

Tremendously heavy rainfall has occurred, twice as much as at any previously recorded time.

Emergency warning was issued, 1,000 mm in 24 hours in Asakura, and 600mm in Hita city and then, after rainfall.

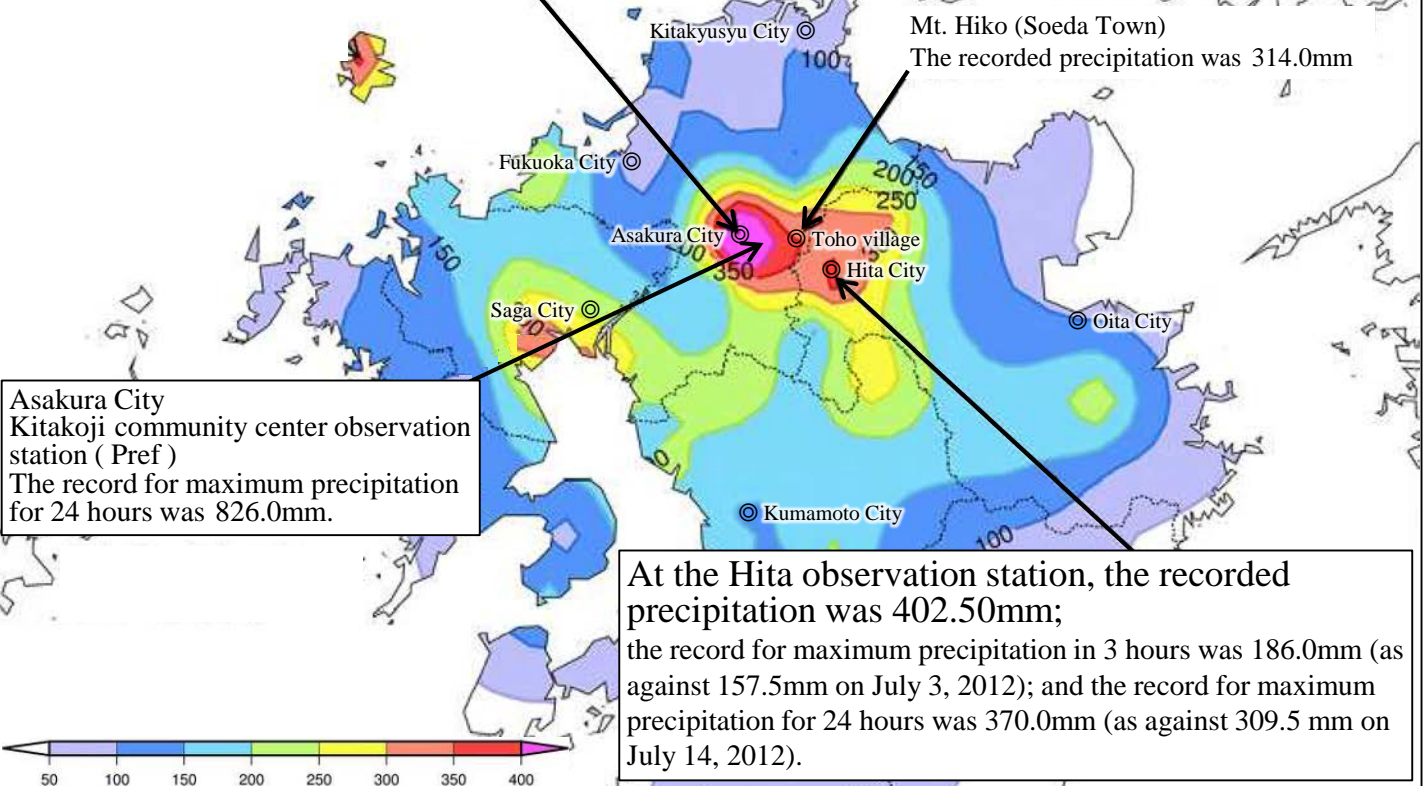
On July 5, 2017, there was heavy rainfall from noon till night in the North Kyushu area. The rain was particularly heavy in certain districts. Consequently, emergency warning was issued for Fukuoka Pref. and Oita Pref.

