forests, national parks, or other protected areas). These activities will likely have small footprints as the instruments are small in size and will have minor impacts to its surrounding environment. In this case, the PMUs are required to consult with the local Environmental Agency to determine the appropriate environmental assessment. The regulation on AMDAL/ESIA (Ministry of Environment and Forestry No. P.38/Menlhk/setjen/Kum.1/7/2019) specifically states that activities inside protected areas do not require AMDAL but require UKL-UPL or SPPL if these activities: i) relate to the safety and security of the people and do not entail important impacts to the environment; and ii) may entail important impacts to the environment but is required for emergency related purposes. The ESMF requires preparing an environmental and social assessment acceptable to the bank, refer Annex 4, and for the Bank to review the assessment.

Annex 4 in Vol. 2 refers to proposed outlines for UKL-UPL and SPPL that are acceptable to the Bank, which incorporate requirements of the GoI's environmental permitting requirements and the World Bank's ESS1.

Land Acquisition and Resettlement Policy Framework (LARPF)

The Land Acquisition and Resettlement Policy Framework (LARPF) provides guidance on resettlement screening, assessment, institutional arrangements, and processes regarding land acquisition to be complied with by project management staff, consultants, and related parties. The World Bank recognizes that land acquisition and land use restrictions induced by the project can have adverse impacts on land users and communities. The World Bank ESS5 on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement sets the standards on addressing and mitigating risks resulting from involuntary resettlement, including any case of involuntary land taking. ESS 5 seeks to avoid involuntary resettlement¹⁴. 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. The standard stresses impact avoidance and mitigation, timely compensation for lost assets at replacement costs and assisting displaced persons in their efforts to improve, or at least restore their livelihoods and living standards, in real terms, to

¹⁴ "Involuntary resettlement" refers both to physical displacement (relocation or loss of shelter) and economic displacement (loss of assets or access to assets that leads to loss of income sources or other means of livelihood) as a result of the project activities.

pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher. Furthermore, ESS 5 seeks to ensure that any land acquisition and subsequent resettlement are planned and implemented with appropriate disclosure of information, meaningful consultation and informed participation of those affected.

Forced eviction and physical displacement¹⁵ are included in the Negative List. IDRIP anticipates small-scale land acquisition for construction of facilities such as offices and data centres and installation of instrumentation which will be mostly done through willing-buyer and willing-seller arrangements and voluntary land donation (particularly for disaster-warning instrumentation). Some of the planned construction is expected to take place within existing government land and/or facilities. In the event that such land may have been informally used or occupied by or rented to other parties (i.e. farming or commercial activities), due assistance and/or compensation must be settled prior to any civil works based on the entitlement matrix in the LARPF. Any proposed land or site will be subject to prior land due diligence (refer to **Annex 7 in Vol. 2**) to ensure that there is documented evidence that the land is legally and physically “clean and clear”, and technically feasible for development.

Under remote circumstances where some land clearance or any impact on agriculture is envisaged as a result of civil works, affected land owners and/or tillers will be given reasonable time to harvest the crop. Affected persons should be informed in advance of the project activities and their timing to enable proper planning and minimize impacts on livelihoods.

Willing seller willing buyer. The majority (if not all) acquisition of the land for sub-project activities will be conducted through *willing seller-willing buyer*¹⁶. The LARPF provides guidance for the acquisition of land through willing seller willing buyer or mutual agreement as the preferable mode of acquisition. Land Acquisition Plans will be prepared in the event new sites for infrastructure development are proposed. Such plans will be reviewed by the World Bank and No Objection will be required prior to any construction. The LARPF also outlines procedures for negotiated settlements in limited circumstances where that the project requires specific locations for establishment of facilities or installation of instrumentation due to locational advantage. This refers to situations where PIUs and/or sub-national governments need to acquire specific land or restrict its use for project purposes, but rather than doing so through an expropriation proceeding, PIUs and/or sub-national governments try to arrive at a mutually agreeable negotiated settlement with the landowner and/or user with the full judicial or administrative process of expropriation or compulsory acquisition as governed under Law No. 2/2012 on Land Acquisition for Public Interest.

¹⁵ Physical displacement constitutes loss of shelter and residential land (both permanent and temporary) and subsequent physical relocation and loss of livelihoods as a result of land acquisition.

¹⁶ “Willing buyer and willing seller” arrangements constitute voluntary market transactions in which the seller is not obliged to sell, and the buyer cannot resort to expropriation or other compulsory procedures if negotiations fail.

Some activities under sub-component 2.2, particularly related to installation of equipment or instrumentation within or near foraging grounds may lead to some access restrictions to land or water uses which will need to be consulted and agreed with communities. In the event that such access restrictions potentially lead to adverse impacts on livelihoods, compensations of loss income and/or livelihoods will be offered in consultation with affected households or communities. Such procedures are further elaborated in the LARPF (refer **Annex 7 of the ESMF Vol. 2**).

Indigenous People Planning Framework (IPPF)

IPPF serves as an instrument to manage risk of exclusion and/or protect the rights of Indigenous People and/or Indigenous Communities (*Masyarakat Adat*). The IPPF establishes consultation procedures and sets conditions for meaningful engagement and consultations. The IPPF addresses relevant requirements under ESS 7, which requires that the development process under the project fosters full respect for the human rights, dignity, aspirations, identity, culture and natural resource-based livelihoods of Indigenous Peoples. ESS 7 stresses impact avoidance and if not feasible, mitigation in full consultations with affected communities. ESS 7 seeks to promote sustainable development benefits and opportunities for Indigenous Peoples in a manner that is accessible, culturally appropriate and inclusive. Under IDRIP, circumstances requiring Free, Prior and Informed Consent (FPIC) requirements under ESS 7¹⁷ are not expected. Elements of meaningful consultations in the IPPF are integral to the Stakeholder Engagement Plan (SEP) and hence, will be mainstreamed throughout project implementation.

The project strives to avoid adverse impacts on Indigenous People and promote their participation and inclusion in the project activities. In the event adverse impacts are envisaged, measures and actions to minimize such impacts will be developed in consultation with the affected Indigenous People and/or *Masyarakat Adat* and through a social assessment, proportional to potential risks and impacts. The scope and scale of the action plan will be proportionate to the potential risks and impacts of the project. The format of the plan is provided in the IPPF and the World Bank will review and provide No Objection prior to implementation of specific activities affecting Indigenous People and/or *Masyarakat Adat*.

In the event that Indigenous People and/or *Masyarakat Adat* are the sole or the overwhelming majority of project beneficiaries, the elements of the above plan will be included in the overall sub-project implementation and/or Stakeholder Engagement Plan (SEP). The IPPF can be found in **Annex 9 of the ESMF Vol. 2**.

¹⁷ FPIC is required if the project 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; 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.

