

Chapter 3 Five-Year Acceleration Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience

Section 1 Conducting “Five-Year Acceleration Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience”

In recent years, meteorological disasters have become more catastrophic and frequent due to the effects of climate change, and the occurrence of large-scale earthquakes, such as the Nankai Trough Earthquake, Subduction Zone Earthquakes in the Vicinity of the Japan and Chishima Trenches, and the Tokyo Inland Earthquake, is becoming more imminent. In addition, the infrastructure intensively developed in and after Japan's period of rapid economic growth will become decrepit all at once in the future. Therefore, it is necessary to ensure the maintenance and renewal of infrastructures. However, a preventive maintenance cycle has not yet been established, and if appropriate measures are not taken, this will not only lead to an increase in total costs over the medium to long term, but there is also concern that Japan's administrative and socioeconomic systems will become dysfunctional. To overcome such a national crisis, protect the lives and properties of the people, and maintain vital national and social functions, it is necessary to accelerate and deepen efforts for disaster prevention and mitigation, and national resilience, and to build a resilient nation that does not succumb to disasters. Also, the use of digital technology, which has been rapidly developed in recent years, is indispensable in order to achieve more efficient disaster prevention and mitigation, as well as national resilience. In December 2020, the Cabinet approved the "Five-Year Acceleration Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience" (hereinafter referred to as the "Five-Year Acceleration Plan").

(Reference: https://www.cas.go.jp/jp/seisaku/kokudo_kyoujinka/5kanenkasokuka/index.html)

The Five-Year Acceleration Plan will further accelerate and deepen the following three areas: (1) measures against increasingly severe storm and flood disasters and impending large-scale earthquakes, (2) measures against aging infrastructure to shift to preventive maintenance of infrastructure, and (3) promotion of digitalization and other measures to efficiently promote policies for national resilience. Medium- and long-term goals will be set for 123 measures, including flood control measures in the basin by advance discharge of water from dams, and the construction of recreational areas, measures for aging roads, bridges and school facilities, improvement of road management efficiency with IT, and upgrading of weather information for disaster management. These measures will be implemented intensively over a five-year period from FY 2021 to FY 2026.

The first year of the Five-Year Acceleration Plan is funded by the third supplementary budget for FY 2020, with a national budget of about 2.0 trillion yen (of which about 1.7 trillion yen is for public works). The FY 2020 third supplementary budget also includes about 0.3 trillion yen in government expenditure (of which about 0.1 trillion yen is for public works) as urgent expenses for the steady promotion of measures to strengthen national resilience based on the Fundamental Plan for National Resilience Basic Plan. Moreover, the initial budget for FY 2021 includes a national budget of about 4.4 trillion yen for national resilience.

These budgets will be used to mobilize a combination of structural and non-structural measures and to vigorously promote disaster prevention, disaster mitigation, and national resilience in cooperation with relevant government ministries and agencies. The government will also strive for active publicity at specific locations and sites to make its efforts visible at the regional level. While further accelerating and deepening the efforts to strengthen national resilience based on the Five-Year Accelerated Plan, Japan will continue to systematically and vigorously promote the creation of a safe, secure, and resilient nation based on the Fundamental Plan for National Resilience Basic Plan with all their strength.

Five-Year Accelerated Measures for Disaster Prevention and Mitigation and National Resilience - Summary



1. Basic Concept

- In recent years, meteorological disasters have become more severe and frequent due to the effects of climate change, and large-scale earthquakes, such as the Nankai Trough Earthquake, are becoming more imminent. In addition, infrastructures that were intensively developed during the period of rapid economic growth will begin to age all at once as time goes on, and if appropriate measures are not taken, not only will the burden increase, but the socio-economic system may also become dysfunctional.
- In order to overcome such crises, protect the lives and properties of the people, and maintain the important functions of society, it is necessary to accelerate and deepen measures for disaster prevention, disaster mitigation, and National Resilience. In addition, the use of digital technologies is indispensable for the efficient implementation of measures for National Resilience.
- To this end, the government will further accelerate and deepen its efforts in the fields of "countermeasures against increasingly severe windstorms and floods and impending large-scale earthquakes," "acceleration of countermeasures against aging infrastructure to shift to preventive maintenance," and "promotion of digitalization for efficient implementation of measures related to National Resilience." The scale of additional projects that will be required in the next five years until FY2025 will be determined, and prioritized and intensive measures will be taken.

