Chapter 2 Consideration of Disasters in FY2021

Section 1 Consideration of the Prevention of Disasters Caused by Embankments

The heavy rain from July 1 of 2021 caused sediment disasters (landslide disasters) and flood damage in many parts of Japan, largely debris flow disaster in Atami City, Shizuoka Prefecture, which brought about extensive damage.

The government compiled a "Package of Support Measures for the Heavy Rain from July 1 of 2021" on July 30, 2021. In the package, in order to take all possible measures against disasters likely to occur again and to minimize damage, they decided to "conduct a general inspection of embankments that seem dangerous, and establish a liaison conference of experts and related ministries and agencies. In light of this inspection, necessary measures, including the way to respond to dangerous areas and land use regulations, are considered to ensure safety."

In response to this, first of all, it was necessary to ascertain the actual condition of embankments affecting residential areas and to take immediate measures for parts that were considered dangerous. Therefore, from August 2021, under the cooperation of related organizations, a nationwide general inspection of embankments was initiated.

In addition, on August 10, 2021, we established the "Liaison Conference of Related Ministries for the Prevention of Disasters by Embankments" (hereinafter referred to as the "Liaison Conference of Related Ministries" in this section), which consists of related ministries and agencies. On September 30, 2021, a committee on the prevention of disasters by embankments (hereinafter referred to as the "Committee of Experts" in this section), consisting of experts from the private sector, was established to discuss measures to prevent disasters by embankments.

(Reference: https://www.cas.go.jp/jp/seisaku/morido_saigai/index.html
https://www.bousai.go.jp/kaigirep/kentokai/moridosaigai/)

(1) General Inspection of Embankments

On August 11, 2021, the relevant Directors-General of the Ministry of Agriculture, Forestry and Fisheries (MAFF), the Forestry Agency, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT), and the Ministry of the Environment jointly issued a document requesting prefectural governors to conduct a comprehensive inspection, and each prefecture proceeded with a general inspection of embankments, including visual checks at each site.

In December 2021, the relevant ministries and agencies organized the status of inspections at that time and reported them to the Committee of Experts. Furthermore, the inspections of almost all of the 36,000 embankment sites nationwide, including visual inspections, (as of the end of March 2022) were reported to have been completed, and the results of these inspections were announced to the public.
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(2) Suggestion by the Committee of Experts

The Committee of Experts held discussions four times from September to December 2021 from the viewpoint of experts in each field, and based on the situation regarding the general inspection of embankments that was organized by the government, the committee summarized its recommendations on December 24, 2021. (Reference: https://www.bousai.go.jp/kaigirep/kentokai/moridosaigai/pdf/teigen_honbun.pdf)

The recommendations included the direction of measures regarding existing dangerous embankment sites and the future direction of mechanisms to prevent the occurrence of dangerous embankments, which should be addressed by the agencies concerned.

As for measures to be taken regarding existing dangerous embankment sites:

- It was proposed that "embankments with high disaster risk" identified in the general inspection of them should be set in motion to ensure their safety as soon as possible.
- While the basic policy is that the embankment builder should impose corrective measures, if it is difficult to do so, the local government will implement measures to deal with the hazardous parts. At the same time, the government should support the local government.

Specific measures were proposed for "thorough implementation of legal measures for the actors including embankment builders," "measures to be taken at dangerous sites" and "measures to be taken until solutions at dangerous sites are completed."

In addition, mechanisms for preventing a future occurrence of hazardous embankments include:

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The General Inspection of Embankments (1)

- As of the end of March 2022, almost all of the 36,000 sites to be inspected nationwide, including visual inspection, were reported to have been completed.
- There were approximately 1,100 embankment sites that fell under one or more of these four inspection items.

[Results of the general inspection of embankments (as of March 16, 2022)]

- The number of sites subject to general inspection: 36,354 sites
  - Of the above, the number of completed inspections: 36,310 sites (99.9%)
  - Conduct a detailed survey, if necessary
    - (1) Embankments where necessary disaster prevention measures could not be confirmed: 516 sites
    - (2) Embankments where waste dumping were confirmed: 142 sites
  - Administrative measures based on various law and regulation are required
    - (3) Embankments for which no procedures such as permission or notification were taken: 728 sites
  - Administrative measures based on each laws and regulations are required
    - (4) Embankments where there were discrepancies between the content of procedures and local conditions: 515 sites
*Some sites fell under multiple inspection items (1,089 sites if duplications are excluded)

*The above sites are based on the results of sequential inspections conducted since August 2021, and do not take into account changes in conditions after each inspection (including those for which corrective measures have already been taken).

Source: The 4th Liaison Conference of the Ministries and Agencies concerned for the Prevention of Disasters Caused by Embankments, Executive Committee Meeting (March 28, 2022)
Uniform rules should be established (a new legal system), and regulations should be strengthened to control dangerous embankment construction, etc.

In order for the new legal system to be effective, the law enforcement system and capacity must be strengthened.

Along with the establishment of a new legal system, it is important to take measures to ensure that soil discharged from construction sites is disposed of to appropriate destinations.

In order to prevent the generation of soil mixed with waste, it is necessary to promote the separation and proper disposal of soil and waste at construction sites.

Fundamental concepts such as the above were presented. And the report proposed specific measures to "create a new legal system to regulate dangerous embankments," "strengthen the enforcement system and capacity," "clarify the destination of soil generated from construction work" and "prevent the generation of embankments mixed with waste."