Other Procedures

A number of other standard operating procedures that shall be implemented throughout project life cycle wherever applicable, which can be found in Volume 2:

- Environmental and Social Codes of Practices (**Annex 5**)
- SOP for electronic waste disposal (**Annex 6**)
- Chance find procedures (**Annex 8**)
- Labor Management Procedure (**Annex 10**)
- Project Strategy and Action Plan for Sexual Exploitation and Abuse (SEA) and Violence against Children (VAC) (**Annex 11**)
- Incident Reporting Toolkit (**Annex 12**)
- COVID-19 Infection Prevention and Control (IPC) for Stakeholder Engagement, Community Based Activities and Constructions (**Annex 13**)

In addition, a SEP has been prepared as a standalone document as a guideline for the overall stakeholder engagement, including with target communities. SEP also includes relevant provisions related to community consultations and consent in the use of local wisdoms for disaster awareness and prevention.

iv. Step 4: Procurement

The management measures outlined in the E&S instruments will inform Environment, Social, Health, and Safety (ESHS) requirements of bidding documents for civil works in accordance with the World Bank's Procurement Regulations and harmonized bidding documents including:

- Submission of Contractor's Environmental and Social Management Plan (C-ESMP) based on mitigation measures set out in the UKL-UPL as part of the bid/proposal;
- A negative list for civil works included in the Bidding Documents;
- Provisional sums for ESHS management included in the Bill of Quantities (BoQs);
- Key ESHS personnel required to implement ESHS requirements; and
- ESHS reporting and monitoring requirements.

The ESMF includes standard ESHS provisions which will form part of the bidding documents. Draft bidding documents, including TOR for expected works (ESHS requirements and provisions) will be reviewed by relevant E&S specialists at the PMUs (can be individual consultants hired for the Project) and submitted to the World Bank for review and no objection prior to announcement of Request for Expression of Interest (EOI) and/or Request for Proposal (RFP).

The following table provides key requirements that must be performed by E&S specialists who will be responsible for integrating key ESMF provisions and recommendations resulting from environmental and social screening processes as well as relevant environmental permits,

including UKL/UPL and LMP in the overall procurement processes and contract implementation.

Table 6. Action for Integrating Environmental and Social Measures in Contracts

Stage of Contractual Process	Actions by PMU (Environmental and Social Specialists and Procurement Specialists)
Before bidding	<ul style="list-style-type: none"> • Ensure that the terms of reference clearly define the supervision engineer’s or PMU responsibilities regarding oversight of, and reporting on, E&S aspects as required in the sub-project UKL-UPL, LMP, and general ESMF provisions. • Ensure the team skills in the terms of reference clearly include key staff qualified and experienced in managing similar projects, and demonstrated capacity to manage social and environmental issues, including issues pertaining to community health and safety and labor.
Preparation of bidding documents	<ul style="list-style-type: none"> • Review contract conditions included in bidding documents to: <ul style="list-style-type: none"> - Ensure that the relevant mitigation measures in the E&S screening and /or UKL-UPL or SPPL recommendations and other provisions in the ESMF such as engagement of asbestos specialist/supervisor and/or other experts are reflected and budgeted in the contract (under responsibility of contractor). - Ensure the UKL-UPL and relevant provisions in the ESMF form part of and is explicitly referred to in the bidding documents. - Identify relevant provisions (workers, camps, child and forced labor, safety, and grievance redress) regulating the contractor’s responsibility and identify any gaps, inconsistencies or areas of concern that could be addressed through additional provisions in the “particular conditions of contract” and/or technical specifications. - Include a negative list for civil works; - Include a requirement that all workers sign ‘Codes of Conduct’ governing behavior and identifying sanctions. - Identify the Codes of Conduct, if necessary. • Ensure the contract conditions clearly specify what type of penalty (i.e. payment suspension) and obligations (i.e. remedial measures) the contractor will face and/or act on if the provisions of the UKL-UPL, ESMF provisions for contractors and C-ESMP are not adhered to—including by sub-contractors. This may include direct incentives to contractors in the form of penalties for poor performance on social and environmental matters or specific Performance Securities for C-ESMP compliance. • Ensure bidding documents clarify the responsibilities of the contractor to prepare and adhere to a C-ESMP based on the UKL-UPL and ESMF and that no civil works will commence until the C-ESMP has been approved by the supervision engineer and/or PMU. The C-ESMP will include, among others, the following mitigation plans: a) traffic and pedestrian safety management plan, b) noise and vibration management practices, c) ambient air quality management practices, d) erosion and sediment control practices, e) environmental and safety incident and reporting mechanism, f) emergency preparedness and response plan, g) environmental, health and safety training plan, h) community and worker grievance mechanism, i) community engagement plan, j) workers’ accommodation plan, k) occupational health safety management practices or procedures, l) labor management plan, m)

Stage of Contractual Process	Actions by PMU (Environmental and Social Specialists and Procurement Specialists)
	<p>security management practices, n) waste management plan (general and hazardous wastes), o) periodic site inspections and audits, p) management of change. q) protocols and regulations of COVID-19 prevention during project implementation</p> <ul style="list-style-type: none"> • For civil works, ensure bidding documents include requirement for Contractor Environmental and Social Management System (ESMS) and dedicated Environmental, Health and Safety (EHS) team as part of contractor organizational structure. • Ensure bidding documents include the responsibilities of the supervising consultant/engineer to regularly monitor and report contractors EHS management performance, at least on a quarterly basis. • Ensure the bidding documents detail how the contractor and supervision engineer and/or PMU will be required to monitor and report on the impacts on the local community, issues related to labor influx and workers' camps. • Propose Key Performance Indicators (KPIs) for Contract Management, reflecting issues and risks specific to the contract and the monitoring plan.
Bidding evaluation	<ul style="list-style-type: none"> • Review and verify the recommended bidder that documents related to the UKL-UPL, ESMF, implementation capacity for environmental and social risk management, and other obligations of the contractor required to be submitted with the bid are sufficiently detailed and cover the contractual requirements. • Require the contractor's representative or dedicated community liaison staff to have the ability to communicate effectively in Bahasa Indonesia. • Verify that the contract management framework identifies clearly lines of communication/feedback and complaint mechanism channels and that these are formalized, and a consistent record is provided. • Ensure that the contractor meets the project's OHS requirements for capability and experience.
After contract signing	<ul style="list-style-type: none"> • Prior to commencing works, the contractor submits site-specific C-ESMP(s) and potential labor requirements based on the UKL-UPL or SPPL, which includes specific management plans for: (i) work activities; (ii) traffic management; (iii) occupational health and safety; (iv) environmental management; (v) social management (including grievance redress mechanism); and (vi) labor influx. • Supervision engineer and/or PMU reviews and approves the C-ESMP—with inputs from appropriate Government agencies—before 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 C-ESMP and mitigation plans are updated promptly and re-disclosed as appropriate to address new issues. • Ensure that the following measures are fully documented for the World Bank's review: <ul style="list-style-type: none"> - Training activities for workers on OHS, activities related to the Code of Conduct, etc. - Performance of recommended specific management plans. - FGRM reports. - KPIs (including the local community/stakeholder engagement plan, if applicable).

v. Step 5: Review and Approval

All relevant Environmental and Social Management instruments and bidding documents required under the project will be subject to internal review by the Environmental and Social Specialists at the PMUs.