2. Prioritized measures and scale of projects

- Number of measures: **123 measures**
- Scale of additional projects required: **Aim of roughly 15 trillion yen**

1. Countermeasures against increasingly severe windstorms and floods and impending large-scale earthquakes [78 measures].	Roughly 12.3 trillion yen
(1) Measures to prevent and minimize damage to human life and property [50 measures]	
(2) Measures to maintain transportation networks and lifelines, and to support the national economy and livelihoods [28 measures]	
2. Countermeasures against aging infrastructure to shift to preventive maintenance [21 measures]	Roughly 2.7 trillion yen
3. Promotion of digitization, for efficient implementation of measures related to National Resilience [24 measures]	Roughly 0.2 trillion yen
(1) Digitization of measures related to National Resilience [12 measures]	
(2) Sophistication of disaster-related information forecasting, collection, accumulation, and communication [12 measures]	
Total:	Roughly 15 trillion yen

3. Duration of measures

- Period during which the scale of projects, etc. will be determined and measures will be implemented intensively: a period of five years from FY2021 to FY2025

Five-Year Accelerated Measures for Disaster Prevention and Mitigation and National Resilience - Examples

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1. Countermeasures against increasingly severe windstorm and floods and impending large-scale earthquakes [78 measures].

(1) Measures to prevent and minimize damage to human life and property [50 measures]

- Basin flood control measures (improvement of rivers, sewerage systems, erosion control, coasts and agricultural water use facilities, improvement of storage functions of rice paddies, and acceleration of the development of recreational areas and storage facilities using state-owned land) (Ministry of Land, Infrastructure, Transport and Tourism, Ministry of Agriculture, Forestry and Fisheries, and Ministry of Finance)
- Tsunami measures for ports, measures for dense urban areas that are extremely dangerous during earthquakes, and measures to form disaster-resistant urban areas (Ministry of Land, Infrastructure, Transport and Tourism)
- Disaster prevention and mitigation measures for priority agricultural reservoirs, forest conservation measures in mountain disaster risk areas, and measures to make fishing port facilities earthquake-resistant, tsunami-resistant, and wave-resistant (Ministry of Agriculture, Forestry and Fisheries)
- Measures to enhance the disaster resistance of medical facilities and social welfare facilities (Ministry of Health, Labour and Welfare)
- Measures related to materials and equipment necessary for disaster management in the police force, and measures related to the disaster resistance of police facilities (National Police Agency)
- Measures to improve and enhance Emergency Fire Response Teams for large-scale disasters, and measures concerning fire corps volunteers that play a central role in regional disaster resilience (Ministry of Internal Affairs and Communications)

(2) Measures to maintain transportation networks and lifelines, and to support the national economy and livelihoods [28 measures]

- Measures to enhance the functions of the road network by eliminating missing links and making High-Standard Highways four-lane, creating a double network of High-Standard Highways and national highways under direct control, and measures to eliminate utility poles on emergency transport roads in urban areas (Ministry of Land, Infrastructure, Transport and Tourism)
- Measures to improve and reinforce power transmission networks and disaster response capabilities of service stations, etc. (Ministry of Economy, Trade and Industry)
- Measures to reinforce the disaster resistance of water supply facilities (such as water purification plants) and measures to make water supply pipelines more earthquake-resistant (Ministry of Health, Labor and Welfare)

2. Countermeasures against aging infrastructure to shift to preventive maintenance [21 measures]

- Measures for aging river management facilities, roads, ports, railroads, and airports, and disaster prevention and mitigation measures by rebuilding aging public housing (Ministry of Land, Infrastructure, Transport and Tourism)
- Measures for aging of agricultural water utilization facilities, and measures for these facilities against heavy rains and earthquakes (Ministry of Agriculture, Forestry and Fisheries)
- Measures for aging public elementary and junior high school facilities, measures for aging national university facilities, and measures to reinforce disaster prevention functions (Ministry of Education, Culture, Sports, Science and Technology)

3. Promotion of digitization, for efficient implementation of measures related to National Resilience [24 measures]

(1) Digitization of measures related to National Resilience [12 measures]

- Measures for infrastructure maintenance and management, including the establishment of a collaborative infrastructure data platform (Cabinet Office)
- Measures to improve the safety and productivity of unmanned construction technologies, and measures to enhance the road management system using IT (Ministry of Land, Infrastructure, Transport and Tourism)

