

Ex-Ante Evaluation

Southeast Asia Division 1

Southeast Asia and Pacific Department, JICA

1. Basic Information

Country: The Republic of Indonesia (Indonesia)

Program Name: Disaster Resilience Enhancement and Management Program Loan (II)

Loan Agreement Date: March 31, 2021

2. Background and Necessity of the Program**(1) Current State and Issues Related to the Disaster Prevention Sector in Indonesia**

Indonesia is prone to floods, landslides, earthquakes, volcanic eruptions and other natural disasters, which contribute to economic and social losses. In particular, the country suffered heavy casualties and a negative impact on economic activity in 2018 due to a series of large-scale disasters related to earthquakes and tsunami, including the Lombok Earthquake on July 29, the Central Sulawesi Earthquake and Tsunami on September 28, and the volcanic eruption in the Sunda Strait on December 22. There was also a series of natural disasters due to heavy rains in January 2020, with nearly 70 people dead in and around Jakarta and thousands forced to evacuate due to large-scale flooding and landslides.

It has been estimated that the annual economic loss in Indonesia from these frequent natural disasters exceeds 180 billion yen¹. Looking at the breakdown by types of disaster, earthquakes, fires, and floods account for the majority of this. In contrast, the average amount of the Dana Cadangan, the disaster response fund earmarked each year by the Indonesian government for disaster recovery and reconstruction has only been around 25 billion yen (2005-2017)², which is insufficient to cover the economic loss from disasters.

Following the massive damage from the 2004 Sumatra Earthquake and Indian Ocean tsunami, the Indonesian government enhanced its disaster related legal system and organizations, not only in terms of response after disasters but establishing a comprehensive disaster prevention system including preventive steps to be taken before the occurrence of disasters, enacting the Disaster management law (2007) and also establishing the National Agency for Disaster Countermeasures (BNPB, 2008). In addition, with international support, including from Japan, it strengthened its efforts to understand disaster risks and make advance preparations, including the development of the

¹ Source: Estimated by Fiscal Policy Agency, Ministry of Finance, Indonesia. The average of values from 2000 through 2017.

² Source: Estimated by Fiscal Policy Agency, Ministry of Finance, Indonesia. The average of values from 2000 through 2016.

Indonesia Tsunami Early Warning System (InaTEWS).

However, in comparison with the four priority actions specified by the Sendai Framework for Disaster Risk Reduction 2015-2030, adopted at the third UN World Conference on Disaster Risk Reduction in March 2015 (① Understanding disaster risk, ② Strengthening disaster risk governance to manage disaster risk, ③ Investing in disaster risk reduction for resilience, and ④ Enhancing disaster preparedness for effective response and to Build Back Better (hereinafter “BBB”) in recovery, rehabilitation and reconstruction) Indonesia is still half-way through its efforts for establishing a disaster prevention system, and challenges still remain.

(2) Japan and JICA's Policy and Operations in the Disaster Prevention Sector

The priority areas of the Japan Country Development Cooperation Policy with the Republic of Indonesia (September 2017) advocate “Assistance for creating a safe and fair society through well-balanced development,” singling out the provision of assistance for disaster risk reduction measures to create a safe and fair society. JICA's Country Analysis Paper for Indonesia (June 2018) also considers disaster prevention measures as a key challenge, noting that cooperation should be provided to Indonesia for the enhancement of its overall disaster prevention (structural and non-structural measures) so that its disaster response capabilities can be improved for preventative, emergency response, and recovery and reconstruction phases. Also, as the continuing host country since the first UN World Conference on Disaster Risk Reduction, and having contributed to the formulation of the “Sendai Framework for Disaster Risk Reduction 2015-2030” by sharing knowledge and technologies as an advanced nation in disaster prevention at the third conference in March 2015, the program is consistent with Japan's policy and the results of JICA analysis as a leading in the international community in disaster countermeasures and the field of disaster prevention. The program also contributes to “ensuring peace and stability” as stated in the Free and Open Indo-Pacific Vision in terms of the strengthening of disaster prevention capabilities.

(3) Other Donor Activities

The World Bank has been supporting the government of Indonesia since 2018 in its efforts to secure disaster risk financing, and under the “Indonesia Fiscal Reform DPL 3” (a loan of 1 billion USD) granted in 2019 the World Bank specified in the policy matrix actions related to disaster risk insurance. The Board of the World Bank also approved the “Indonesia Disaster Resilience Initiative Project (IDRIP)” (a loan of 160 million USD) in November 2019 to support the construction of a multi-hazard early warning system etc. In June 2019, the Board also approved the “Central Sulawesi Rehabilitation and Reconstruction Project” (a loan of 150 million USD) in connection with the Central Sulawesi Earthquake.

