



The World Bank

Indonesia Disaster Resilience Initiatives Project (IDRIP) (P170874)

Appraisal Environmental and Social Review Summary

Appraisal Stage

(ESRS Appraisal Stage)

Date Prepared/Updated: 11/08/2019 | Report No: ESRSA00232

**BASIC INFORMATION****A. Basic Project Data**

Country	Region	Project ID	Parent Project ID (if any)
Indonesia	EAST ASIA AND PACIFIC	P170874	
Project Name	Indonesia Disaster Resilience Initiatives Project (IDRIP)		
Practice Area (Lead)	Financing Instrument	Estimated Appraisal Date	Estimated Board Date
Urban, Resilience and Land	Investment Project Financing	5/20/2019	12/5/2019
Borrower(s)	Implementing Agency(ies)		
Republic of Indonesia	National Disaster Management Authority, Indonesian Agency for Meteorology, Climatology and Geophysics		

Proposed Development Objective(s)

To improve the preparedness of the central government and selected local governments for natural hazards.

Financing (in USD Million)	Amount
Total Project Cost	160.00

B. Is the project being prepared in a Situation of Urgent Need of Assistance or Capacity Constraints, as per Bank IPF Policy, para. 12?

Yes

C. Summary Description of Proposed Project [including overview of Country, Sectoral & Institutional Contexts and Relationship to CPF]

Indonesia is one of the most disaster-prone countries in the world and exposed to a range of natural hazards that can hinder its development outcomes, affecting its people and the economy. Located in the Pacific Ring of Fire with 127 active volcanoes across the archipelago nation, Indonesia experiences frequent earthquakes and tsunamis, as well as floods. Between 2007 and 2018, recorded disaster events caused the loss of 7,375 lives and displaced 55,000,000 people, with annual economic losses of approximately US\$2.2 to US\$3 billion. The natural disasters that Indonesia experienced in 2018 caused the most loss of life in over a decade, particularly from three major catastrophic events:



earthquakes in West Nusa Tenggara (July-August 2018), tsunami and earthquake in Central Sulawesi (September 2018) and tsunami in Sunda Strait (December 2018).

The World Bank is supporting the Government of Indonesia through the Indonesia Disaster Resilience and Reconstruction Program (IDRAR) to finance the rehabilitation, upgrading and reconstruction of critical public facilities and permanent housing in disaster affected areas, as well as to strengthen disaster risk management systems across Indonesia, to be prepared under accelerated procedures. IDRIP comprises two projects: (i) Central Sulawesi Rehabilitation and Reconstruction Project (CSRRP) focusing on supported targeted communities with reconstructed and strengthened public facilities and safer housing; and (ii) Indonesia Disaster Resilience Initiatives Project (IDRIP), which will help improve the preparedness of the central government and selected local governments for future natural hazards. 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 to improve multi-hazard early warning systems (MHEWS). Learning from recent disasters, Indonesia would also benefit from: (i) public awareness and preparedness, including community level contingency planning and disaster risk education; (ii) timely and more accurate impact-based forecasting and disaster warnings, and last-mile communication underpinned by integrated and fit-for-purpose monitoring networks; and (iii) improved emergency management capacity for local governments to be equipped adequately for rapid and reliable responses to multiple hazards.

The PDO of this project (IDRIP) would be achieved through three key components: (1) Disaster preparedness and emergency management capacity; (2) Geophysical early warning services; and (3) Project Implementation Support. The project will support the design of a coordinated MHEWS master plan; implement a district- and village-level disaster preparedness program; and strengthen the capacity of local emergency operations centers (pusdalops).

D. Environmental and Social Overview

D.1. Project location(s) and salient characteristics relevant to the ES assessment [geographic, environmental, social] 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, West Nusa Tenggara (NTB) affected the entire 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 post effect of the natural disaster events, the GoI had set up 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 and focuses on increasing community preparedness against future disasters, including the establishment of early warning systems.



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 to improve multi-hazard early warning systems (MHEWS). Indonesia has 383 regencies/cities ranked as high on the disaster risk index, with almost half of its population living in hazard-prone areas; over 22 million people are exposed to high earthquake risk, with 3 million exposed to associated high tsunami risk; and 20.5 million people settled in high flood risk, with 8.6 million people living in high landslide risk.

For project components that do not involve any physical construction such as community awareness programs, it will be developed and disseminated in up to 180 villages across Indonesia, reinforcing the principles of community-based disaster risk management and empowering local communities and individuals to reduce disaster risk proactively.

