Chapter 2 Measures for Disaster Prevention and Mitigation and National Resilience Reflecting Disasters in 2018

1-1 Emergency Inspection of Critical Infrastructure

Reflecting the impact of natural disasters in 2018 (e.g., Northern Osaka Prefecture Earthquake, the Heavy Rain Event of July 2018, Typhoon JEBI (1821), Hokkaido Eastern Iburi Earthquake) on people's lives, economic livelihoods and lives, the government held the Ministerial Meeting on Emergency Inspection of Critical Infrastructure on September 21, 2018 with an aim to discuss over continuous functionality of electricity, transportation and other critical infrastructure. At the meeting, it was agreed that the government would formulate measures to this end by the end of November (Reference: https://www.kantei.go.jp/jp/singi/jyuyouinfura/index.html). Under this project, 12 ministries and agencies carried out emergency inspections on 132 items concerning (1) critical infrastructure for securing power in the event of a disaster, and (2) critical infrastructure for protecting people's lives.

Example of an Emergency Inspection Item

Electricity **Emergency Inspection of Electricity Infrastructure** 国土強靭化

Overview

Overview: Learning from the major blackout affecting the entire Hokkaido Prefecture caused by the 2018 Hokkaido Eastern Iburi Earthquake, overall inspection of electricity infrastructure will be conducted across Japan, bearing in mind the inspection work for the major blackout conducted by the third party committee established under the Organization for Cross-regional Coordination of Transmission Operators (OCCTO).
Scope: Overall inspection of electricity infrastructure will be conducted across Japan, bearing in mind the aforementioned inspection work.
Ministry/agency in charge: Ministry of Economy, Trade and Industry (METI)

Issues Identified Following the Recent Disaster

A massive blackout occurred during the Hokkaido Eastern Iburi Earthquake in September 2018 due to multiple factors, including the shutdown of a major thermal power plant, electric line failures, and disruptions to renewable energy power generation (hydropower and wind power).

<The status of the electricity system (power transmission network) from the earthquake to the major blackout in the Hokkaido area>

Source: Prime Minister's Office of Japan website (Ministerial Meeting on Emergency Inspection of Critical Infrastructure)
(Reference: https://www.kantei.go.jp/jp/singi/jyuyouinfura/index.html)

At the second Ministerial Meeting on November 27, 2018, the government reviewed inspection results and formulated measures, which were grouped into the following two categories: (1) the maintenance of the functionality of critical infrastructure for disaster prevention (those that protect people's lives and property from floods, sediment disasters and other disasters and those related to rescue and relief activities and medical activities); and (2) the maintenance of the functionality of critical infrastructure to support people's economic livelihoods and lives (e.g., electricity, food supply and transportation infrastructure).

1-2 Approval of the Three-Year Emergency Response Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience

At the third Ministerial Meeting (jointly held with the National Resilience Promotion Office) on December 14, 2018, the Prime Minister said, "We will create a country that possesses strength and resilience, not giving in to disasters. We must continue on this path of national resilience as Japan's grand plan for the long-term future. In particular, in recent years, since disasters have grown in intensity, disaster prevention, disaster mitigation, and building national resilience for the protection of the lives and property of the people have become important and urgent issues, and we must continue to advance these efforts swiftly." With this view in mind, the members of the meeting formulated measures for critical infrastructure based on the results of emergency inspections, as well as those for concrete block walls and farm ponds reflecting the results of past inspections. At the meeting, the Cabinet approved the Three-Year Emergency Response Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience, which described urgent measures that required immediate action, such as the below.

Reference: https://www.kantei.go.jp/jp/singi/jyuyouinfura/index.html.

Example of Emergency Inspection Results and Response Measures

Rivers

Emergency Inspection
Concerning the Risk of Levee Breach in Rivers

国土強靭化

Overview: Learning from the Heavy Rain Event of July 2018, emergency inspections were carried out to examine the inundation depth during a flood caused by a backwater phenomenon, etc. As a result, it was found that some of the inspected rivers had sections with a risk of causing enormous casualties. To mitigate such risks, levee reinforcement and elevation and other response measures will be taken.
Ministry/agency in charge: Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

Class A rivers: Approx. 14,000; Class B rivers: Approx. 7,000

Inspections were conducted.

Sections with a risk of reaching a large inundation depth and causing enormous casualties

・It was found that important facilities were located in some of the areas with a risk of reaching a considerable inundation depth and causing damage to houses exceeding a certain number.

[Response measures]
Levee reinforcement and elevation to prevent or delay breaches

