

Sediment-related disasters during the Niigata-Fukushima Heavy Rains in July 2004

Date: July 13, 2004

Place: Middle area of Niigata Prefecture
(Tochio City, Izumozaki Town, Yoita Town, Teradomari Town, etc.)

Meteorological conditions: heavy rain due to the baiu (seasonal rain) front which became active from July 12.

Observatory: Tochio Gauging Station
Continuous rainfall: 563 mm (7/12~18)
Maximum hourly rainfall: 62 mm/hr (7/13 9:00~10:00)

Number of sediment-related disasters

Debris flow	18	
Landslide	98	
Slope failure	278	Total: 394

Sustained damage

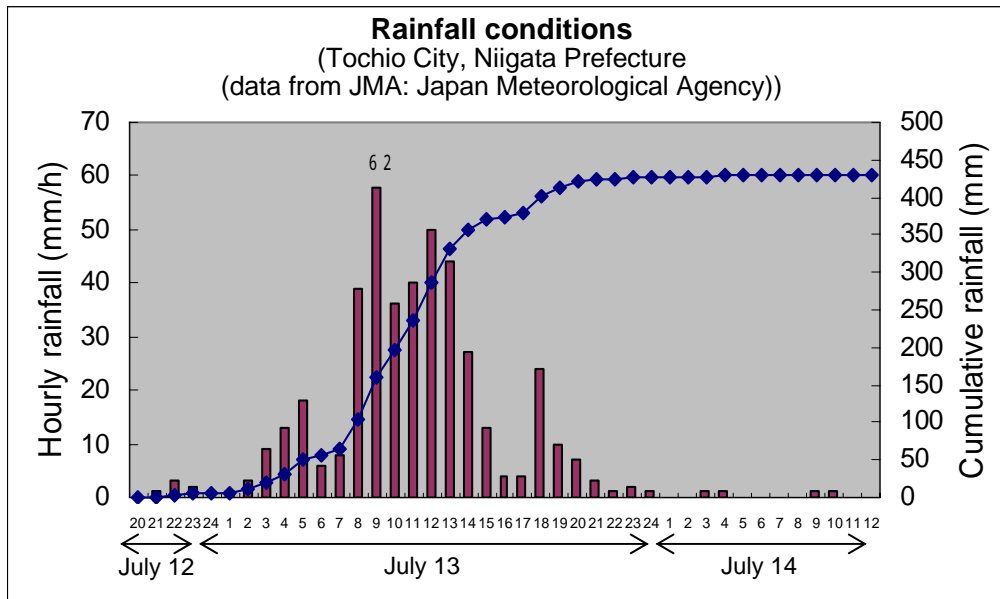
Human damage	Killed: 2	Injured: 1
Housing damage	Total collapse: 12	Half collapse: 9
	Partial collapse: 48	

Isohyetal map of the Igarashi River and Kariyata River basins (24 hour-maximum)



* The period of 24-hour-rainfall is roughly 1:00~24:00 of July 13, although it differs depending on a gauging station.

Distribution of total rainfall



An unprecedented heavy rain hit the Chuetsu (middle) area of Niigata Prefecture, mainly around Tochio City, from early morning to early afternoon on July 13.



Nakayama, Izumozaki Town, Niigata Prefecture
(killed: 1, total collapse: 1)

Source: SABO Dept. MLIT, JAPAN