For project components that involves civil works under Component 1 will be concentrated in up to 20 districts affected by recent disasters, as well as selected priority districts. This will include upgrade or construct Emergency Operation Center (EOCs), emergency management information systems, and communication equipment, including data centers, and network infrastructure that complements and is compatible to the national level system.

D. 2. Borrower's Institutional Capacity

BNPB and BMKG do not have prior experience in managing safeguards or the World Bank's Environmental and Social Framework (ESF) under World Bank-financed operations. While environmental and social (E&S) risks under these components are expected to be low to moderate, lack of familiarity with the World Bank's environmental and social requirements indicates the need for further investments in institutional capacity building that the project is aiming to support. Component 3 for project implementation support will offer the assistance needed for BNPB to implement the environmental and social instruments necessary for mitigating risks under Component 1, whilst Component 2 includes financing for project implementation support to BMKG. The effectiveness of early warning systems and emergency management information systems depends to a great extent also on the quality of awareness raising of all stakeholders including communities. The capacity of BNPB and the subnational disaster management agencies (BPBDs) to involve all stakeholders is critical.

II. SUMMARY OF ENVIRONMENTAL AND SOCIAL (ES) RISKS AND IMPACTS

A. Environmental and Social Risk Classification (ESRC)

Moderate

Environmental Risk Rating

Moderate

The Environmental risk and impact has been determined as Moderate. Overall, the project will have positive environmental and social benefits in building disaster awareness activities through strengthening disaster risk management systems for faster and more effective disaster response. Under Component 1, the project will provide investments in strengthening systems, building and renovating infrastructure, procuring instruments, and installing



technological systems and software. The moderate risk is associated with components 1 and 2 as it is directly dependent on the management capacity and commitment of individual implementing agencies - BNPB and BMKG - to apply the World Bank's Environmental and Social Standards (ESSs) under the ESF, in particular ESS 4 on community health and safety. For component 3, no potential risk is anticipated except positive impacts to enhance the Borrower's capacity to retain qualified and competent resources with E&S skills and experience to manage E&S management systems of the Project.

Social Risk Rating

Moderate

The Social Risk rating has been determined to be Moderate. While the social development outcome is positive, a critical factor is the ability of the implementing agencies to actively involve relevant stakeholders including disaster-prone communities on awareness raising about emergency management information systems and response mechanisms. The establishment and upgrading of selected emergency operation centres, integrated data centers, and related infrastructure is likely to involve limited land acquisition and, depending on the type of land, the land acquisition procedures would need to be invoked. The project has a good potential to strengthen community-based disaster risk management systems for enhanced effectiveness.

B. Environment and Social Standards (ESSs) that Apply to the Activities Being Considered**B.1. General Assessment****ESS1 Assessment and Management of Environmental and Social Risks and Impacts*****Overview of the relevance of the Standard for the Project:***

The PDO of the IDRIP 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 (earthquakes in July and August 2018), Central Sulawesi (earthquake and tsunami in September 2018) and areas along Sunda Strait (tsunami in December 2018).

The project has the potential to reap positive environmental and social impacts, including positive benefits to communities residing in high risk and/or disaster prone areas through better preparedness against future disaster shocks. Although the specific information on the physical investments related to disaster management and supporting infrastructure (i.e., data centers and emergency operations centers) have not been identified, previous experiences with similar needs indicates the size of construction would be between small to medium scale.

Low to moderate environmental and social risks are anticipated for activities under Components 1 and 2. Under component 1 on disaster preparedness and emergency management capacity, the initial phase will support immediate urgent needs of local governments affected by the catastrophic events in 2018, followed by high-risk areas to be identified during project implementation. Component 2 on geophysical early warning services 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.

Under Component 1, project activities will involve other civil works which are envisaged to generate minor and temporary negative impacts such as dust, noise, disturbance on existing traffic flows, safety and access to local



communities. The types of civil works will include: (i) emergency operations centers/pusdalops – minor civil works, mostly internal refurbishment of a local BPBD room or perhaps small new building/shipping container located on the same site; (ii) small-scale structures to accommodate/protect weather monitoring equipment like weather station/seismometer with required space around 25 to 50 square meters. Potential risks would be associated with lack of compliance with Health, Safety and Environment (HSE) guidelines and protocol during construction (e.g., using personal protective equipment for worker safety) and post-construction activities (e.g., debris management), which might lead to workplace injury at construction site. Previous project experiences in Indonesia indicate that contractors' capacity and awareness will likely vary, with lower capacities potentially encountered among local contractors outside Java. In addition, supervision and law enforcement capacities amongst sub-national environmental agencies will similarly vary.