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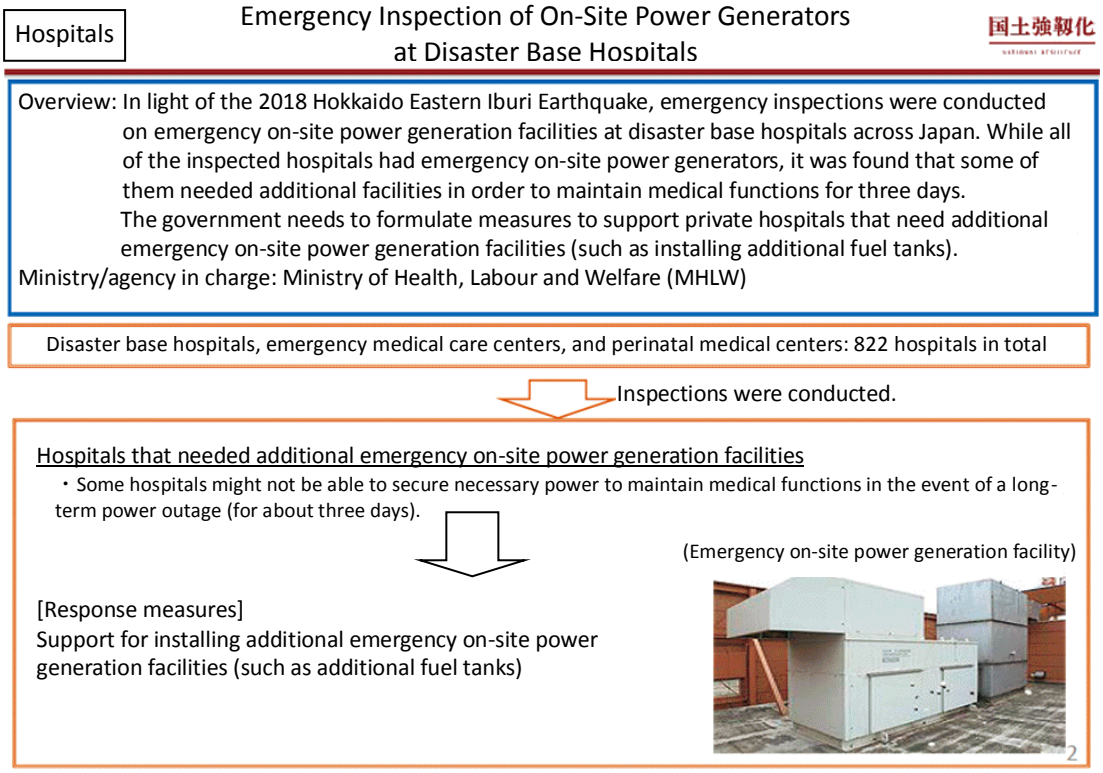

Source: Prime Minister's Office of Japan website (Ministerial Meeting on Emergency Inspection of Critical Infrastructure)
Reference: https://www.kantei.go.jp/jp/singi/jyuyouinfura/index.html

1-3 Implementation of the Three-Year Emergency Response Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience

The Three-Year Emergency Response Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience describes the goals, contents, expenditures and other information of 160 tangible and intangible measures to be urgently implemented over the three years from FY2018 to FY2020 from the perspectives of (1) the maintenance of the functionality of critical infrastructure for disaster prevention and (2) the maintenance of the functionality of critical infrastructure to support people's economic livelihoods and lives.

These emergency measures will be carried out with a fund of approximately 7 trillion yen utilizing the fiscal investment and loan program and contributions from the private sector with a view to achieving completion or significant advancement by the end of the period. In order to ensure the functionality of critical infrastructure, which protects people's lives and property from natural disasters and is essential for people's lives and economic livelihoods, the national government will promote these measures in cooperation with various entities, including local governments, private hospitals, airport terminal companies, communications companies, and railway companies.

Among these measures, expenditures for those to be commenced in the first fiscal year were covered by the FY2018 secondary supplementary budget. Additional funds will be allocated from the FY2019 and FY2020 budgets for temporary and special measures.

The government will conduct periodical follow-up assessments on the progress of these emergency measures to ensure steadily progress and attainment of the defined goals in three years.

Overview of the Three-Year Emergency Response Plan for Disaster Prevention, Disaster Mitigation, and Building National Resilience

1. Basic Principles

○Based on the Results of the Emergency Inspection of Critical Infrastructure and Response Measures (report from the Ministerial Meeting on Emergency Inspection of Critical Infrastructure on November 27, 2018) and the results of past inspections on concrete block walls and farm ponds, emergency measures were formulated for the following two purposes:

- the maintenance of the functionality of critical infrastructure for disaster prevention; and
- the maintenance of the functionality of critical infrastructure to support people's economic livelihoods and lives.

These emergency measures are tangible and intangible measures falling under 20 priority and other programs included in the 45 programs of the National Resilience Basic Plan. They will be promoted intensively over the next three years.

2. Categories of Measures and Estimated Budgets

○Emergency measures: 160 items

○Implemented with a fund of approximately 7 trillion yen (also utilizing the fiscal investment and loan program)*1, *2

I. Maintenance of the functionality of critical infrastructure for disaster prevention: Approx. 3.5 trillion yen

(1) Prevention and minimization of damage of major floods, sediment disasters, earthquakes, tsunamis, and other disasters: Approx. 2.8 trillion yen
(2) Securing disaster response capabilities, including those for rescue and relief activities and medical activities: Approx. 0.5 trillion yen
(3) Securing information necessary for evacuation: Approx. 0.2 trillion yen

II. Maintenance of the functionality of critical infrastructure to support people's economic livelihoods and lives: Approx. 3.5 trillion yen

(1) Securing electricity and energy supply: Approx. 0.3 trillion yen
(2) Securing food supply, lifeline utilities, supply chains, etc.: Approx. 1.1 trillion yen
(3) Securing land, sea, and air transportation networks: Approx. 2 trillion yen
(4) Securing information, communications, and information services necessary in daily life: Approx. 0.02 trillion yen

(*1) Includes 0.6 trillion yen from the fiscal investment and loan program and 0.4 trillion yen of contributions from the private sector. Includes 0.3 trillion yen in FY2018 1st supplementary budget.

(*2) Totals may not add up due to rounding.

3. Period and Goals

○Period: Three years from FY2018 to FY2020

○Goals: Complete or significantly advance emergency measures that require immediate action from the viewpoint of promoting disaster prevention and disaster mitigation and building national resilience

Source: Prime Minister's Office of Japan website (Ministerial Meeting on Emergency Inspection of Critical Infrastructure)
Reference: https://www.kantei.go.jp/jp/singi/jyuyouinfura/index.html