AMeDAS Radar measured precipitation at around 1,000mm in 24hrs for Asakura city in Fukuoka Pref. and 600mm for Hita city in Oita Pref. The damage caused enormous.

Precipitation distribution map for July 5 to 6.

At the Asakura observation station, the recorded precipitation was 586.00mm;

the record for maximum precipitation per hour was 129.5mm (as against 74.5mm on August 15, 2009); and the record for maximum precipitation for 24 hours was 545.5mm (as against 293 mm on July 14, 2012).



Source : Compiled from the published data of the Japanese Meteorological Agency

Overall picture of the results of heavy precipitation in north Kyushu in July, 2017.

Dates : July 5 to 6, 2017.

Human loss : 26 deaths; 5 persons missing; 3 seriously injured; and 11 less seriously injured.
Housing damage : 266 units completely destroyed; 850 half destroyed; 360 suffering substantial above the floor; and 1,341 less substantial immersion.

Source : Compiled from the Fukuoka and Oita Pref website (As of August 18)

Large quantities of driftwood scattered across various cities.

Large quantity of driftwood flowed into the Yamada district, Asakura city, Fukuoka pref.

Entire mountainsides were collapsed by rain induced landslides, so that large quantities of sand and driftwood were carried into city center.

The rain caused substantial land sliding on the mountain near a tributary in the middle of the Chikugo river basin. The consequent damage was made worse by the large quantities of driftwood involved. In Asakura city, a famous set of water mills, one of the area's famous historical heritages, was damaged. Nonetheless, the necessary work on restoring and maintaining National Route 211 was completed as of July 14.



Asakura city, many hillside collapses occurred.



Damaged historical heritage sote.
Triple water mill. (Asakura city)

MLIT helicopters surveyed damaged areas.



Kyushu Regional Development Bureau Disaster-Prevention Helicopter 「Harukaze (Spring Wind) 」

Aerial investigation of the damaged area facilitates prompt delivery of vital information to the emergency control center.

Two helicopters, the Harukaze (Spring Wind) and the Ailand (Lovely Land), took off soon after the disaster in order to evaluate the scale of damage and provide data for developing restoration plan. The helicopters examined such areas as Asakura city, Hita city and Toho village. Ground access to this place was very difficult, which made it hard to obtain disaster-related information by conventional means. The information supplied by the aerial survey was passed on local authorities in the communities concerned.



Aerial survey of damage.(Asakura city, Fukuoka pref)



Keeping devastating municipality authorities inform in real time.

TEC-FORCE members were deployed in the damaged area.



TEC-FORCE mobilized across the country were dispatched to the damaged areas. (July 7, 2017)

TEC-FORCE (Technical Emergency Cooperation Force) members are specialists in natural-disaster recovery work.

Total of 3,441 TEC-FORCE members were mobilized in the damaged areas all over Japan. Their duties were to provide technical assistance for recovery work. For example, they managed emergency road repair work and rebuilt embankments collapsed by the flood.



Damage investigation. (Asakura city, Fukuoka pref)



Elimination of road obstacles.
(Toho village, Fukuoka pref)

Assistance to damaged areas not easily accessible by conventional means.



Vigorous road clearance around the clock.

Enforced for first time the Disaster Countermeasures Basic Law.

The MLIT and its contractors worked restoration of national route 211, which had been disrupted by the landslides and erosion of road foundations. One main aim of this operation was to reopen the access route to the Kurokawa district, Asakura city, which had been completely cut off from the outside. In this operation, the MLIT implemented the Disaster Countermeasures Basic Law allowing public officials to take control abandoned vehicles.



Heavy equipment been used to clear rain-induced obstacles.
(Toho village, Fukuoka pref)



Emergency vehicle using newly cleared roads.

Urban flood protection.



Oita pref Hita City Kagetsu River, whose embankment had collapsed.
Left bank neighborhood site 1k800. (July 6, 2017)

Urgent completion of emergency repair work on serious damaged river-control systems.