Necessary improvements to ensure consistency with the provisions in the ESMF, including proposals and plans for capacity strengthening at the project implementation level. Internal clearances for E&S instruments will be provided by each respective PMUs for both Components 1 and 2. In the event that environmental permits are required, PMUs will submit necessary E&S documentation to the relevant Environmental Agency (provincial or district level) for review and clearance.

The Central PMU will be responsible to ensure final review and submission of E&S instruments and bidding documents (subject to procurement requirements) to the World Bank for no objection.

vi. Step 6: Implementation, Monitoring, and Reporting

Non-construction related activities: day-to-day oversight and management of E&S aspects will fall under the responsibility of each PMU directorate managing each sub-component. E&S specialists and/or focal points will be appointed at the PMU level to support supervision and provide technical support to the implementing agencies. Terms of References (TORs) for the Feasibility Studies (FS) and Detailed Engineering Design (DEDs) under Component 1.2 must be reviewed and cleared by The Bank's environmental and social safeguard specialists prior to the development of the studies/design.

Construction related works: mitigation and management measures outlined in the E&S instruments (i.e. UKL/UPL or SPPL or C-ESMP or ESCOPs) will be implemented by contractors and supervised by relevant supervision consultants and/or PMU E&S specialist and environmental agencies. Environmental and social monitoring is required to gather information to determine the effectiveness of implemented mitigation and management measures and to ensure compliance of the contractor with the approved E&S instrument.

Environmental and social indicators will be defined when mitigation measures are confirmed. Environmental and social specialists from respective PMUs for each component will be tasked with monitoring compliance of the contractors throughout implementation. Bidding documents will confirm expected reporting intervals with contractors¹⁸, who will be required to submit

¹⁸ Medium scale infrastructure projects such as renovation of multi-story buildings will submit progress reports on a monthly basis that include information on construction progress, budget, health, safety and environmental performance.

regular reports on environmental and social indicators and any incidents that may have adversely impacted on the environment arising from the subproject. Such reporting is expected to take place at least every quarter to the PMUs. This will feed into periodic reports of the PMUs and C-PMU and substantiate semi-annual progress monitoring reports to the World Bank. The C-PMU reports to the Bank on: (i) findings and results of the UKL/UPL and other assessments as relevant and implementation of the UKL/UPL (ESMP) and/or C-ESMP and agreed compliance measures; (ii) status of the implementation of mitigation measures; (iii) findings of monitoring programs, and (iv) records of grievances.

Monitoring and evaluation arrangements for specific risks are further detailed in the following instruments. The expected frequency and intensity will be proportional to the level of potential risks (refer ESMF Volume 2):

- Land Acquisition and Resettlement (refer **Annex 7**)
- Indigenous Peoples (refer **Annex 9**)
- Labor Management (refer **Annex 10**)
- Project strategy and Action Plan for SEA/VAC (refer **Annex 11**)

D Associated Facilities

Investments under IDRIP may complement other on-going or future investments by GoI and other development partners/financiers.

As per the World Bank’s ESF, where these activities are “i) direct 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”, they are defined as ‘Associated Facilities’ and relevant ESSs apply, “to the extent that the implementing agencies have control or influence over such Associated Facilities”

Under the project, measures and mitigation measures relating to associated facilities include:

- Conduct screening of other projects/activities to determine whether they are defined as ‘Associated Facilities’, which require the application of ESSs. Such due diligence can be conducted as part of the technical screening assessment;
- Engage proponents/financiers to ensure conformity with relevant ESSs under the IDRIP.

E Feedback and Grievance Redress Mechanism (FGRM)

IDRIP will establish a project-level FGRM which build on the existing FGRM systems within BMKG and BNPB and will be maintained throughout project implementation. The FGRM will also serve as a platform to identify and address issues related to project activities. The FGRM facilitates the process of receiving, evaluating, and handling complaints from affected persons or communities, beneficiaries related to the project, project workers, and general public (i.e.

citizens, NGOs and CSOs). The aims of FGRM is to: (i) strengthen accountability and promote good governance and (ii) provide a means for project stakeholders, including communities and workers to provide feedback and/or express complaints related to project activities. The draft FGRM will be developed based on the existing complaints handling systems within BNPB and BMKG. The FGRM design is detailed below.

Definition: In line with the operational guidelines of the project, the Feedback and Grievance Handling Mechanism is a process for receiving, evaluating, and handling complaints from residents and casualties.

Scope: FGRM will be made available for stakeholders and other interested parties to raise questions, comments, suggestions and/or complaints, or provide any feedback from all activities funded by the project.

Feedback and Grievance Redress Mechanism for Sexual Exploitation and Abuse / Violence Against Children (SEA / VAC) would be treated separately in line with the Project Strategy and Action Plan for SEA and VAC (Annex 11)

FGRM users include (1) project beneficiaries, people who affected by the project (i.e. people who will and/or directly or indirectly affected by the project), (2) project workers, including construction workers and (3) other citizens who can use FGRM for the purposes aforementioned (see Scope).

Management of the FGRM: The FGRM will be managed by PMUs, under the direct responsibility of the Project Director. Since there are two separate PMUs, one under the BNPB and the other one under the BMKG, the FGRM mechanism will be hosted by these two PMUs as per Project Component activities. Each PMU will designate an officer as PIC for FGRM coordinator. This will be either the social specialist for the project or an officer with relevant qualifications to perform the task. As the Executing Agency, BNPB is responsible to oversee and compile the overall FGRM documentation, including for M&E and reporting to the World Bank.

Submission of Complaints: Complaints can be submitted at any time during the implementation of the project.

FGRM channels: the PMUs will provide the channels where residents/beneficiaries/ affected communities can submit complaints through:

Social media: Twitter: @bnpb_indonesia, Facebook: @infobencanaBNPB,
Instagram: @bnpb_indonesia

Email: idrip@bnpb.go.id and idrip@bmkgo.go.id

Letter: send to the Project Office, National Disaster Management Authority (BNPB), Jl. Pramuka Kav. 38, Jakarta Timur, 13120.

Call Centre BNPB: 021-51010 112

Through Lapor.go.id

Information is provided in an accessible format. Information about the Feedback and Grievance Redress Mechanism will be available on the website (<https://bnpb.go.id> and <https://www.bmkg.go.id/>) and will be included in communication with stakeholders.