Under Component 2, project activities will involve minor civil works in installation of geophysical equipment and no major anticipated impact in surrounding environment.

There are no potential adverse risks under component 3 except positive impacts to manage the above-mentioned potential risks and retain experienced technical people to assist the PIUs during project implementation including managing environmental and social aspects of the project.

Potential environment impacts of the project activities can be managed through robust and well implemented mitigation measures, which have been established in the draft Environmental and Social Commitment Plan (ESCP). These include provisions in the project's Environmental and Social Management Framework (ESMF) for Environmental Code of Practice (ECOPs) as well as Construction Environmental and Safety Management Plans (CESMPs), commensurate to the scales of the construction and type of activities.

Due to the emergency nature under which the project is being prepared , a project-level ESMF will be developed prior to loan effectiveness, once selected target districts have been confirmed by the Government, starting with areas affected by the recent catastrophic events, including in Central Sulawesi, West Nusa Tenggara, and along Sunda Strait. Learning from these events, the Government has indicated urgent priorities to strengthen public awareness and preparedness (including community-level contingency planning and disaster risk reduction); and early warning systems capacities (including timely and more accurate impact-based forecasting and disaster warnings). The project will provide urgently needed support to restore damaged hazard monitoring and early warning equipment and strengthen the disaster risk management capacity of local governments in these areas. Implementation of the ESMF will be part of the technical assistance support to strengthen the institutional capacities of the implementing agencies. No construction activities will proceed without the World Bank's approval, which will be subject to the preparation of adequate environmental and social management plans in conjunction with the agreed ESMF. The ESMF will be used to screen the sub-projects in light of environmental and social risks resulting from project activities and to determine necessary assessments and mitigation measures, which will guide the project design and implementation. Stakeholder involvement for awareness raising on disaster preparedness and promoting the involvement of potentially-disaster prone communities will be a key focus area for attention and this has been further detailed in the project's Stakeholder Engagement Plan (SEP).



A Stakeholder Engagement Plan (SEP) has been prepared as part of project preparation and identifies and analyzes key project stakeholders, describes opportunities for public consultation and grievance redress mechanisms, and outlines commitments to releasing routine information on the project's environmental and social performance. The SEP was disclosed by the Government on May 22, 2019 and by the World Bank on May 24, 2019. As part of the early implementation of the project, the key implementing agencies will seek the views of stakeholders on the SEP, including the confirmation of all stakeholders and the proposals for future engagement. Such engagement will continue to be a reiterative process during project implementation. Key implementing agencies under the project will maintain and disclose as part of the environmental and social assessment, a documented record of stakeholder engagement to date, including a description of the stakeholders consulted (dis-aggregated by gender), a summary of the feedback received and a brief explanation of how the feedback was taken into account or the reasons why it was not. This requirement has been established in the ESCP.

B.2. Specific Risks and Impacts

A brief description of the potential environmental and social risks and impacts relevant to the Project.

ESS2 Labor and Working Conditions

Specific physical investments financed by the project likely involve a small number of direct workers and contracted workers. Construction works are not to generate substantial labor influx since the scope of the physical construction works is on average small (i.e. data centers, refurbishment/establishment of emergency operations centers, procurement and installation of hazard monitoring and forecasting systems, such as instrumentation related to geophysical early warning systems). Most of the installation of instrumentation and equipment will be through contractors and will not involve community workers and hence, OHS risks for the former are likely to be low. Community workers will be engaged through public awareness and community preparedness programs at village level.

Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) risks related to the project have been assessed as low due to the envisaged scope above. However, it is also acknowledged that such risks may escalate in the context of post disaster management which often falls under the purview of the BNPB and its sub-national counterparts (i.e. Provincial and District Disaster Management Agencies/BPBD). For this reason, targeted capacity building and awareness raising on GBV/SEA will be provided as part of the project's technical support during implementation.

To address risks considered under ESS 2, the project's ESMF and its capacity building provisions will include a) labor management framework and procedures, b) project workers' GRM and c) Occupational Health and Safety (OHS) management procedures, d) workers' codes of conduct, particularly in relation to GBV/SEA prevention. These instruments will form part of the overall environmental and social management system for the project and relevant provisions will be required in the Construction Environmental and Social Management Plans (CESMPs), which fall under the responsibility of selected contractors.

