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Examples of recent landslide countermeasures by conservancy projects

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At the Iwagawa River, which runs through Ichinoseki City, Iwate Prefecture, Typhoon Kathleen in 1947 and Typhoon Ione in 1948 caused large-scale landslides. As a result, large amounts of earth and sand flowed into the river and seriously damaged the downstream urban area. In order to recover the disaster-affected mountain region, the Forestry Agency of Japan launched a forest conservation project under its direct control in private forests in the Iwagawa River District in 1949 and instigated forest conservation measures centering on stream work such as check dam constructions. The project was completed in 1955. However, in 1969, due to the re-emergence of landslide activity in the region bringing increased probability for disaster – and in response to strong requests from Iwate Prefecture and Ichinoseki City – the agency once again launched a landslide prevention project under its direct control. The agency carried out the project systematically and as planned, so its effectiveness was adequately proven even in the face of the Iwate-Miyagi Nairiku Earthquake (M 7.2) in 2008 with almost no slope failure observed after the earthquake at locations targeted by the project.

Measures taken in the Iwagawa River District included control work for removing or reducing factors that may cause landslides, such as underground water drainage work and surface water drainage work, as well as restraining work for direct prevention of landslides by with structures. In addition, sites, where landslides took place, were provided with various measures including hillside retention efforts such as vegetation (seeding and planting) work to prevent soil loss.

The past projects spanning nearly a half-century have resulted in increased safety with no observable landslide activity. In 2017, the Tohoku Regional Forest Office of the Forestry Agency of Japan set up an exploratory committee consisting of landslide experts along with the deputy Mayor of Ichinoseki City and officials from Iwate prefecture to review past work approaches. The decision was made to terminate the projects at the end of March 2019.

In recent years, mountain disasters due to earthquakes or concentrated heavy rains have intensified, increasing the necessity of forest conservation projects for the recovery of damaged mountains and mountain streams. The agency of Japan will continue cooperation with local governments, such as Iwate Prefecture and Iwate City, and research institutions such as FFPRI to ensure regional and national safety and security.

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