The project's FGRM will also be made accessible to project workers, including direct workers, contracted workers, and primary-supply workers. Human Resource (HR) matters will be handled directly by respective HR departments at BNPB and BMKG as well as employers in the case of contracted workers. For contracted workers, the project will include a provision in the bidding document requirements for FGRM being made available by selected contractors for their workers as established in the project's LMP. Community workers would be encouraged to address their grievances through the project's stakeholder engagement activities as established in the SEP (ESS 10), including public consultations, direct engagement with community facilitators and project staff. The project's FGRM focal points at the PMU level and FGRM coordinator at C-PMU (who will also assume the role of an environmental and social coordinator) will ensure systematic documentation emerging from project activities.

FGRM for SEA/VAC will be handled separately from the general FGRM established for the project. Specific guidance is provided in Annex 11 of the ESMF on the Project Strategy and Action Plan for SEA/VAC (Volume 2). The project's social specialist at the CPMU will be trained on handling FGRM related to SEA/VAC based on the World Bank's good practice guideline and act as the main focal point for SEA/VAC related grievances. This includes liaising with SEA/VAC service providers upon request of survivors and relevant documentation and reporting to CPMU and World Bank.

Confidentiality and conflict of interest: Complaints can be made anonymously. Confidentiality represents a fundamental aspect of the project and complainants' identity will not be disclosed unless they provide consent to allow further verification and investigation.

Internal FGRM processing:

- **Receiving, recording and dispatching:** Technical E&S Consultant/OHS Officer/FGRM Officers, one to two in BNPB and one to two in BMKG, will fill out a complaint form and record them in the Complaints List. Complaints must be immediately submitted to a tracking system where complaints are sorted and transferred to the division/directorate responsible for investigating and handling complaints, or to staff if the complaint is related to a particular project activity implementation. Each submitted complaint will be responded regardless of the need for further investigation and/or follow-up. Any suggestions and

questions must also be recorded and reported so that they can be analyzed to improve project communication

FGRM Officers will be selected on a merit basis and considerations will be taken to avoid and/or minimize conflict of interest. In BNPB, FGRM will be attached to the Information and Complaints Management Unit, or *Pejabat Pengelola Informasi dan Dokumentasi* (PPID), with one to two dedicated officers in charge for IDRIP and one as coordinator at PMU level. In BMKG, FGRM also will be attached to the PPID, with one to two dedicated officers in charge for IDRIP, with one act as coordinator at PMU level. In addition to that, BNPB as CPMU, will provide one FGRM coordinator for project level, which in charge to manage, evaluate, report, and document all feedback and complaint reported from PMUs. All appointed individuals involved in the investigation process must not have material, personal, or professional interests to the investigation and there is no personal or professional relationship with the complainant(s) or witness(es).

- **Reviewing and investigating:** following complaint dispatch, each individual complaint must be reviewed within 15 (fifteen) working days and investigated as necessary. The person who takes in charge of investigating complaints will gather the facts to get a clear situation. Investigation/follow-up can include site visits, document review, and meetings with parties who can solve the problem. The timeframe for complaint investigation can be extended to 16-30 business days depending on the complexity of the issues and based on the PMU manager's approval, and the complainant must be informed whether:
 - additional consultation is needed to respond to a complaint;
 - further materials are needed to enable proper investigation

The results of the investigation and response will be submitted for consideration to the FGRM coordinator at the national level/project level, who will decide what action to take. FGRM coordination will document the status of the complaints, including actions to be taken or agreed. Details of the investigation and findings will also be documented in the tracking system and submitted to the FGRM coordinator at the PMU level.

If complaints cannot be solved at the division/directorate at PMU level, complaints can be escalated to the Central PMU or Inter-agency Steering Committee as relevant.

- **Responding:** complainants will receive complaint verification and updates of complaint settlements by mail, e-mail and/or other channels where complaints are submitted. Questions will be responded by the FGRM PIC or relevant directorate(s) within 15 (fifteen) working days of submission. To enable feedback loop, complainants will be provided opportunities to express their concerns and/or opinions regarding the outcome and/or processes of complaint settlements. If any dissatisfaction is reported, the FGRM PIC will be responsible to liaise with relevant directorate(s) or parties and/or escalate to higher authority on a case by case basis.

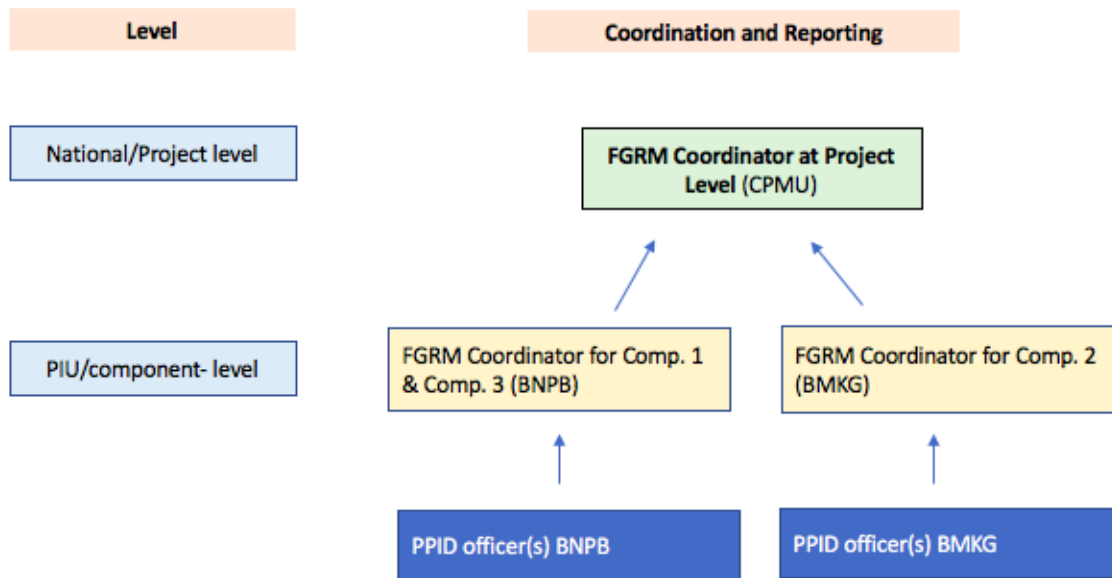
Issues related to construction workers for civil works will be further elaborated in the LMP (refer to **Annex 10 in Vol. 2**) and each contractor with support from OHS supervision engineers will be responsible to manage grievances related to their workers. FGRM Office at the PMU level will maintain coordination and communication exchanges with the contractors and OHS supervision engineers to ensure that all grievances are systematically documented.

