

Inappropriate fault assessments in Japan's nuclear society: a case study on the Urazoko fault on Tsuruga power plant site

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We show that Japan's nuclear society has a very strange manner of evaluating active faults with special reference to the Urazoko fault adjacent to the Tsuruga power station. Detail fault traces are mapped through interpretations of large-scale air photographs. Some boring data are reexamined to know the recent activity of the fault.

The Yanagase-yama (Utsurogi-toge) fault extends with a NW-SE (NNW-SSE) trend for about 17 km in the southeast of the Tsuruga bay. Many streams have been left-lateral offset 20-100 m. The Urazoko fault, lying in the northwest of the bay, is the northwestern extension of the Yanagase-yama fault. Offset of streams along the Urazoko fault are indicative of the cumulative left-lateral movements. The vertical component of the Yanagase-yama fault and the Urazoko fault are upthrown on the southwest and northeast, respectively. Thus, these faults compose a over 25-km long left-lateral active fault traversing the Tsuruga plant site. The Japan Atomic Power Company (JAPC) reported the Urazoko fault as not being active one based on lineament study and geological surveys. However, we raise a query against the explanations. The lineaments shown by JAPC are unintelligible to us, because of the complete disregard for geomorphic evidences. The boring data exhibited by the JAPC run in clear contradiction to its words; the data indicates that the most recent faulting occurred after ca.13 ka.

The assessment of the activity of the Urazoko fault crossing the plant site is very inappropriate. There are still many serious problems of evaluating active faults in Japan's nuclear society.