ESS3 Resource Efficiency and Pollution Prevention and Management



Given the specific information of the physical investment in the upgraded/new emergency operations centers or the data centers (e.g. the capacity and location) have not yet been determined, this project will not purchase or use raw material except certified sustainable produced wood as construction materials. This project is likely to produce general waste such as dismantling old building materials and post construction debris. These materials will be disposed in proper licensed dump site/ hazardous waste management facilities and included in the ECOPs or ESMPs for the contractors.

ESS4 Community Health and Safety

This standard is relevant to mitigate community health and safety risks related to the operation of project financed infrastructure and equipment especially in supporting the Multi-Hazard Early Warning System (MHEWS) platform and information through the geophysical early monitoring services. The GoI will conduct a hazard risk assessment and based on the result, develop a contingency plan in coordination with relevant local authorities and affected communities to build early warning communication methods and evacuation plans. Potential risk for the project's activities may likely stem from potential weak implementation of contingency plans, poor public awareness, information distortion and/or inadequate maintenance of relevant early warning equipment, leading to malfunction and/or failures.

ESS5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

The location of data centers and emergency operations centers, the type of land required for their construction, and mechanisms for their acquisition would determine the relevance of application of ESS5. Due process would be followed to determine the type of land and in the event there is need for land acquisition and involuntary resettlement, due process shall be followed to adequately compensate and rehabilitate the affected persons in conjunction with ESS 5 before any project related construction activity proceeds further. In order to this in a timely and organized manner, advance planning would be critical and the concerned agencies would be supported to ensure early identification of sub project locations, of type of land, owners, project affected people and to apply the aforesaid processes. A Resettlement Policy Framework (RPF) would be prepared as part of the project's ESMF. A Resettlement Action Plan (RAP) will be developed once the project sites requiring land acquisition (if any) have been determined.

ESS6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

Given the specific information of the physical investment on the data centers and emergency operations centers (e.g. the scale of construction and location) are unknown, the impacts of natural habitats will be assessed during the preparation of the AMDAL or UKL-UPL (partial environmental assessment and its environmental management and monitoring plan) as guided in the ESMF document. A project-level ESMF will be prepared to also include a guidance on Good International Industry Practices (GIIPS) on sourcing raw materials such as timber.

ESS7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

The interventions under the project especially disaster risk reduction awareness raising and training as well as mechanisms for the inclusion of indigenous communities where they exist need to be adapted to their situation with



a view to effectively include them in the communication and participation process. Community Based Disaster Risk Management approaches to support community preparedness programs under Component 1 and service delivery systems under Component 2 would need to develop implementation mechanisms tailored to the needs of the Indigenous communities. An Indigenous Peoples Planning Framework (IPPF) will be prepared as part of the project's ESMF. In the event that Indigenous Peoples will be affected by the project activities as informed during screening, Indigenous Peoples Plans (IPPs) will be prepared to lay out engagement processes and mitigation of adverse risks and impacts based on Free, Prior and Informed Consent (FPIC).

ESS8 Cultural Heritage

Given that the specific information of the data centers and emergency operations centers (e.g. the scale of construction and location) are unknown, the impacts on cultural heritage will be assessed during the preparation of the AMDAL or UKL-UPL. If required, a chance find procedure will be produced as part of the ESMF.

ESS9 Financial Intermediaries

This project will not involve any Financial Intermediaries.

C. Legal Operational Policies that Apply

OP 7.50 Projects on International Waterways

No

OP 7.60 Projects in Disputed Areas

No

III. BORROWER'S ENVIRONMENTAL AND SOCIAL COMMITMENT PLAN (ESCP)

DELIVERABLES against MEASURES AND ACTIONS IDENTIFIED	TIMELINE
ESS 1 Assessment and Management of Environmental and Social Risks and Impacts	
ORGANIZATIONAL STRUCTURE: The PMU will hire at least two personnel as qualified environmental and social specialist respectively with at least 5 years of experience in their respective roles and embedded in the Project Management Unit (PMU) to assist the PIUs.	11/2019
ENVIRONMENTAL AND SOCIAL ASSESSMENT: Prepare a project-level Environmental and Social Management Framework (ESMF) which establish requirements for screening and/or guide sub-project activities which may require specific environmental and social assessment or management plans. The project-level ESMF will have specific requirements on the need for management plans at project and sub-project levels and will be a condition for project effectiveness.	11/2019



