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[U-11] Synthetic science of the complex cascading disasters in Noto Peninsula

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Thu. May 29, 2025 1:45 PM - 3:15 PM Exhibition Hall Special Setting (1) (Exhibition Hall 7&8, Makuhari Messe)

The Noto Peninsula, which was damaged by the earthquake on January 1, 2024, was again hit by a record-breaking heavy rainfall from September 20 to 23, 2024, resulting in another devastating disaster.

Pronounced rain bands provided more than 500 mm in total rainfall with intensity over 100 mm/h. Many new landsliding, as well as expansion of landslide rim, erosion of bare hillslopes, and reworking of debris caused by the previous earthquake produced large amounts of sediment and driftwood that flowed into channel networks mainly in the northern part of the peninsula. In the lower/middle reaches of the rivers, massive mud-water overflow caused severe casualties and house damage resulted from combined factors such as riverbed rise due to the sediment supply, water detour due to driftwood stacking, and possible drainage stagnation due to gradient reduction along the north-flowing rivers due to coseismic crustal uplift. Many infrastructures under reconstruction were partially destroyed again, and emergency temporary housing set up after the earthquake was also damaged by the flooding. How should we face the risk of such cascading disasters caused by the combination of earthquakes and heavy rains, with multidimensional social factors? We need to understand the mechanisms and processes of various disaster-related phenomena through collaboration of earth sciences, civil engineering, and social sciences, and to establish advanced methods of hazard assessment and disaster prediction and methods and effective social contribution methods. In this session, we expect researchers from a wide range of fields to present their research results for gathering knowledge and to have an open discussion forum regarding the predictability of the disaster chain and effective counter measures. This session will be co-organized with Japan Academic Network for Disaster Reduction.

1:45 PM - 1:55 PM

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