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**Summary of Proposal by the Committee on the Prevention of Disasters Caused by Embankments**

**2. Measures to be taken regarding dangerous embankment construction sites**

**[Basic concept]**
- For "embankments with a high disaster risk" identified in the general inspection of embankments, it is necessary to implement measures to ensure safety as soon as possible.
- While corrective measures should be taken by embankment builders as a basic policy, local governments should implement measures to deal with dangerous sites when it is difficult to do so, and the national government should provide support to local governments.

**[Specific measures]**

**(i) Enforcement of legal measures against embankment builders**
- The authorities responsible for ensuring safety and regulations should be given without hesitation to embankment builders and landowners of illegal embankments, and strict action should be taken against them.

**(ii) Measures against dangerous sites**
- Detailed investigation (e.g., surveying, testing) should be conducted for embankments where continuation is required of which are "high-disaster risk embankments."*1*
- In addition, emergency measures (e.g., installation of sandbags) should be implemented to temporarily avoid collapse and other damage.

**(iii) Measures to be taken until the disappearance of the site (site management)**
- Embankments identified as "high-disaster risk" should be publicly announced and disclosed to residents, in order to ensure prompt evacuation in the event of an emergency. The local government or the national government should be notified of the incident.
- Monitoring of the site through remote sensing (e.g., surveillance cameras, fixed-point observation) is required.

**2. Mechanisms to prevent the occurrence of dangerous embankments**

**[Basic concept]**
- In order to prevent the collapse of embankments from affecting residences, a nationwide uniform rule (i.e., a new legal system) should be established to regulate dangerous embankment construction and regulations should be strengthened.
- Soil that is not mixed with waste is from natural origin and should be properly utilized or returned to nature. It is not appropriate to dispose of it with waste. Soil generated from construction work (waste mixed soil) should be separated as much as possible and disposed of in accordance with the Waste Management and Public Cleansing Act.

**[Specific measures]**

**(i) Establishment of a new legal system**
- Establishment of a legal system by the government (the government should present a comprehensive concept) to deal with dangerous embankments within the public safety policy framework.

**(ii) Enhancement of law enforcement system and capacity**
- Establishment of a system to specify illegal embankments and guidelines to deal with them.

**(iii) clarification of the destination of soil generated from construction work**
- Publication of a list of permitted sites, posting of such sites on websites and providing information on the repeated issuance of permits to ensure that the soil is properly disposed of in accordance with each business's legal and related business system.

**Notes:**
*1) A site is one where the builder contractor decides the disposal of the embankment (e.g., other construction sites or industrial sites) due to the risk of disaster. 
*2) Monitoring of the soil and proper disposal of soil and soil in order to clarify the destination of construction work at the time of construction.
(3) Actions based on the Recommendations

Based on the recommendations of the Committee of Experts, the Liaison Conference of the Related Ministries decided on "Measures to Prevent Disasters Caused by Embankments" on December 27, 2021. These measures are to respect "the recommendations of the Committee of Experts to the maximum extent and promptly embody all matters described in the recommendations in the relevant ministries and agencies."

In response, MLIT and MAFF considered a new legal system to regulate dangerous embankments with uniform standards nationwide to prevent damage to residences and others caused by collapsing embankments. In March 2022, they submitted a "Bill for Partial Amendment of the Act on Regulation of Residential Land Development" to the 208th session of the Diet. The bill was passed and enacted on May 20 after deliberations in both houses of the Diet.

### Partial Amendment of the Act on Regulation of Residential Land Development

#### Background and Necessity

- **Current Situation on Embankments**
  - Heavy rain caused embankment collapse in Aizumi City, Shiizuoka Prefecture, and landslides (July 2021)
  - Comprehensive embankment inspections, including visual inspections at approximately 30,000 sites throughout Japan (March 2022)
- **Institutional Issues**
  - Embankment development by various laws to ensure residential land security, forest functions, and farmland preservation
- **A legal system to comprehensively regulate dangerous embankments, etc. with uniform standards throughout the country is required.

#### Overview of the Law

- To protect the lives and bodies of citizens from disasters caused by embankments, etc., the "Act on Regulation of Residential Land Development" was drastically revised, including the scope and purpose of the act, to comprehensively regulate dangerous embankments, etc. under uniform standards nationwide, regardless of land use (residential, land, forest, agricultural land, etc.).

#### The Minister of MLIT and the Minister of MAFF shall formulate a basic policy for the prevention of disasters associated with embankments.

### 1. Gas-free Regulations

- **Regulated areas**
  - Prefectural governors, etc., designate areas where embankments may cause damage to houses, etc., as regulated areas
  - Embankments on areas where people live such as urban areas, settlements and their surroundings, etc.

### 2. Ensuring Safety of Embankments

- **Permit criteria**
  - Establish the necessary permit criteria for disaster prevention according to the topography and geology of the area to raise the ground level
  - Ensure that safety measures are in place in accordance with permit standards, conduct:
    - Prior to permit issuance, inspections and safety checks

### 3. Clarification of Responsibilities

- **Emergency responsibility**
  - Clarify that landowners have responsibility for maintaining land in a safe condition at all times where embankments, etc. have been placed
  - Where necessary to prevent disasters, order corrective measures, etc., not only to the landowners, etc., but also to the embankment builders.

### 4. Effective Penalty Measures

- **Penalties**
  - Ensure that the penalties function adequately as a deterrent, the penalties of imprisonment and fines against unauthorized acts and violations of orders, etc., are strengthened to a level greater than the maximum penalties under the ordinance.

#### Targets and Effects

Comprehensive regulation of dangerous embankments, etc. to prevent disasters associated with embankments, etc.

- Number of public notices: 3,000
- Number of hearings: 100
- Number of security checks: 500
- Number of inspections in progress: 1,000

Source: MLIT