In 2019, the Asian Development Bank granted the “Financial Market Development and Inclusion Program (Sub program 3)” (a loan of 500 million USD). In September 2020, the Board also approved the “Disaster Resilience Improvement Program (DRIP) (a loan of 500 million USD), an emergency disaster finance scheme supporting the enhancement of disaster resilience, including for non-natural disasters such as infectious disease.

For the comprehensive disaster prevention system enhancement planned by the Indonesian government, JICA is making prior investments to prevent disasters and support for reconstruction phases in line with BBB and is providing complementary support in recovery phases where the World Bank and the Asian Development Bank are responsible for emergency response after a disaster occurs.

The Board of Directors of the French Development Agency approved the co-financing of the program (100 million euros) in December 2020.

3. Program Description

(1) Program Objectives

The objective of the program is to support the improvement of disaster related policies and strategies of the Republic of Indonesia through policy dialogue, thereby contributing to strengthening the capacity to deal with natural disasters.

(2) Program Site/Target Area

Indonesia

(3) Program Components

The program supports the improvement of policies and institutions and their steady implementation in the following four fields, as pillars set and agreed with Indonesian authorities based on the Sendai Framework for Disaster Risk Reduction 2015-2030. A total of 15 policy actions have been established, with the addition of one action policy from the Phase 1, and their progress and achievement status will be confirmed. The following are examples of typical policy actions.

Pillar	Policy actions achieved by end of June 2019 (Phase 1)	Policy actions achieved by end of June 2020 (Phase 2)	Policy actions to be achieved by end of June 2021 (Phase 3)
1. Strengthening DRR governance and	○ Commenced review and discussion to incorporate lessons learned from disasters in Central	○ Published PRJMN 2020-2024 based on lessons learned from the Central Sulawesi and Lombok	○ Add disaster prevention efforts considering the socially vulnerable to the annual plan for

<p>mainstreaming</p>	<p>Sulawesi and Lombok into next National Medium-Term Development Plan (RPJMN).</p> <ul style="list-style-type: none"> ○ Finished final draft Disaster Management Master Plan 2015-2045 (DMMP), which is the first national long-term master plan in disaster management. ○ Developed local DRR strategies/plans in 34% of kabupaten and kota, which includes effective measures to reduce disaster risk. 	<p>disasters</p> <ul style="list-style-type: none"> ○ Proceeded with the procedure for the enforcement of the long-term DMMP 2015-2045 presidential regulation ○ Increased the Kabupaten and Kota DRR Plan formulation rates from 34% to 35% 	<p>2021 formulated by BAPPENAS, based on PRJMN 2020-2024</p> <ul style="list-style-type: none"> ○ Enforce the long-term DMMP 2015-2045 presidential regulation and disseminate to relevant Ministries and local governments ○ Increase the DRR Plan formulation rate from 35% to 37% with the cooperation of the BNPB and the Ministry of Interior
<p>2. Promotion of understanding of disaster risks</p>	<ul style="list-style-type: none"> ○ Developed two technical guidelines for local government level disaster risk assessment ○ Started discussion on activities for strengthening seismic and tsunami observation network ○ Started discussion on activities for strengthening FEWS owned by PUPR ○ Developed Contingency Plan for potential hazard in 	<ul style="list-style-type: none"> ○ Formulated four additional technical guidelines for local government level disaster risk assessment ○ Increase the accumulation of seismic and tsunami observation data ○ Accumulated weekly flood data for river FEWS under the jurisdiction of PUPR ○ Formulated Contingency Plans for a further 29 	<ul style="list-style-type: none"> ○ Formulate two additional technical guidelines for local government level disaster risk assessment ○ Improve the rapidness and accuracy of earthquake information and tsunami warnings ○ PUPR to integrate flood data and improve monitoring systems in cooperation with

