

Release of Radionuclides from Natural River, Abukuma as Suspended Particulate Matter into Pacific Ocean

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Most of radioactive material released from Abukuma River Basin, one of the largest stream near the contaminated zone of Fukushima, flowing most of the contaminated plane zone then flow into the Pacific Ocean, are in the suspended particulate form, being estimated more than 90 % in the upper stream and 70 % near the river mouth. Most of radionuclides in particulate form are still trapped bottom sediment in the middle of the basin, however we find that significant amount are released during the heavy precipitation event. We also found that, at hydrological extremes the total loading increase more than 1000 times higher than the normal stream condition. The total flux of radiocesium into the Pacific Ocean estimated at the Iwanuma Station from 10 August 2011 to 10 May 2012 become 9.11 Terabecquerel during 274 days for Cs-137, and 6.81 Terabecquerel during 274 days for Cs-134.

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