

# Rapid Technical Support for Disasters and Troubles

## Road Structures Department

In order to respond to functional loss of road structures due to disasters and troubles, we rapidly dispatch experts on request from local governments and provide technical support for emergency measures, stopgap recovery efforts, etc. Here we present the state of responses and examples of major responses in FY2021.

### Social background and issues

- Given that the severity of torrential rain disasters is trending upwards and structures built during the period of rapid economic growth are deteriorating with age, road-related damage and troubles occur frequently.
- We are conducting on-site investigations and providing technical advice regarding recovery on request from local governments, and in every case, we are required to respond promptly because avoiding further damage and restoring function are urgent duties.

### Response state and examples

#### State of responses in FY2021

In FY2021, we have coordinated with the Public Works Research Institute, Road Maintenance Centers in Regional Development Bureaus, and others to dispatch experts for the road disasters and troubles in the table to the right on request from local governments and RDB.

It is apparent that many of them were caused by torrential or extended rainfall and that road structures have lost function due to a variety of damage and deformation.

If an advisory committee is established to investigate causes or for the recovery efforts, the experts participate and contribute to find solutions.

#### Examples of road disasters and troubles where experts were dispatched in FY2021

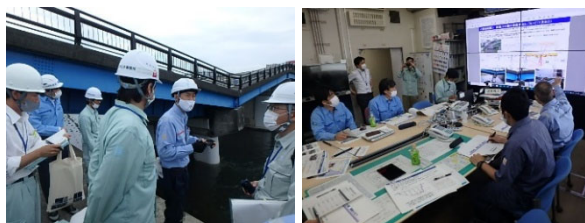
Outline	Dispatch location	Requesting agency
Deformation of slopes, retaining walls, etc.	Slopes, retaining walls on Nat. Hwy 107	Iwate Pref.
Bridge pier inclination due to scouring	Kawashima Ōhashi (Matsubara-Imojima Route (pref. road))	Gifu Pref.
Bridge pier sinking due to scouring	Kisegawa Ōhashi (Fuji-Shimizu Route (pref. road))	Shizuoka Pref.
Bridge damage due to sediment flow	Aizomebashi, Nat. Hwy 135	Shizuoka Pref.
Sediment runoff	2 locations, Nat. Hwy 54	Chūgoku RDB
Shoulder collapse, bridge damage due to landslide	2 locations, Nat. Hwy 19	Chūbu RDB
Sediment runoff	Ōmi Jingū ramp section, Nat. Hwy 161	Kinki RDB
Scouring of revetment, streambed	Shin-Ōtagiribashi (Shin-Kasuga Kaidō Route (municipal road))	Komagane, Nagano Pref.
Sediment runoff	Nat. Hwy 220 (upbound)	Kyūshū RDB
Deformation of tunnel mouth and slope	Zennami Tunnel, Nat. Hwy 47	Tōhoku RDB

#### Response to damage due to heavy rainfall in July 2021

One pier of the Kisegawa Ōhashi bridge (Fuji-Shimizu Route (Shizuoka prefectural road)) had sunk more than 2 meters due to scouring from heavy rainfall in July 2021, and we provided technical support to prevent the growth of scouring and for stopgap recovery efforts.

On the Aizomebashi bridge (National Highway 135), which was affected by sediment flow occurring in the city of Atami in July 2021, we provided technical support for matters to investigate and examine with a view to prompt reopening to traffic.

With our technical support, scouring countermeasures were implemented and a temporary assembled bridge was installed at the Kisegawa Ōhashi, and the route was reopened to traffic on August 31 (<https://www.pref.shizuoka.jp/kensetsu/ke-830/documents/210826kisegawa.pdf>). Traffic regulations on National Highway 135, which includes Aizomebashi, were removed on July 29.



Meeting for on-site investigation and response policy for Kisegawa Ōhashi



Aizomebashi damaged by sediment flow and on-site investigation

Providing rapid, appropriate technical support to minimize the effects of disasters and troubles

☞ See here for related articles

- *Technical Support for Frequently Occurring Road Disasters* (p. 32)
- *Development of Methods for Determining Disaster Potential and Preventive Measures for Bridge Washouts and Scouring* (p. 61)