PERMIT, CONSENTS AND AUTHORIZATIONS: For sub-components 1.2, 1.3 and 2.3,, obtain relevant environmental permits through AMDAL or UKL/UPL processes applicable to the project activities from relevant national authorities. Under other sub-components, the need and types of environmental permits for each individual activity will be further assessed during implementation.	06/2020
ESS 10 Stakeholder Engagement and Information Disclosure	
A Stakeholder Engagement Plan (SEP) that describes how information will be provided to and received from stakeholders has been developed. The SEP includes and describes a grievance mechanism for affected and interested stakeholders.	06/2019
ESS 2 Labor and Working Conditions	
LABOR MANAGEMENT PROCEDURES: As part of the ESMF, develop a labor Management Procedure (LMP) in accordance to the GOI's legal framework and the ESS2. This LMP is application to direct workers, contracted workers and community workers.	11/2019
GRIEVANCE REDRESS MECHANISM (GRM) FOR PROJECT WORKERS: Develop and maintain a grievance mechanism as part of the labor management procedures for project workers.	
OHS MEASURES: As part of the ESMF, develop and implement occupational, health and safety (OHS) measures for project workers in accordance to the ESS5.	11/2019
EMERGENCY PREPAREDNESS AND RESPONSE: Prepare Emergency Preparedness and Response Plan under Sub-components 1.2, 1.3 and 2.3 for (i) construction period and (ii) for operation stage. Ensure workers and contractors are trained.	06/2020
ESS 3 Resource Efficiency and Pollution Prevention and Management	
MANAGEMENT OF WASTE AND HAZARDOUS MATERIALS: As part of the ESMF , develop and implement measures and procedures for management of waste and hazardous materials during demolition, dismantling and disposal.	11/2019
ESS 4 Community Health and Safety	
TRAFFIC AND ROAD SAFETY: As part of the ESMF, develop and implement a road safety management procedure to address potential hazards on communities resulting from construction activities and operationalization of construction equipment.	11/2019
GBV AND SEA RISKS: As part of the project's ESMF specified in 1.2 and Technical Assistance (TA) support by the project, develop and implement measures and actions as well as capacity building plans to assess and manage the risks of GBV/SEA.	11/2019
ESS 5 Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	



RESETTLEMENT POLICY FRAMEWORK (RPF): As part of the ESMF , develop a Resettlement Policy Framework (RPF) to address adverse impacts resulting from land acquisition and resettlement (if any)	11/2019
ESS 6 Biodiversity Conservation and Sustainable Management of Living Natural Resources	
BIODIVERSITY RISKS AND IMPACTS: As part of the ESMF, develop and implement screening procedures to ensure no biodiversity risks and impacts resulting from the proposed infrastructure.	11/2019
ESS 7 Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	
INDIGENOUS PEOPLES PLANNING FRAMEWORK: develop and implement an Indigenous Peoples Planning Framework (IPPF) as part of the project's ESMF.	11/2019
ESS 8 Cultural Heritage	
CHANCE FINDS: develop a chance find procedure as part of the ESMF.	11/2019
ESS 9 Financial Intermediaries	

B.3. Reliance on Borrower's policy, legal and institutional framework, relevant to the Project risks and impacts**Is this project being prepared for use of Borrower Framework?**

No

Areas where "Use of Borrower Framework" is being considered:

At the preparation stage, reliance on the GOI's framework for addressing environmental and social risks of the project investments is not envisaged. This will be subject to further assessment during implementation.

IV. CONTACT POINTS**World Bank**

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**Borrower/Client/Recipient**

Borrower: Republic of Indonesia

Implementing Agency(ies)

Implementing Agency: National Disaster Management Authority

Implementing Agency: Indonesian Agency for Meteorology, Climatology and Geophysics

V. FOR MORE INFORMATION CONTACT

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VI. APPROVAL

Task Team Leader(s): Marcus John Jin Sarn Lee, Jolanta Kryspin-Watson, Yong Jian Vun
Practice Manager (ENR/Social) Nina Bhatt Cleared on 05-Nov-2019 at 08:47:22 EST
Safeguards Advisor ESSA Peter Leonard (SAESSA) Concurred on 18-May-2019 at 15:47:11 EDT