Mission of NILIM

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“As the only national research organization in the social infrastructure and housing field, our goal is to use technology as the driving force to create an attractive country and society that are safer, more secure, and more vigorous, both now and in the future.”, this is the mission of NILIM. I feel that the year 2024 truly reminded us of this mission and that we engaged in achieving this mission.

Responding to the Noto Peninsula Earthquake that occurred in January 2024, and the heavy rain disaster that occurred in the same area in September 2024, NILIM dispatched experts to the affected area just after the disaster and supported the local governments, etc. of the affected area. As these disasters damaged a wide area in many different ways, NILIM dispatched experts from all the research fields that NILIM has. I believe that our staff supported various activities at the government’s response. On-site HQs were opened within the Ishikawa Prefectural Office and from Tsukuba city and that we accomplished NILIM’s mission using all the abilities NILIM had. We were also able to do necessary research and give appropriate advice under difficult circumstances.

Previously I worked in Kochi Prefecture where the bridge girder of an expressway in the prefecture was carried away due to a landslide resulting from the heavy rain disaster in July 2018. At that time, we were able to restore the expressway within one year, thanks in part to the bridge experts that were dispatched by NILIM and took appropriate measures. Now that I have changed my position from the one who receives support to the one who gives support at NILIM, I have recognized once again that it would be important for NILIM to have highly skilled experts who are able to support affected areas.

In addition, through our experience with various disasters and accidents, we have identified new issues, analyzed them and reflected on lessons learned regarding technical standards and policies. The Figure below shows the history of disasters and accidents in the road structure field and of technical standards used in responding to such disasters. We have repeated the cycle of disasters and accidents, survey, research, standardizing technology and implementation at affected areas, and as a result been able to reinforce our country’s infrastructure.

For example, at the time of Noto Peninsula Earthquake, though substantial damage occurred to roads, we did not identify any serious damage to the bridge itself. We were able to determine that the damage was minimized thanks to the revision of technical standards and measures taken in advance. It is valid evidence to confirm that the direction of previous earthquake countermeasures for bridges was effective. On the other hand, a certain damage occurred at the joint between bridges and earthworks, which was a new issue, and we are studying countermeasures for that. Though we are still recovering from the 2024 Noto Peninsula Earthquake, it will, in future, be recorded as one page in the history of disaster, recovery / restoration and reinforcement, and our current approaches will also be recorded in the same page.

From the word “infrastructure”, we tend to imagine such infrastructure as facilities or physical structures including water supply and sewage, roads, ports, airports, Sabo facilities, embankment and dam. In addition, “infrastructure” as a system includes activities to plan, construct and maintain those infrastructures, and laws, budgets, standards and technologies to recover from disasters. Moreover, NILIM is a part of the “infrastructure” as a system which in its broader sense, is responsible for such roles as supporting the restoration of damaged facilities infrastructure or reflecting on the knowledge learned from disasters to technical standards. I believe that each of NILIM’s staff is a part of “infrastructure” as member of technical experts.

This report introduces NILIM's research and broad development. These research results are used as a base for technical standards, improving the safety of infrastructure and becoming an important tool to contribute to improving on-site productivity. It is NILIM's important role to collect these results, and maintain and reinforce these research structures.

So far, we have made and revised technical standards based on the introduction of new technologies and experiences learned from large-scale disasters. This work has been done through the collaboration between senior researchers who are familiar with the past revision history and young researchers. We are currently working on revising various technical standards taking into account the damage that occurred in Noto Peninsula Earthquake, and I believe young researchers participating in such works will take a leading role in next revisions.

I believe it is also an important mission for NILIM to always retain experts who can properly offer advise at disaster areas and to continue to have experts who can revise technical standards with an understanding of the past revision history.

It is necessary to develop future experts, in addition to retaining experts for each field, to engage in research and development during normal times and to support affected areas at the time of emergency. Moreover, it is also important to have human resources and structures to support such experts from a logistical standpoint so that they may smoothly do their work. NILIM should be an organization that incorporates all such functions.

