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Project Information Document (PID)

Appraisal Stage | Date Prepared/Updated: 17-May-2019 | Report No: PIDA26873

Public Disclosure Authorized

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Indonesia	P170874	Indonesia Disaster Resilience Initiatives Project	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	20-May-2019	19-Jun-2019	Social, Urban, Rural and Resilience Global Practice
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Ministry of Finance	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.

Components

Component 1. Disaster preparedness and emergency management capacity
Component 2 Hydrological and geophysical early warning systems
Component 3 Project implementation support

The processing of this project is applying the policy requirements exceptions for situations of urgent need of assistance or capacity constraints that are outlined in OP 10.00, paragraph 12.
Yes

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	160.00
Total Financing	160.00
of which IBRD/IDA	160.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	160.00

Environmental and Social Risk Classification

Moderate

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

Country Context

1. **Indonesia has seen impressive growth and a large reduction in poverty over the past two decades.** Since 1950, average Gross Domestic Product (GDP) per capita has increased almost nine-fold in real terms.[1] The percentage of poor and vulnerable people in the population decreased from 54 percent in 2001 to 31 percent in 2017. The official poverty rate, based on the national poverty line, reduced to 9.8 percent in March 2018, or 26 million poor people in absolute terms.[2] Poverty reduction has been driven by strong and steady economic growth since the economic low of the 1997-1998 Asian Financial Crisis, along with solid job creation in cities as labor shifted from agriculture to services. Whilst growth is projected to be stable in coming years, with Indonesia continuing in its development path as a middle-income country, the pace of progress has been uneven across different regions, with rising inequalities. Additionally, many families fall in and out of poverty as many people live just above the poverty line and many of those who have climbed out of poverty remain just above the poverty line. While poverty is more prevalent in rural areas, the share of poverty in urban areas is increasing, reaching 38.1 percent in March 2018, primarily due to urbanization processes.[3]

2. **At the same time, 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,[4] with annual economic losses of approximately US$2.2 to US$3 billion.[5] Earthquake risk is particularly high, with around 80 percent of the country located in

[1] World Bank.2019 (Forthcoming). Urbanization Flagship Report: Time to Act – Realizing Indonesia's Urban Potential.
[2] World Bank. 2018. Indonesia Economic Quarterly. September 2018. Urbanization For All. Link.
[3] World Bank. 2018. Indonesia Economic Quarterly. September 2018. Urbanization For All. Link.
[4] Based on EM-DAT 2018 and BNPB data.
[5] National Disaster Management Authority, Head of Data and Information, 2018; and World Bank/GFDRR 2012. ASEAN. Among Association of Southeast Asian Nations (ASEAN) countries, Indonesia faces particularly high expected annual economic losses from floods and earthquakes.

earthquake-prone areas.[6] It is expected that by 2055, approximately 64 percent of Indonesia's population will be living in earthquake hazard zones, up from 53 percent in 2016, with the largest increase in exposure across Java island.[7] Based on probabilistic loss models, there is a 2 percent chance each year of a significant earthquake event occurring that causes damages of approximately US$1.3 billion.[8] Whilst these severe disaster events can cause significant human and economic losses, the poor and vulnerable often bear the brunt of disaster impacts as they tend to live in hazard areas, lack access to basic services, and have limited access to financial resources and assets to cope with the aftermath losses.

3. **Apart from geophysical hazards, Indonesia is also highly vulnerable to hydrometeorological 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. A 50-centimeter sea level rise, combined with land subsidence in Jakarta Bay, could permanently inundate densely populated areas of Jakarta and Bekasi that house more than 270,000 residents.[9] Where peak precipitation increases because of climate change and large-scale interannual climate variability (such as El Niño), the risk of flooding is projected to be high to very high in several areas of the countries including Sumatra, Java, Bali, Kalimantan and Sulawesi.[10] Cities are particularly vulnerable to increases in flood risks due to their high concentration of people and assets, as well as proximity to rivers and coasts. Following this trend, it is expected that by 2055, the number of Indonesians exposed to alluvial flood risk will increase by 75% when compared the exposure levels in 2015. The urgency for increased capacities for dealing with hydrometeorological disasters are highlighted by the 2019 South Sulawesi Floods, which caused an estimated 68 fatalities with thousands displaced, and the 2019 Jayapura flood and landslide, which caused an estimated 113 fatalities with over 11,000 displaced.