Gender- and children- related grievances, if any, will be managed through a separate process as guided in the FGRM in Chapter 3 and Project Strategy and Action Plan for SEA/VAC (refer to **Annex 11 in Vol. 2**).

Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address Project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate GRS, please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

The following Figure 2 illustrates the internal FGRM processing as outlined above:

Figure 2: FRGM Internal Processing



Staffing: FGRM Officers at the PMU level will have the following responsibilities.

- Management of the entire FGRM system;
- Coordinating with FGRM officers in BNPB and BMKG (separately), including with Environmental and Social Specialists, OHS officers, supervision engineers as relevant;
- Developing FGRM awareness raising activities;
- Receiving and recording complaints and inquiries;
- Sorting/categorizing and dispatching complaints to relevant directorates and/or parties, including contractors as relevant;
- Notifying complainants about their complaint status and timeframe for settlements about receipts and deadlines for reviewing complaints;
- Tracking complaint settlements;
- Maintaining communication and ensuring coordination with relevant stakeholders responsible for complaint settlements.

FGRM Coordinator/PIC at project/national level (C-PMU) will have the same responsibilities as abovementioned, with additional responsibility for overall monitoring, consolidation of data, and reporting as part of the project implementation/progress report.

Monitoring and Reporting

FGRM documentation for the project will be available on the website (<https://bnpb.go.id>) and (<https://www.bmkg.go.id/>), which will be periodically updated.

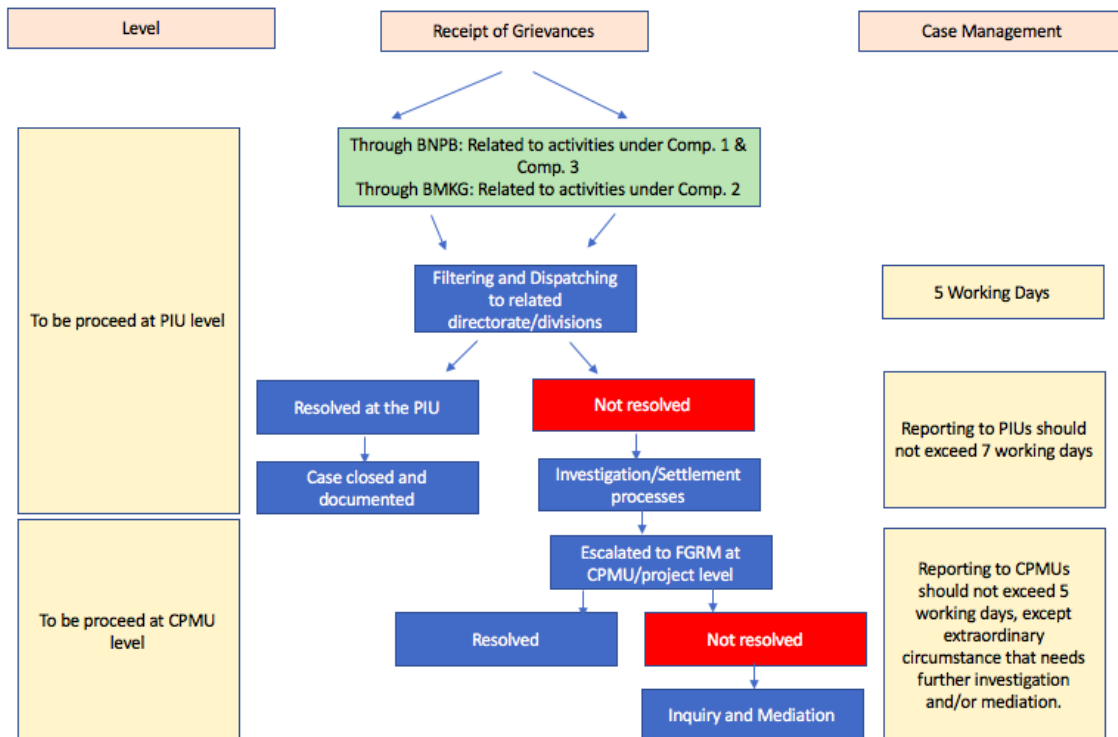
The FGRM coordinator/PIC at the project/national level (C-PMU) will monitor the FGRM to assess its effectiveness and accessibility in capturing, documenting and resolving complaints

at the project level. FGRM officer at PMU level should submit data to FGRM coordinator at CPMU level on every month for project-level data compilation and reporting purposes. Such monitoring will inform measures for future FGRM improvements.

As part of the progress report submitted to the World Bank, the FGRM Coordinator/PIC at the national level/C-PMU will collect and consolidate FGRM documentation from each PMU (BNPB and BMKG) and perform necessary analyses to identify if there are systematic issues associated with the project implementation. The reports will include the following information:

- Status of FGRM operation (procedures, staffing, awareness raising, etc.);
- Quantitative data about the number of complaints received and their status of settlements;
- Qualitative data about the types of complaints and answers given, unresolved problems;
- Timeframe required for complaint settlements;
- Complaints warranting further escalation to the higher level;
- Any specific issues related to FGRM processes and staffing;
- Corrective actions agreed;
- Lessons learnt;

Figure 3. Project-level FGRM process



Under COVID-19 circumstances, care will need to be taken to ensure public safety and to the extent possible, face-to-face engagement and/or consultations will be avoided as per GoI's instruction. Stakeholder engagement, which also covers public access to FGRM, will be

address through virtual means, such as social media, email, virtual meetings, phone calls to the extent technically feasible. Such avenues will be disseminated to the public and target communities through BNPB and BMKG's existing networks

Chapter 4: ESMF Implementation and Financing

A Institutional Arrangement for Environmental and Social Management

The National Disaster Mitigation Agency (BNPB) is responsible to oversee the overall project activities. At the same time, BNPB is the coordinator for activities under Component 1 on increased disaster risk knowledge and awareness and Component 3 on project implementation support. Meanwhile BMKG will be overseeing all activities under Component 2 on Geophysical early warning services. A central project management unit (CPMU) will be established to coordinate the overall project activities for BNPB and BMKG, while two Project Management Units (PMUs) established at BNPB and BMKG. The following table provides information on the roles and responsibilities of the PMU and CPMU.