In the Chikugo River system, certain sections of the Kagetsu River embankment were collapsed by flooding. This event resulted in the highest flood levels ever officially recorded at those locales. Emergency lighting vehicles were dispatched to the affected areas. It took eight days to complete the repairs, working round the clock. The job was finished as of July 14, as was the repair of similar, but less critical, damage which had occurred at three other points elsewhere in that same river system.



Intense emergency restoration around the clock.
(July 12, 2017)



Emergency restoration work completed.
(July 14, 2017)

Giving the local authorities backup.



Leader of TEC-FORCE explaining at the Shibuya Hiroaki Toho village mayor side.

While work crews and their leaders addressed infrastructure repair and select MLIT executives took charge of large numbers of TEC-FORCE members, other MLIT senior personnel were dispatched to provide emergency backup support for local authorities, especially for mayors. In any serious natural disaster, local authorities face serious challenges in looking after the security, safety, hygiene, and other pressing needs of area populations but frequently lack the staff to do so adequately. Therefore, some MLIT managers acted as de facto vice-mayors, with special attention to giving advice on repair work from a civil-engineering point of view. This overall assistance effort included the transmission of information immediately useful for enhancing the recovery effort.



Share the disaster damage with self-defense forces, police and local governments.



Explain progress of the damage investigation to Shibuya Hiroaki Toho village mayor.

Drone-recorded videos made available on SNS.

Aerial images by drone. (Ono district, Hita city, Oita pref.)

Drone aircraft investigated disaster areas not otherwise easily accessed.

The Drone Expert Force, a TEC-FORCE arm, was assigned to survey damage to areas not readily accessed by surface means. This aerial reconnaissance provided invaluable data on the nature and scale of the damage suffered. The stills and film footage thus obtained were posted on SNS, giving interested parties a better immediate grasp of the total situation.



Investigation by TEC-FORCE Drone flight unit.



Maintenance Bureau of staff is manipulate by oneself.

Local contractors save their home communities.



Emergency restoration work of damaged river.

Local contractors dealt with emergency work day and night.

Round the clock, in order to prevent additional damage, these area entrepreneurs took on such urgent tasks as establishing sandbag barriers, operating construction vehicles, and removing dangerous driftwood accumulations, all this in an especially taxing work environment. This overall effort was critical to securing the safety of the districts concerned.



Driftwood removal work of Inaibaru river.



Emergency restoration work of damaged national route 211.

Driftwood removal at sea.



Marine environment maintenance ship 「Kaiki」 to collect driftwood in Cooperation with fishery cooperatives.

The MLIT in cooperation with local fishery cooperatives gathered dangerous driftwood floating in the sea.

Due to the heavy rain, large quantities of driftwood and other debris had been washed into the Ariake Sea, where they presented a standing threat to navigation. The MLIT, in cooperation with local fishery cooperatives such as the Fukuoka Ariake Fishery Association and the Saga Ariake Fishery Association, undertook the work of removal. By August 24, a total of 2,033 m³ of debris had been collected, thousands of sizable pieces of wood included, leaving the problem largely resolved.



Collect driftwood from fishing boat.



Collect Large quantity of driftwood using a barge.

The National Government takes over from Fukuoka Prefecture the responsibility for emergency repair work on river-embankment infrastructure.

Damaged Fukuoka Pref Asakura city Akatani river.

Normally, prefectures have been responsible for emergency work involving river systems struck by natural disaster. In the present case, however, several rivers managed by Fukuoka Prefecture were badly choked with debris, especially driftwood present in masses sufficiently large to overtax local resources. In particular, Mr. Hiroshi Ogawa, Governor of that prefecture, asked MLIT to deal with restoration work on the Akatani River, part of that drainage system. For the first time, therefore, the National Government took over emergency repair work on the embankments, and other installations, concerned. This work included the removal of sand, driftwood, and other potentially dangerous material as well as securing the river for navigation. The MLIT organized the work teams involved and executed the overall task with vigor.



「Akatani river emergency restoration work promotion Team」 start-up. (July 21, 2017)



Start removal of sediment and driftwood. (July 19, 2017)