4. **The natural disasters that Indonesia experienced in 2018 caused the most loss of life in over a decade, particularly from three major catastrophic events**. First, in July and August 2018, West Nusa Tenggara (NTB) province suffered a series of major earthquakes, the most significant occurring on 5 August 2018 measuring M7.0, which 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,[11] damaging almost 110,000 houses, 663 schools, 52 health facilities, 6 bridges, and many roads, causing approximately US$854 million[12] in damages and losses. Second, in September 2018, a M7.5 earthquake with an epicentre located 81 kilometres 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 US$1.3 billion[13] in economic losses estimated at 13.7 percent of regional GDP,[14] and displaced almost 165,000 people.[15] 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

[6] National Disaster Management Authority, Director of Disaster Risk Reduction on Safe School Program, 2016
[7] World Bank. 2018. Review and Analysis of Indonesian Cities' Exposure to Disaster Risk
[8] World Bank. 2011. Indonesia: Advancing a National Disaster Risk Financing Strategy – Options for Consideration.
[9] Data from the Indonesia Dashboard (database), World Bank, Washington, DC (accessed August 14, 2018), http://sdwebx.worldbank.org/climateportalb/home.cfm?page=country_profile&CCode=IDN&ThisTab=NaturalHazards
[10] Government of Indonesia (2013), "National Action Plan for Climate Change Adaptation (RAN API): Synthesis Report"
[11] Executive Summary of NTB Rehabilitation and Reconstruction Action Plan (2018).
[12] Presentation of Coordination and Assistance Team for Post-Disaster Recovery and Redevelopment in Central Sulawesi and NTB.
[13] Master Plan for Central Sulawesi Rehabilitation and Reconstruction, draft version 5.0 (2018).
[14] Processed from estimated Central Sulawesi RGDP 2017 by National Statistical Bureau (2018).
[15] UNOCHA update, December 20, 2018.

along Sunda Strait, causing 437 fatalities and displacing almost 34,000 people.[16] Major floods have also recently affected Indonesia including the 2019 South Sulawesi Floods, which caused an estimated 68 fatalities with thousands displaced; as well as the 2019 Jayapura flood and landslide, which caused an estimated 113 fatalities with over 11,000 displaced.[17]

Sectoral and Institutional Context

5. **Since the Indian Ocean earthquake and tsunami in 2004, the GoI has made considerable progress in improving laws and regulations, enhancing institutional capacity, and strengthening fiscal capacity related to its disaster risk management systems**. Law Number 24 of 2007 Concerning Disaster Management refined the roles and responsibilities of different line ministries, businesses, and international institutions related to disaster management, shifting Indonesia's approach to disaster risk management (DRM) from being relatively reactive to encouraging proactive disaster risk mitigation. BNPB was established in 2008 through Presidential Regulation 8/2008 with a key goal to coordinate relevant line ministries and agencies responsible for activities at all stages of the DRM cycle: pre-disaster, during disaster, and post-disaster. Subnational local disaster management agencies (BPBDs) have been established in all 34 provinces and the majority of 514 *kota/kabupaten*, in line with key principles outlined in the Sendai Framework for Disaster Risk Reduction (SFDRR)[18] to place ownership of disaster risk management at the local level. Additionally, since 2004, Indonesia has made significant investments in their hydrometeorological and geophysical observation networks and early warning systems, becoming an Indian Ocean Tsunami Warning Services (IOTWS) regional provider and performing consistently to high standards. The Ministry of Finance also launched the National Disaster Risk Financing and Insurance Strategy in October 2018, complementing efforts that aim to mitigate the economic and fiscal impacts of disaster and climate shocks.