Table 7. PMU and CPMU roles and responsibilities in E&S process

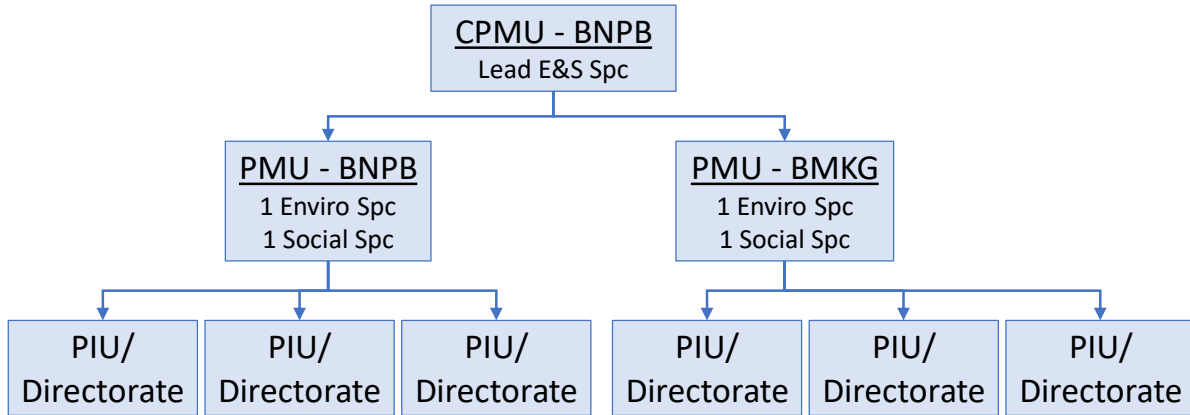
Process	PMUs	CPMU
<i>Environmental and social screening in AWP</i>		
E&S Screening on Annual Working Plan submitted by each implementing agency	Ensure E&S screening is performed prior to annual work plan (AWP) submission	Internal approval of AWP prior to submission to the World Bank for No Objection
E&S screening on detailed activity plan	Ensure E&S screening is performed on the basis of AWP's per program/activity	
<i>Environmental and social provisions in Procurement of Civil Works</i>		
Inclusion of ESHS provisions in bidding documents	Ensure relevant ESHS provisions, budget items for ESHS (i.e. provisional sums), negative list are included in the bidding documents and TOR for civil works	Submission of draft Bidding Documents to the World Bank for No Objection
Review of C-ESMP	Review relevant action plans, roles and responsibilities and budget allocation in the contractor proposals and C-ESMP	Provide overall E&S oversight in the procurement of civil works
<i>ESMF implementation</i>		
Streamlining of E&S program in activity plan	Ensure E&S contents and relevant measures are included in the work plans and relevant instruments and/or action plans are in place prior to activity implementation	Provide overall E&S oversight and mobilise technical support as needed to strengthen E&S management based on recommendations from the environmental and social specialists for the project.
Capacity building for strengthening E&S management	Ensure that capacity building related to strengthening E&S management is implemented, including on aspects related to social inclusion and labor management	
Mainstreaming of E&S in procurement plan	Ensure the inclusion of E&S aspect in the bidding documents, including TOR for civil work specification and Bill of Quantity (BoQ), individual consultants, and local facilitators for trainings or community-based programs (DESTANA/KATANA).	

Process	PMUs	CPMU
Ensuring accessibility of FGRM for target communities and project workers.	Ensure FGRM is adequately resourced and relevant measures to ensure its accessibility are in place as part of the project specification and TOR and conduct awareness raising trainings	
Stakeholder engagement	Implement stakeholder engagement, including community outreach as guided by the SEP. Support coordination and liaise with disaster-mitigation and response agencies, including BIG, BPPT, LAPAN, TNI, Kemensos, Kemenkominfo, selected subnational governments, and other relevant agencies.	Convene relevant stakeholders, including the project steering committee to support the implementation of project activities, including trouble shooting of issues unresolved at the PMU level
<i>ESMF monitoring and evaluation</i>		
Annual Work Plan (AWP)	Monitor and evaluate the process of E&S inclusion in AWP at the component level	Monitor the overall project compliance with the ESMF and liaise with the World Bank on ESMF implementation under the project, including progress report submission
Detailed activity plan/per program	Monitor and evaluate the process of E&S inclusion in the detailed activity plans	
Stakeholder engagement	Monitor and evaluate the implementation of the SEP, including any emerging concerns from target communities	Monitor and evaluate the implementation of the overall SEP
Feedback and Grievance Redress Mechanism	Monitor and evaluate the process of FGRM implementation during activity implementation, including use of FGRM channels by target communities, project workers, including any SEA/VAC incidents reported related to the project.	Monitor and evaluate the effectiveness of the overall FGRM system and provide necessary technical support
Capacity building	Provide technical monitoring and capacity building support to community facilitators and project staff	Monitor and evaluate the process of E&S inclusion in institutional capacity building activities, targeted at internal PMUs and local facilitators/workers hired for community-based preparedness program (DESTANA/KATANA)

The CPMU will engage a lead environmental and social specialist who will coordinate the overall implementation of the ESMF for IDRIP. The lead will be assisted by one environmental specialist and one social specialist at each of the PMUs at BNPB and BMKG. In total, there will be five environmental and social specialists dedicated to implement the ESMF for the subprojects. The main responsibilities of the environmental and social specialist are to conduct environmental and social screening for the subprojects and ensuring the relevant required E&S

instruments are in place in accordance with the ESMF requirements. The specialists will also conduct monitoring and evaluation of the mitigation measures and keep good record of all documents in implementing the ESMF. The figure below shows the proposed institutional arrangement for the environmental and social specialist.

Figure 2. Institutional Arrangement for Environmental and Social Specialists



B Capacity Building

BNPB and BMKG have a set of regulations, procedures, and SOPs to manage environment and social risks, including regulation on inclusive and participatory disaster risks awareness and preparedness (Head of BNPB No.1/2012 on the Resilient Villages), gender mainstreaming in disaster preparedness and awareness rising (Head of BNPB No.13/2014), information disclosure (UU KIP No. 14/2008), as well as SOPs on no-infrastructure development or activities on government protected areas or nearby cultural heritage areas. Furthermore, BNPB and BMKG also have had and have been implementing SOPs on labour management procedure and (electronic) waste management (PMK No. 83/2016 on State-owned Assets Removal). While, there is a sense of familiarity with vast range of environmental and social management procedures, which are covered by the Indonesian’s and institutions level regulations and procedures, implementation and enforcement of regulatory provisions and oversight vary due to geography and differing implementation capacities across the regions. Hence, there is a need for capacity building measures in areas considered critical for the overall E&S consultations, particularly complaint handling processes, inclusive and participatory public consultations, and other technical capacities, including management of OHS and community health and safety risks associated with construction activities under the project.