	11 areas	locations	related authorities
			<ul style="list-style-type: none"> ○ Support local governments in the formulation of Contingency Plans
3. Promotion of investing in disaster risk reduction for resilience	<ul style="list-style-type: none"> ○ Start drafting strategic plan (Renstra) including DRR policy at a national level 	<ul style="list-style-type: none"> ○ Proceed with the process of enacting 2020-2024 strategic plan (Renstra) incorporating national level disaster prevention policy 	<ul style="list-style-type: none"> ○ Allocate a total of 69 trillion Rp. or 7.8% of the total budget over 5 years to the disaster prevention budget based on the 2020-2024 strategic plan (Renstra)
4. Enhancing to Build Back Better in recovery, rehabilitation and reconstruction	<ul style="list-style-type: none"> ○ Started the formulation of hazard maps based on collected information and risk assessments following the Central Sulawesi disaster ○ Started the formulation of regional spatial planning for the resilience of areas vulnerable to disaster 	<ul style="list-style-type: none"> ○ Elaborated hazard maps, formulated spatial plans and shared hazard maps with residents to promote understanding of disaster prevention ○ Formulated General Spatial Plan (RTRW) and Detailed Spatial Plan (RDTR) in Central Sulawesi Province, Palu City and Sigi Regency based on refined hazard maps with proper inter-party coordination while checking consistency with the infrastructure plan ○ Strengthened cooperation with related authorities on measures against Jakarta flood 	<ul style="list-style-type: none"> ○ Formulate the draft of General Spatial Plan (RTRW) and the Detailed Spatial Plan (RDTR) with provisional approval from local governments to be used for infrastructure reconstruction ○ Analyze the damage caused by the Jakarta flood and share with relevant authorities to be reflected in future flood measures

		landslides	
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(4) Program Cost

Loan Amount: 50,000 million yen (Co-financing: 100 million euros by French Development Agency)

(5) Schedule

Financial support for the program starts in March 2021. All the policy actions in the Phase 2 of the program were achieved by June 2020, and the loan execution (scheduled for May 2021) is be deemed complete once all policy actions have been achieved. It is expected at this point in time that financial assistance will be provided until the Phase 3, and the Phase 3 is planned to set out policy actions to be achieved by June 2021³.

(6) Program Implementation Structure

- 1) Borrower: The Government of Republic of Indonesia
- 2) Guarantor: None
- 3) Executing Agency: Ministry of National Development Planning (BAPPENAS)
- 4) Operation and Maintenance Organization: None

(7) Collaboration with other donors

1) Japanese Donor Activities

Individual experts, “Inclusive Disaster Risk Reduction Policy Advisers” (from September 2017 to March 2022) and “Integrated Water Resources Management Policy Advisers” (from July 2019 to March 2022) are providing technical support in the formulation of disaster prevention policies and development plans. With regard to the improvement of disaster prevention capabilities, it is planned that ① through the technical cooperation in the “Project for Promoting Countermeasures against Land Subsidence in Jakarta” (from October 2017 to December 2021), support will be provided for measures for the January 2020 Jakarta flooding, ② through the technical cooperation in the “Project for Capacity Development on Operation of Earthquake and Tsunami Analysis and Warning Dissemination” (scheduled for 2021), improvements will be made to the systems and capabilities to sharing information related to earthquakes and tsunami, and ③ through the technical cooperation in the “Project for Enhancement of Disaster Risk Reduction through Improvement of the Disaster Risk Information and Communication Framework in Indonesia” (scheduled for 2021), a disaster risk reduction system will be constructed. In addition, through the grant aid for the “Project for Strengthening Disaster Prevention Information System,” support will be provided for the development of a disaster prevention information processing and transmission

³ The program refers to the Phase 2. Policy actions that should be achieved by the end of June 2019 are set for the Phase 1 and by the end of June 2021 for the Phase 3, with a projection that this will improve the series of policies and systems.

system. We are also providing integrated support from planning to implementation for the Central Sulawesi earthquake and tsunami through technical cooperation for development planning in the “Project for Development of Regional Disaster Risk Resilience Plan in Central Sulawesi” (from December 2018 to November 2021), grant aid for the “Programme for the Reconstruction of Palu 4 Bridges in Central Sulawesi Province.” (G/A concluded June 2019) and loan assistance in the “Infrastructure Reconstruction Sector Loan (IRSL) in Central Sulawesi” (L/A signed January 2020).

2) Other Donor Activities

It is expected at this point in time that support will be provided until the Phase 3, and co-financing will be provided for the program by the French Development Agency.

