

## Survey on riverine Cs-137 transport in Fukushima prefecture

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In Fukushima prefecture, river water is widely used for city water, agricultural water, and other purposes. Although the radioactivity in river water already declined enough to drink it, the activity and flux of radiocaesium should be observed in order to evaluate effects on the air dose rate due to deposition while flood events and transfer from agricultural products, wild animals and plants via ecosystem.

Suspended sediments samples were collected at 30 sites in Abukuma river system and Hamadori districts, and the discharge and turbidity were measured at the same sites. And then, particulate radiocaesium activities and fluxes were calculated.

Although the declining tendency of the radioactivity of particulate Cs-137 has been continuing, the declining rate slowed down after one year from the accident. In observation sites on Kuchibuto tributary, in which decontamination works were conducted by Ministry of the Environment, the radioactivity became lower after spring in 2014. The decline was probably caused by the decontamination of agricultural land (After stripping surface soil, soil without contamination was brought in and added).

In September 2015, a heavy rainfall event occurred. In lower reach of Abukuma River, the water discharge was at almost the same level as the event caused by typhoon Roke in September 2011. However, the particulate Cs-137 flux was one order to magnitude lower than that at September 2011, because the Cs-137 activity concentration decreased.

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