To strengthen the PIUs capacity for environmental and social management, the following themes for capacity building and training were identified, which will be revisited during project implementation:

Table 8 Capacity Development Plan

Training/workshop	Timing	Participants	Lead by/PIC
IDRIP and ESMF	- Prior to project implementation - Annual refreshers	- All project personnel - PIUs	E&S Specialists
Procurement (including ESHS in civil work and supervision)	- Prior to project implementation - Annual refreshers	- All project personnel - Procurement personnel	Procurement specialists with assistance from E&S specialists
PPID/Feedback and Grievance Redress Mechanism	- Prior to project implementation - Annual refreshers	- All project personnel - PIUs	E&S specialists
Gender and disability-sensitive public consultation	- Prior to project implementation	- All project personnel	E&S specialists
Gender and disability-inclusive community-based disaster preparedness program (DESTANA/KATANA)	- Prior to project implementation - Annual refreshers	- PIUs - Facilitators	E&S specialists
Construction management relating to environmental and social aspects and how to use the ESCOPs, OHS, and Community Health and Safety Management, including SEA/VAC	- Annually	- PIUs - Supervision consultants - Contractors	E&S Specialists
Various technical assistance and thematic training on selected areas	- Annually	- PIUs - Specific project personnel	CPMU/PMU

Additional training and capacity building options may be proposed depending on needs and capacity gaps which will be assessed during project implementation. The above training will be organized by BNPB and BMKG with technical support from the environmental and social specialist at the CPMU and PMU levels, and when required in collaboration with training service providers and technical support from the World Bank as appropriate. Such training will be financed by the project, particularly capitalizing on available resources under Component 3.

C Stakeholders Engagement and Information Disclosure

The overall stakeholder engagement and information disclosure will be guided by the project SEP. The following summarizes key measures agreed as part of the overall project engagement.

i. Key Stakeholders

Implementing agencies for the management of environmental and social risks include institutions and agencies that influence and make decisions on the project implementation. This group mainly includes the National Disaster Management Authority (BNPB) and the Indonesian Meteorology, Climatology and Geophysics Agency (BMKG); the Ministry of National Development Planning (Bappenas), Ministry of Finance (MoF), as well as BMKG and BPBD offices at the subnational-level. BNPB will be responsible for activities under Components 1 and 3 and oversees the overall coordination of IDRIP activities, while BMKG is responsible for activities under Component 2.

Under Component 1 on Disaster preparedness and emergency management capacity, engagement will be made with local governments, communities and vulnerable groups, including indigenous people and people in remote areas, along with BPBD for community-based preparedness programs; technical agencies for the development of the MHEWS plans; BPBDs and local government for information dissemination, the Ministry of Communications and Information (KEMENKOMINFO) to coordinate the strengthening of adequate information dissemination infrastructure and strengthening internet networks for the community (downstream), and BPBDs and National Search and Rescue Team (BASARNAS) and other relevant agencies for emergency management capacity building.

Under Component 2 on Geophysical Early Warning Services, engagement will be made with technical agencies (BMKG, The Geospatial Information Agency-BIG, The Assessment and Application of Technology Agency-BPPT), local governments, and KEMENKOMINFO for service delivery systems, technical agencies (BMKG) and local governments for monitoring networks an early warning capacity, and with technical agencies (BMKG), especially the Education and Training Centre (PUSDIKLAT) and BMKG in the subnational level for both institutional and individual capacity building.

Under Component 3 on Technical Assistance, engagement will be made with the education and training centre (Pusdiklat) of BNPB. On this component, there would several activities that involves individual consultants, such as project management support, technical advisory, Monitoring and Evaluation, procurement, and knowledge sharing.

ii. Stakeholder Engagement

The project's broader stakeholder engagement is guided by the SEP and will inform the project through: (a) consultations and community participation during project implementation, e.g.,

communities will participate in the design and implementation of community preparedness programs (DESTANA/KATANA)¹⁹ and people oriented early warning systems; (b) transparent feedback and grievance redress mechanisms; (c) communication campaigns and capacity building; and (d) development of risk management processes and engagement required under the World Bank's ESF.

The level and approach for stakeholder engagement will depend on the level of risks and influence each stakeholder has in managing anticipated environmental and social risks. Another important dimension is engagement to enhance project benefits by promoting participatory and inclusive project implementation and responding to community needs. Stakeholder engagement will be implemented as early as possible at the planning stage to ensure lessons learned from previous projects are well incorporated to better inform the design and planning of project implementation.

For both components, further consultations with target communities will be conducted once the target locations have been determined. Such consultations will focus on types of engagement approaches amongst a wide range of population groups, including vulnerable groups and remote communities occupying disaster-prone areas, awareness raising materials and media for public information dissemination (disaster warning), capacity building to village stakeholders and first responders in the event of disasters, use of village resources, including village funds in the management of post disaster events and recovery. Communities will be sensitized on topics such as early warning, disaster prevention, post disaster management, as well as access to information with regards to imminent disasters or disaster risks.

Local wisdom and/or indigenous knowledge and practices on disaster prevention and management, which are often observed in some regions of Indonesia, will be identified and revitalized as part of the overall awareness raising and community capacity building, especially when enhancing community-based disaster preparedness program (DESTANA/KATANA).

iii. Information Disclosure and Public Consultation

Integral to the project's Stakeholder Engagement Plan (SEP), PMUs will disclose the draft of the ESMF and conduct public consultations related ESMF in order to seek for public's feedback and facilitate any concerns related to environmental and social risks of activities under IDRIP.

¹⁹ DESTANA: *Desa Tangguh Bencana* (Resilient Village – a community-based disaster preparedness program), KATANA: *Keluarga Tangguh Bencana* (Resilient Family – family-based disaster preparedness program)

Information disclosure

In effort to promote accessibility and transparency, the draft the ESMF draft (Volume 1 and Volume 2), including the updated SEP, will be disclosed in both Bahasa Indonesia and English at least 10 business days prior to public consultation, and the confirmed/revised version will be disclosed for public after receiving the World Bank's "no objection" and prior to project effectiveness. These documents must be updated and re-disclosed to reflect stakeholders' views and concerns raised during the public consultation. Detailed consultation minutes and documentation must be provided as attachments of the documents. Relevant E&S instruments will be disclosed by BNPB and BMKG as the implementing agencies through the following platforms:

BNPB website: bnpb.go.id

BMKG website: bmkg.go.id

Email idrip@bnpb.go.id and idrip@bmkg.go.id

The first draft of ESMF has been disclosed on 29 June 2020 on BNPB and BMKG website (<https://bnpb.go.id/idrip-2020>). The World Bank will also disclose the ESMF and relevant E&S instruments through the World Bank website following authorization from BNPB and BMKG.

Another important aspect of general principles of stakeholder engagement is the use of a Feedback and Grievance Redress Mechanism (FGRM) for affected communities and workers who are involved/affected/benefitted by IDRIP.

The project will implement regular stakeholder engagement, in the form of public consultations, workshops and/or other approaches as appropriate throughout the project cycle to ensure that: 1) affected and concerned/interested stakeholders are able to raise their concerns and feedback, 2) PMU can inform affected and interested stakeholders on the current status/updates on the project implementation. Public consultations will be undertaken in accessible venues (i.e. location, time, and facility) and use Bahasa Indonesia and/or local language(s) as necessary (i.e. if public consultations and/or community engagement involve local communities and/or Indigenous People). Consultations for environmental and social management instruments for specific risks, such as RAP, IPP, C-ESMP, etc. will be undertaken once sites and relevant risks and potentially affected stakeholders have been identified. Disclosure and information dissemination of relevant instruments will be assured at least 10 working days prior to such public consultations in languages, formats and media accessible to affected stakeholders.

