

Hydraulic conditions of erosion and crevasse spray sedimentation generated by the breach of Kinugawa River around Misaka area, Joso City on September 10, 2015.

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When flooding occurs in the large rivers, the special terrain is generated around the breach point. First of all, it scraped deep flood flow the marsh, making erosion terrain called crevasse channel. The crevasse spray deposits are around the channel. Especially crevasse spray deposits have been frequently reported in the fluvial sediments of geologic era, however modern sedimentological and geomorphological report is limited yet.

Through September 9 to 11, 2015, large flooding and landslides disaster around the East Japan was generated by the influence of the Typhoon No. 18, named "2015 Kanto and Tohoku heavy rain disaster.". The left bank of Kinu River was breached over a period of about 200 m, a large flooding disaster occurred on 10 September 10 around 12:50 in Misaka area in Joso City, Ibaraki Prefecture. Various sedimentary structures were observed, such as heavy erosional terrain caused by the supercritical flow around the breach point, the bed form 3D dune-ripple control by the changing flow velocity in the crevasse spray deposits, and fabric of rubbles indicating flow direction.

Keywords: crevasse spray, Kinu River, Misaka area, Joso City, hydraulic condition, Geomorphology, Sedimentology