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Initinal and secondary decline of transport of radionuclides in Fukushima in the terrestrial environment

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The Fukushima Daiichi Nuclear Power Plant accident has released massive amount of radiocesium into the terrestrial environment, and the radiocecium have been moved through rainfall and erosional processes. Especially, radiocesium (Cs-137) transfer and flux through river network is important to understand the redistribution of radiocesium in terrestrial environment.
An intensive field monitoring campaign has been started including mapping project, immediately after the Fukushima NPP accident including detailed monitoring site in upstream (Yamakiya site), and 30 monitoring sites in downstream river sites. In this presentation, I will present the initial and secondary decline of summary of environmental transfer studies after the Fukushima NPP accident The processes includes forest canopy to ground soil and aquifers, transfer to river and marine.
The activity concentration of radiocesium of suspended sediment declining rapidly in rivers until about 1 year after the fallout, then decline slowly, but the tendency of rate of decline differs between rivers. The rate of decline in paddy field and headwater stream is quicker in initial decline followed by slower decline. However, the slow decline of activity concentration of suspend sediment in cropland and decline steadily. We will analyse the difference in initial and secondary decline between rivers using upstream land use and runoff characteristics.