All materials that are prepared for public consultation should be accessible to the broader public, including the availability of the documents in English and Bahasa Indonesia, and are published on the official website of the implementing agencies, official social media accounts of the PMUs, and in publicly-accessible areas as appropriate (e.g., hardcopy of ESMF draft in select BMKG subnational offices or BPBD offices), if relevant.

Any concerns, feedback, or complaints raised during public consultations and/or during project implementation shall be documented and reported through the FGRM procedure. BNPB and BMKG shall provide clear explanation of how, who, and when to follow up, including any decisions to not further process complaints and/or cases (refer the FGRM process). At a minimum, such documentation needs to cover the following aspects: venue, time, attendants, points of discussions, concerns/feedback/complaints, and follow up notes.

All activities and notes during public consultation should be recorded and documented to be followed up or published on the websites of the PMUs. The general information needed are: the venue, time, attendants, points of discussions, concerns/feedback/complaints, and follow up notes. If officials of the PMUs deem to take photo documentations, one should ask for permission from the attendance at the beginning of the consultation – there should be adequate information on what the purpose of the photos and where it will be stored, posted, or published (i.e., if need to be published on the website, social media, or being used in the report).

Public Consultation

Regarding the ongoing COVID-19 pandemic situation, virtual public consultations were carried out to overcome the limitations in conducting direct interaction with stakeholders. The project public consultation and ESMF documents were carried out on Tuesday, July 14, 2020 through the Zoom platform which was attended by 152 participants as well as the distribution of questionnaires filled out by 90 respondents from BPBDs and Technical Unit BMKG in Province and District levels. Public consultations were carried out to ensure that the interests of stakeholders and the community could be captured and considered as outlined in the SEP and thus provided information for program implementation. The sustainability of the public consultation has been documented in the form of: invitation letter, list of participants, consultation minutes (summary of the consultation, responses, and the results of the distribution of questionnaires), and photos. Please refer to Appendix 14 - Public Consultation for detailed information.

During the IDRIP project implementation, consultations will be carried out continuously. Community involvement will be adjusted to meet the needs of the target community. All potential risks will be communicated and consulted transparently. Such involvement will also function as a way where potentially affected community members can submit complaints and questions about the project. Impact mitigation measures will be mutually agreed upon by affected communities and systematically documented. Public consultation plans related to environmental and social management during the implementation of IDRIP are shown in Table 8. Regarding the limitations during the COVID-19 pandemic, consultation and community involvement are encouraged to be implemented virtually. This is regulated further in **Appendix 13** of Vol 2 concerning Prevention and Regulation of COVID-19 Infection Prevention and Control (IPC) for Stakeholder Engagement, Community Based Activities and Constructions. The COVID-19 guidance in **Appendix 13** is based on the World Bank's ESF/Safeguards Interim Note: COVID-19 Considerations In Construction/Civil Works Projects and The

Ministry of Public Works and Housing Instructions No. 02/IN/M/2020 on Protocol for Preventing the Spread of Corona Virus Disease 2019 (COVID-19) In Construction Services.

Table 9 Public Consultation Plan related to E&S management

Project Stage	Consultation Topics	Method	Target Groups	Timeframe	PIUs
Prior to project effectiveness	ESMF finalisation and updates on the project's Stakeholder Engagement Plan (SEP)	Workshops, FGDs	National PMUs, BPBD, selected Sub-national government agencies, NGOs/CSOs, and community representatives (if the situations are conducive)	November 2019 (Already Implemented for Phase I)	BNPB, BMKG, with assistance from community facilitators if necessary
Project implementation	Project implementation progress, including rationale on E&S management, SEP, and FGRM	Workshops, FGDs through virtual meetings and/or other applicable methods in accordance with prevailing risks and COVID-19 Protocols (Annex 13 of ESMF Volume 2)	National PMUs, selected sub-national government agencies, representatives of NGOs/CSOs and community members (if necessary).	Periodic	BNPB (Directorate of Prevention)
	Community engagement as part of IDRIP implementation (as part of SEP implementation and updating)	Workshops, community meeting, FGDs through virtual meetings and/or other applicable methods in accordance with prevailing risks and	National PMU, BPBD, selected Sub-national government agencies, NGOs/CSOs, and community representatives (if the situations are conducive)	On-going	BNPB (Directorate of Prevention), BMKG

		COVID-19 Protocols (Annex 13 of ESMF Volume 2)			
Project/sub-project completion	Project evaluation (part of Implementation Completion Report/ICR) covering ESMF implementation and FGRM management	Workshops, FGD, community meeting, through virtual meetings and/or other applicable methods in accordance with prevailing risks and COVID-19 Protocols (Annex 13 of ESMF Volume 2)	National PMU, BPBD, selected Sub-national government agencies, representatives of NGOs/CSOs, and community representatives	2024	BNPB (Directorate of Prevention), BMKG

D Financing

IDRIP financing will support implementation of this ESMF and related activities such as monitoring, evaluation, supervision, documentation, dissemination, and capacity building. Budget allocation for core environmental and social management at the project level will be sourced from Component 3. Budget allocation for sub-project environmental and social management will be embedded into project activities and contracts (in the case of civil works). Budget allocation for preparation of sub-project environmental and social management instruments (i.e., UKL-UPL, LARPF, IPP, additional TOR for technical assistance, Communication Strategy, FGRM enhancements, etc.) at activity/sub-project preparation stage cannot be determined at this stage since the exact project footprints and whether such instruments are required will be determined during project implementation. Costs related to the provisions of the ESMF will include, please Table 10

Table 10 Financial Plan

Budget items	Frequency	Cost estimate
Recruitment of environmental and social specialists	One-off (over project duration with units per month)	USD469.422 Rp6.589.275.000

Environmental and Social Management Framework
Indonesia Disaster Resilience Initiatives Project

Training and refreshers of core environmental and social team, including relevant personnel and grievance focal points in the CPMU and PMUs	Annual	USD17.782 Rp249.600.000
Capacity building for the implementation and monitoring of environmental and social management for implementing agencies, sub-national governments, contractors, supervision engineers, etc.	Recurrent	USD31.309 Rp439.482.000
Monitoring and oversight of environmental and social aspects, covering operational costs, technical assistance, and reporting	Recurrent	USD51.267 Rp719.630.000
Consultants for FGRM strengthening (technical assistance component)	One off	USD138.970 Rp1.950.725.000
Total (estimate)		USD708.749 Rp9.948.712.000