6. **The Government of Indonesia (GoI) intends to develop the Indonesia Disaster Resilience and Reconstruction (IDRAR) program, a national platform with two key objectives: to strengthen Indonesia's disaster preparedness and emergency management systems; and to enhance post-disaster rehabilitation and reconstruction programs.** Indonesia's exposure to a multitude of natural hazards, large expanse, and geographic diversity necessitate accelerated investments in strategic high-risk priority areas, increased awareness and understanding of disaster risk, technological and technical innovation, and strengthened local capacity for disaster preparedness and emergency management. Recognizing these opportunities, the World Bank has been working with the Government of Indonesia on a comprehensive approach to strengthen Indonesia's resilience against disaster shocks. Key ingredients of this dialogue include financing instruments to reduce budgetary cost of responding and recovering from disasters; strong policy framework; and a combination of investments to reduce disaster impacts. Learning from recent disasters, the main priorities lie in five key areas: (i) investments in disaster risk reduction, including risk-informed development and spatial planning, seismic risk mitigation and urban flood risk management; (ii) Public awareness and preparedness, including community level contingency planning and disaster risk education; (iii) Early warning systems capacities, including integrated monitoring networks, densification of instrumentation in high-risk areas, timely and accurate impact-based forecasting and disaster warnings, and last-mile communication; (iv) Emergency management capacity, particularly for local governments to be equipped adequately for rapid and reliable responses to multiple hazards; and

[16] UNOCHA update, January 3, 2019. Tourism infrastructure sustained major damages include 92 hotels and 60 culinary stalls.
[17] UNOCHA update, January 3, 2019.
[18] The Sendai Framework for Disaster Risk Reduction is a 15-year non-binding international agreement that recognizes the importance of sharing the responsibility of reducing disaster risk with local government, the private sector, and other stakeholders. Link.

(v) disaster-resilient development planning. The World Bank proposes to support Indonesia's efforts in disaster risk reduction with select investments in these areas through the two separate yet complementary projects—the CSRRP and the IDRIP—under the umbrella of the proposed IDRAR program, which will include projects supported by other development partners. Through this national program, and with support from project financing under CSRRP and IDRIP, the Government will invest in initiatives such as disaster-resilience development planning, standardization of disaster risk management procedures, knowledge management, and institutional capacity building.

7. **Following the catastrophic events in 2018, the Government of Indonesia (GoI) requested a comprehensive package of support from the World Bank to address the urgent need for financial and technical assistance**. The package included: (i) technical assistance to support recovery activities and longer-term disaster resilience; (ii) immediate channelling of existing project financing to complement the Government's recovery program in housing, transport, water supply, and social protection sectors; and (iii) emergency recovery operations—to be prepared under accelerated procedures—to finance the rehabilitation, upgrading and reconstruction of critical public facilities and infrastructure in disaster-affected areas, as well as to strengthen disaster risk management systems across Indonesia. The two emergency operations are: (i) Central Sulawesi Rehabilitation and Reconstruction Project (CSRRP), focusing on supporting targeted disaster-affected communities with reconstructed and strengthened public facilities and safer housing; and (ii) Indonesia Disaster Resilience Initiatives Project (IDRIP), which will help restore damaged hazard monitoring and early warning equipment, and improve the preparedness of the central government and selected local governments for future natural hazards, including in areas affected by recent catastrophic events. These two projects would complement other rehabilitation and reconstruction efforts in Central Sulawesi, such as the recovery of public facilities, water resources infrastructure, solid waste management facilities, and transport infrastructure by other development partners; permanent housing and livelihoods recovery support activities by NGOs and other partners; and support to settlement infrastructure and roads rehabilitation through ongoing Bank-financed projects. Beyond disaster-affected areas, IDRIP will also support identified priority high-risk areas, as well as strengthening disaster resilience at the central level.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

8. The PDO of IDRIP is to improve the preparedness of the central government and selected local governments for natural hazards.

