

Changes in the concentrations of radioactive cesium outflowed from the steep mountainous forest of Abukuma Mountains, released by Fukushima Daiichi Nuclear Power Plant Accident.

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Mountainous forest is currently one of the most important sources of radioactive cesium released from the Fukushima Daiichi Nuclear Power Plant accident in Fukushima prefecture, which was covered approximately 70% of the land area by the forest. This study reports the changes in concentrations of radioactive cesium in sediments outflowed from the steep mountainous forest of the Abukuma Mountains, Fukushima, during September 2013 – December 2015.

The sediment samples of 0-5 cm layer were obtained from the soil-saving dam installed at outlet of the steep river-valley in the mountainous forest of Fukushima, Japan. The catchment area is 2.1 ha and total amount of the sediments measured by 3D laser scanning method during the period were 2.4 m³ in this dam [1]. 9 – 17 samples were collected each year at the position of 1 – 3 m upstream side from the dam body. Figure 1 shows the radioactive cesium concentration in the sedimented soils. The Cs-137 concentrations in the sedimented soils were decreased by nearly 20% during the monitoring period.

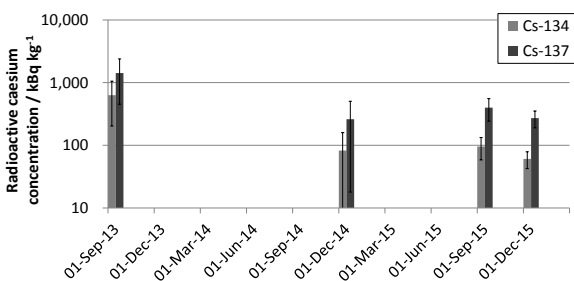


Figure 1: The concentration of radioactive cesium in sedimented soils in the soil-saving dam.

1. Watanabe, T., et al., 2016, Japan Geoscience Union Meeting 2016.