(8) Environmental and Social Considerations, Cross-Cutting Issues and Gender Categories

1) Environmental and Social Consideration

① Category: C

② Reason for Categorization: The program is likely to have a minimum or no adverse impact on the environment or society, in light of Japan International Cooperation Agency Guidelines for Environmental and Social Considerations (published in April 2010).

2) Cross-Cutting Issues

① Climate Change Measures: The program aims to increase Indonesia's capability to respond to flood risks, whose impact due to climate change has been a matter of concern, through policy actions to promote the installation of a flood early warning system, contributing to measures against climate change (adaptation measures).

② Consideration for Persons with Disabilities: Hearing will be conducted with organizations for persons with disabilities and residents with disabilities in the course of development of disaster prevention strategies and plans and an effort will be made to oblige implementation of inclusive, disaster prevention efforts.

3) Gender Category: [Gender Projects] ■ GI (S) (Gender Informed (Significant))

<Details of the activity/Reason for categorization> The program has agreed with the opposing government to reflect in annual plans the opinions, needs and perspective of socially vulnerable groups including women, based on PRJMN 2020-2024.

(9) Other Important Issues: Monitoring under the Phase 1 of the program was facilitated through online meetings with the support of a local consultant employed by the Indonesian office, despite the impact of COVID-19, and the achievement status of the matrix was confirmed, and actions set for the Phase 3. Monitoring meetings also functioned as a coordination platform among disaster prevention related authorities, leading to the promotion of policy cooperation and coordination. Also, with the increased risk of COVID-19 in the event of a natural disaster in densely populated areas at high risk

of natural disasters, it was confirmed with the Indonesian government that proceeding with upfront investment and strengthening disaster management were important from the viewpoint of infection control. Japan was consulted by the Indonesian government for input on strengthening systems against COVID-19, and this is planned to be considered in parallel with the Phase 3.

4. Targeted Outcomes

(1) Quantitative Effects

1) Performance Indicators (Operation and Effect Indicators)

Indicators	Baseline (2019)	Target (2021) ⁴ [End of Program]
The percentage of developed local DRR strategies/plans	34%	More than 37 %
The number of Contingency Plans that include timing of issue for Early Warning, and evacuation sites on hazard analysis under BNPB support	11 Contingency Plans	More than 26 Contingency Plans
The increase of budget allocation for programs related to Disaster Risk Reduction under PUPR support	9.3 trillion Rp. (2018)	More than 9.3 trillion Rp. (Average over the past 3 years)
The number of spatial plans to be prepared based on elaborated hazard maps	0	At least 6 spatial plans

2) Impact

Improved disaster prevention system/capability of relevant agencies of the Indonesian government

(2) Qualitative Effects

Enhanced ability of the Indonesian government to develop/implement disaster prevention policy and improved disaster management ability.

(3) Internal Rate of Return

Not applicable.

5. Assumptions and External Factors

(1) Assumptions and External Conditions: Measures against the convergence of the COVID-19 around the world have been maintained, to avoid the sudden worsening of the situation throughout the world.

⁴ Objective values are set by the Ministry or institution responsible for each action.

6. Lessons Learned from Past Programs and Application to the Program

From the ex-ante evaluation of the Development Policy Loans (I-IV) for Indonesia, it has been noted that program loans and technical cooperation are complementary and produce synergistic effects at various stages of the reform process, and that it is thus desirable to promote cooperation between program loans and technical cooperation. Also, from the lessons of the Climate Change Program Loan (I-III) for Indonesia, it was found that it was important to effective policy improvement that systems be developed for policy discussions, including after the end of the program. Also, from the lessons of the Phase 1 of the program, the importance of the functioning of monitoring meetings as coordination platforms between disaster prevention related authorities and of the promotion of cooperation and coordination was displayed.

7. Results of Evaluation

The program conforms with the development challenges and policy of Indonesia and the cooperation policy and analysis of Japan and JICA, supporting the improvement of policies and systems in the field of disaster prevention and contributing to the realization of a society and economy that is resilient to disasters by encouraging prior investment in disaster preparedness in the country and increasing their ability to respond, as well as contributing to Sustainable Development Goals 1 (reduction of poverty), 11 (making cities and human settlements inclusive, safe, resilient and sustainable) and 13 (taking urgent action to combat climate change and its impacts), and thus there is a high need to support the implementation of the program.

8. Plans for Future Evaluation

(1) Indicators to be Used

As mentioned in 4. (1) to (2)

(2) Future Evaluation Schedule

Upon completion of the program

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