

Detection criteria for tsunami-inundation area of the Tohoku earthquake, based on air-photo stereo-pair interpretation

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Air-photos revealed tsunami damages vast and serious, which were taken immediately after the 2011 off the Pacific coast of Tohoku earthquake, northeast Japan. For quick and intensive, rescue and recovery activities, we conducted their stereo-pair interpretation to release '1:25,000-scale tsunami damage map' online 17 days after the earthquake. The latest '2011 final' edition was released on December 11, 2011. Stereo-pair air-photos enable us to identify tsunami-inundation areas when interpreted from the following points of view: landforms, elevations, land conditions, geomorphic histories, land uses, and man-made infrastructures, in addition to tsunami-flow courses. We describe our identified tsunami-inundation evidences, hints, and problems in the mapping, to manage future devastating tsunamis.

Keywords: tsunami, landform, air-photo, stereo-pair analysis, 2011 off the Pacific coast of Tohoku earthquake