Key Results

9. IDRIP will finance critical investments and capacity building priorities for a multi-hazard early warning system (MHEWS) platform and local emergency management systems, to enhance preparedness for future disaster events, particularly seismic and hydrological disasters, supporting central and local governments and communities. Following the series of catastrophic events in 2018, IDRIP will finance immediate urgent needs for restoration of emergency preparedness and early warning functions in areas affected by recent disasters. The project will help BNPB and its institutional partners to refine the technical design of the MHEWS platform in preparation for further investments. It will achieve this through three components that will complement capacity building and technical advisory support by other development partners in this sector (including JICA, USAID, Germany, and France). 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, local BPBDs and communities, starting with areas affected by recent disasters Central Sulawesi, West Nusa Tenggara and along Sunda Strait, and followed by identified priority high-risk areas, for improved last-mile communication.

D. Project Description

10. **The CSRRP and IDRIP complement each other by reducing the vulnerability of people and assets to hydrometeorological and geophysical events through an integrated package of structural and non-structural investments**. CSRRP will meet urgent needs to strengthen and reconstruct critical assets and infrastructure in disaster-affected areas of Central Sulawesi, whilst developing the foundations of a national platform for disaster-resilient infrastructure strengthening and future post-disaster recovery programs. Through IDRIP, accelerated investments in strategic high-risk priority areas will increase public awareness and understanding of disaster risk, better preparing local governments and communities against future disasters. These complementary investments will help to implement Indonesia's comprehensive approach to strengthening disaster resilience, aligning with the strategic priorities of both the Government and the Bank.

Component 1: Disaster preparedness and emergency management capacity (US$70 million of IBRD Loan)

11. This component will be implemented by BNPB and strengthen the capacity of GoI and communities to better prepare for, and respond to, future natural hazards. This will be achieved through investments to scale up disaster awareness activities and strengthen emergency management and early warning systems for faster and more effective disaster response. It will also support development and refinement of the MHEWS platform, which aims to provide early warnings on the following natural hazards: earthquakes, tsunamis, floods, volcanic eruptions, landslides, drought, extreme storms, and forest and land fires. The initial phase of support under IDRIP will support the 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: Hydrometeorological and geophysical early warning services (US$85 million of IBRD Loan)

12. This component will be implemented by BMKG and support GoI to advance its services toward impact-based information services through the strengthening of monitoring and 'nowcasting'[19] capacity for hydrometeorological and geophysical hazards, development of impact-based forecast and warning products, and institutional strengthening and capacity development. The aim is to improve service delivery systems to support disaster risk management operations and strengthen future planning for disaster and climate resilience. This component will also finance urgently needed support to restore early warning functions, including restoration, upgrading and/or replacement of damaged instrumentation in Central Sulawesi, West Nusa Tenggara, and along Sunda Strait.

[19] Nowcasting comprises the detailed description of the current weather along with forecasts obtained by extrapolation for a period of 0 to 6 hours ahead. In this time range it is possible to forecast small features such as individual storms with reasonable accuracy. It is, therefore, a powerful tool in warning the public of hazardous, high-impact weather including tropical cyclones, thunderstorms and tornados which cause flash floods, lightning strikes and destructive winds.

Component 3: Project Implementation Support (US$5 million of IBRD Loan)

13. This component will be implemented by BNPB and strengthen the capacity of implementing agencies especially BNPB, to oversee project implementation at the national and subnational levels. The project will support: project management, procurement, financial management activities, technical audits, oversight of compliance with agreed social and environmental standards, and monitoring and evaluation activities. It will also be used to strengthen disaster-resilient development planning, and help establish the Steering Committee for the IDRAR program.

Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Assessment of Environmental and Social Risks and Impacts