(2) Sophistication of disaster-related information forecasting, collection, accumulation, and communication [12 measures]

- Disaster prevention and mitigation measures using supercomputers, and climate change adaptation through high-precision forecast information (Ministry of Education, Culture, Sports, Science and Technology)
- Measures to upgrade disaster prevention meteorological information, such as improving the prediction accuracy of line-shaped precipitation systems, and measures to upgrade disaster prevention information in the fields of rivers, erosion control, and coastal areas (Ministry of Land, Infrastructure, Transport and Tourism)

Examples of Five-Year Accelerated Measures (Basin Flood Control Measures)

Basin flood control measures

(improvement of rivers, sewerage systems, erosion control, coastal and agricultural water use facilities, improvement of storage functions of rice paddies, and acceleration of the development of recreational areas and storage facilities using state-owned land)

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Overview: The related ministries and agencies will work together to promote "basin flood control measures," which are flood control measures that are implemented throughout the river basin through the collaboration of all parties involved in the river basin. **(Rivers and Dams)** Excavation of river channels, improvement of embankments, reinforcement of embankments, earthquake-resistance measures, promotion of pre-release water discharge from dams, improvement of dams and recreational areas **(Sewerage)** Urban inundation countermeasures through sewerage, making sewage treatment plants and rainwater pumping stations watertight **(Erosion Control)** Sediment Disaster (Landslide Disaster) management **(Coastal)** Tsunami and storm surge countermeasures **(Agricultural Water Use Facilities)** Repair and renewal of existing agricultural water use facilities, and maintenance of agricultural water use facilities **(Paddy Fields)** Promote agricultural land improvement projects implemented in areas where rice paddy dams are being built to improve the storage function of paddy fields **(State-Owned Land)** Development of recreational areas and storage facilities by utilizing unused state-owned land

Government ministries and agencies: Ministry of Land, Infrastructure, Transport and Tourism; Ministry of Agriculture, Forestry and Fisheries; Ministry of Finance

Targets to be Achieve Through these Measures (excerpt)

◆ Medium- and long-term goals

(Rivers and Dams)

- Rate of improvement of Class A rivers to cope with great floods in postwar period
Current status: approx. 65% (FY2019) ⇒ Medium- to long-term goal: 100%
- * Accelerate the year of achievement by these measures: from around FY2050 to around FY2045

- Percentage of Class B rivers that have been upgraded to cope with floods of recent disasters
Current status: approx. 62% (FY2019) ⇒ Medium- to long-term goal: 100%
- * Accelerate the year of achievement by these measures: from around FY2050 to around FY2045

(Agricultural Water Use Facilities)

- Achievement rate for agricultural land and surrounding areas where waterlogging damage will be newly prevented through the construction of drainage pump stations, etc.
Medium- to long-term goal: 100% (approx. 210,000 ha) (FY2025)
- * Accelerate the year of achievement by these measures: from FY2027 to FY2025

(State-Owned Land)

- By utilizing new unused state-owned land, recreational areas will be developed and storage facilities with a goal of 50 locations nationwide

◆ Main Operators National Government, Japan Water Agency, the prefecture of Japan, municipalities, land improvement districts, etc.

◆ Five years later (FY2025)

(Rivers and Dams)

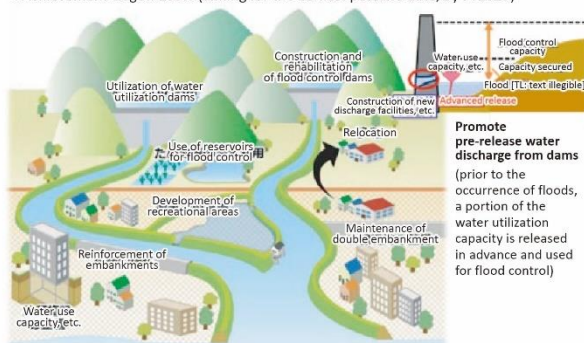
- Achievement target: approx. 73% (Class A rivers), approx. 71% (Class B rivers)

(Agricultural Water Use Facilities)

- Achievement target: 100% (approx. 210,000 ha)

(State-Owned Land)

- Achievement target: 100% (aiming for the earliest possible date, by FY2025)



Basin flood control measures through collaboration among related ministries and agencies

Source: National Resilience Promotion Office, Cabinet Secretariat
(See: https://www.cas.go.jp/jp/seisaku/kokudo_kyoujinka/5kanenkasokuka/index.html)