

Major Disaster Surveys

- 1 Field survey and guidance based on the nature-oriented river works advisor system for emergency projects to deal with severe damage and disaster assistance projects (Niigata Prefecture, Wakayama Prefecture)

From July 27 to 30, 2011, parts of Niigata and Fukushima Prefectures were struck by record breaking heavy rain exceeding the torrential rain which struck Niigata and Fukushima Prefectures in July 2004, causing damage along the Igarashi River, the Agano River and so on. We advised on forms of revetments and embedding according to the causes of the damage, and gave advice on the design of new channels and the treatment of revetments and watersidess taking account of environment, for the Igarashi River, Shiotani River, and Hane River. Because the Agano River includes a river cruising course, we gave guidance about revetments considering the scenery and the height of polders.

Typhoon 12 brought record-breaking torrential rainfall exceeding a total of 1,800mm at places on the Kii Peninsula, causing damage on rivers including the Hidaka River, Ota River, and the Nachi River. For the Hidaka River, we gave advice on methods of improving the levees after confirming the flood control functions of the open levees. For the Ota River, we advised on excavation method which conserved the riparian forests growing continuously at the waterside of the low water channel. For the Nachi River, we advised on the setting of the channel profile foreseeing its future change which had been buried by this disaster and provided guidance on a method to consider the world treasure, the Nachi Taisha Shrine.

FUJITA Kou-ichi, Director
River Department
HATTORI Atsushi, Head
FUKUSHIMA Masaki, Senior Researcher
River Division
AMANO Kunihiko, Head
ONUMA Katsuhiko, Senior Researcher
Environment Department, River Environment Division

2. Damage survey on the Igarashi River of the Shinano River System after the Niigata-Fukushima torrential rainfall

Torrential rainfall in Niigata and Fukushima Prefectures in July 2011 caused severe damage to river management structures, including breached levees on the Shinano River System and the Agano River System. The River Division responded to a request for the dispatch of staff to survey the damage, by inspecting the Shinano River, Igarashi River, and Kariyata River on the Shinano River System, and the Agano River on the Agano River System. They confirmed the state of breaching and leakage of levees, and discussed their causes, and at the same time, confirmed the state of damage to revetments etc., which had been restored after damage which occurred in July 2004, and discussed future countermeasures.

HATTORI Atsushi, Head
River Department, River Division

3. Survey of damage to the Onodani River on the Shingu River System caused by Typhoon 12

The impacts of Typhoon 12 caused record-breaking rainfall in the southern part of the Kinki Region, triggering large-scale failure of mountain sides along the Shingu River System and in the surrounding mountainous land, and at the same time, severely damaging management facilities on the downstream river courses, by breaching levees for example. The River Division responded to a request to dispatch staff to inspect the damage, by carrying out inspections on the Shingu River and Onodani River on the Shingu River System and on the Nachi River on the Nachi River System. The inspectors confirmed the state of damage in a case where a polder was completely submerged by a flood discharge far higher than the levees, and state of damage when a river course in a narrow mountainous area was blocked by sediment so the flood discharge flowed across the protected area. They also discussed future countermeasures.

HATTORI Atsushi, Head
River Department, River Division

4. Field Survey of damage to bridges due to the Niigata and Fukushima Torrential Rainfall of July 2011

Concentrated torrential rainfall which occurred in Niigata and Fukushima prefecture from July 27 to 30, 2011 abruptly raised the river's water level, causing damage including inundation and landslides. Many bridges in the river basin were damaged due to the effect of inundation.. The Bridge and Structures Division conducted a survey of the damaged bridges , mainly on Route 252 alongside the Tadami River. They confirmed conditions of the superstructures which were washed away, damage conditions in regards to abutments and piers, and damage to stiffening girders deformed by the effect of the rising river water.

TAMAKOSHI Takashi, Head
Road Department, Bridge and Structures Division