Under Components 1 and 2, low to moderate environmental and social risks are anticipated for activities under Components 1 and 2, which have positive environmental and social impacts by reducing potential human losses and increasing the preparedness of GoI and communities against future disasters. For ensuring community health and safety, the GoI will conduct a risk hazard 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 activities would be the possible failure to implement an adequate contingency plan, or inadequate maintenance of relevant equipment, leading to inefficient operationality after project implementation. Under Component 1, it will also involve other civil works activities which would have minor and temporary negative impacts such as dust, noise, disturbance on existing traffic flows, safety and access to local communities. The type of civil works will range from small renovation works to building new disaster management and control centers, and three regional logistics warehouses in strategic locations (Surabaya, Medan, Makassar). The potential risk would be contractors not implementing 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) and this might lead to workplace injury at construction site. This is because the capacity and awareness vary from medium to low among supervision contractors and also the project implementation unit (PIUs). Under Component 2, it will involve minor civil works in installation of hydrometeorological and geophysical equipment and no major anticipated impact in surrounding environment. However, for installation of weather radar depending on the size and design would require a moderate enclosure size and minor civil works. The other potential risk would be the disposal of the used thermometers in weather stations which contains mercury if the project supports the transition from manual to automatic weather stations. Potential environment and social impacts of the project activities can be managed through robust and well implemented mitigation measures, which have been established in the draft ESCP. These includes Environmental Code of Practice (ECOPs) as well as construction Environmental and Safety Management Plan (ESMPs) depending on the scale of the construction and type of activities. A project-level Environmental and Social Management Framework (ESMF) will be developed during project implementation.

The Project will be subject to the World Bank's Environment and Social Framework (ESF), and an Environmental and Social Commitment Plan (ESCP) will need to be agreed with the Government. The ESCP will set out measures and actions required for the Project to achieve compliance with relevant Environment and Social Standards (ESSs) over a specified timeframe. The World Bank ESS relevant to the project are: ESS 1 Assessment and Management of Environmental and Social Risks and Impacts, ESS 2 Labor and Working Conditions, ESS 3 Resource Efficiency, and ESS 4 Community Health and Safety. A Stakeholder Engagement Plan (SEP) will need to be prepared by the Government as part of the project preparation. The draft ESCP and draft SEP shall be cleared by the World Bank's management and disclosed by the GoI and the World Bank prior to the project's appraisal. Due to the emergency context under which the project is being prepared, the environmental and social assessments and plans required under the ESSs will be developed during the project implementation phase. These assessments and plans will be established in the ESCP with specific time-bound action plans agreed by the Government.

Note: To view the Environmental and Social Risks and Impacts, please refer to the Appraisal Stage ESRS Document.

E. Implementation

Institutional and Implementation Arrangements

14. **Project coordination**. GoI intends to establish an inter-agency Steering Committee for the IDRAR Program chaired by the Deputy for Regional Development of Bappenas with two designated windows: Rehabilitation and Reconstruction (co-chaired by BNPB and PUPR), and Disaster Preparedness and Emergency Management (co-chaired by BNPB and BMKG). Steering Committee members will include PIUs under both projects, as well as other relevant government agencies and subnational governments. The Steering Committee would be responsible for coordination between the line agencies for effective project implementation, monitoring, and evaluation; as well as for providing strategic guidance and oversight of the IDRAR program. Its membership and scope of responsibilities would evolve when the IDRAR program develops to include other projects and activities. Establishment and operating costs of the Steering Committee will be supported by Component 3 (Project Implementation Support) under IDRIP.

15. **Project Executing Agency (EA):** BNPB will act as the EA for this project, with day-to-day project management and project coordination under a Central Project Management Unit (CPMU). As the EA, BNPB will be responsible to coordinate the results achieved by each of the Project Implementation Units (PIUs) and measure progress towards the project's objectives. The CPMU will also facilitate regular coordination meetings with PIUs; implement Environmental and Social Standards (ESSs) in accordance with the ESF; manage and report on the Results Framework; and develop, utilize, and update the Project Operations Manual (POM) with PIUs. It will be led by a dedicated Project Coordinator, who will be responsible for managing the project's technical, fiduciary, safeguards, and monitoring and evaluation (M&E) activities.

16. **Project implementation units (PIUs).** Two PIUs will be established at BNPB (Component 1) and BMKG (Component 2). BMKG will report to BNPB and be responsible for achieving the agreed objectives and relevant performance indicators; procuring and managing consultants and managing contractors to execute project activities; and complying with safeguards, fiduciary, and M&E requirements. Component 3 (project

implementation support) will be implemented predominantly by BNPB with a portion to be implemented by Bappenas for consultancy services and technical assistance.

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APPROVAL

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