Next year, NILIM will celebrate the 25th anniversary since its establishment, I would like to reinforce our human resources and structure, ensuring research to support affected areas using NILIM's overall ability for its mission, "to create an attractive country and society that are safer, more secure, and more vigorous, both now and in the future".

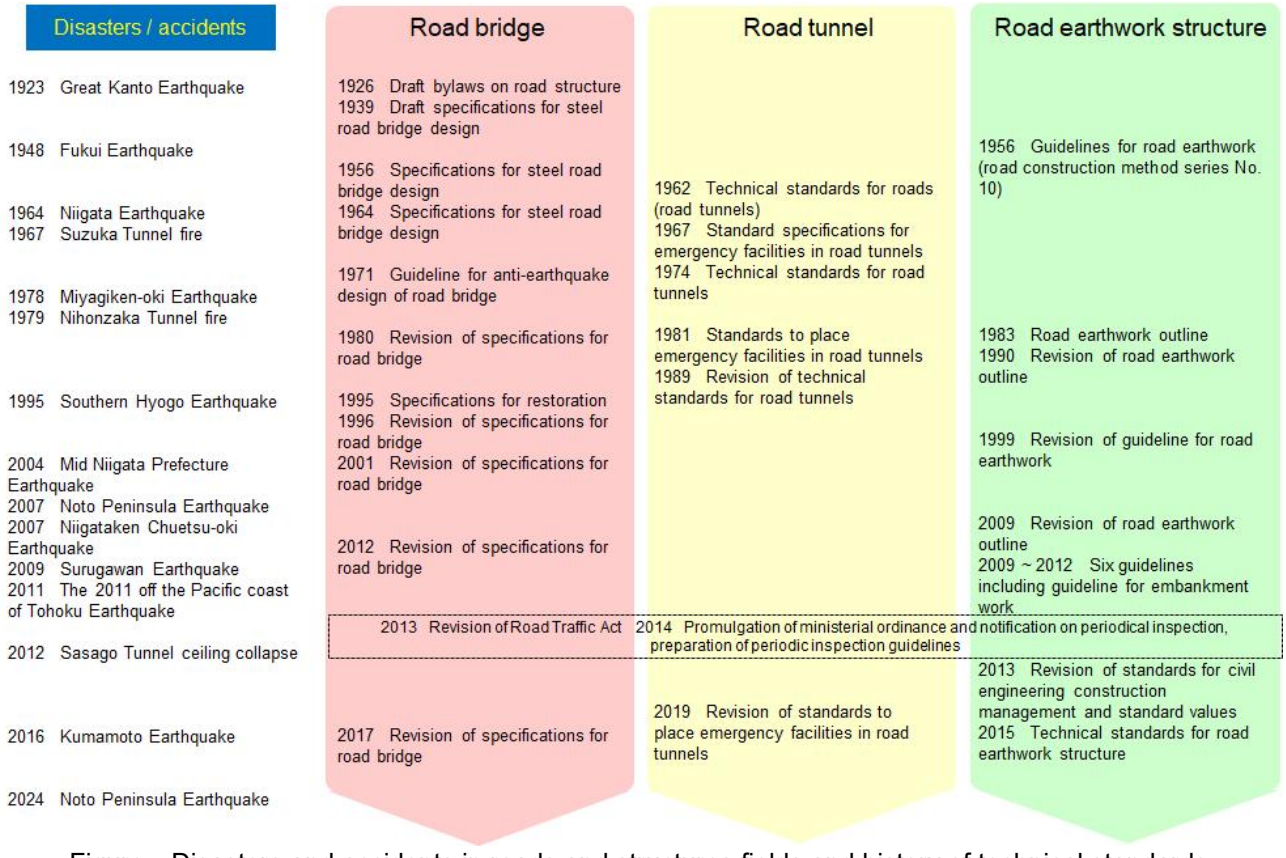

Figure Disasters and accidents in roads and structures fields and history of technical standards