

## The relation between imaging of soil structure with GPR and depth profile of radioactive cesium

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Radionuclides such as radioactive cesium, now the main radiological contributor, were released in the environment by the Fukushima Dai-ichi nuclear power plant accident. The government and local governments have proceeded with decontamination plans to reduce dose rate in living spheres. But most areas of forests have been still contaminated. Japan Atomic Energy Agency initiated a project entitled 'Long-Term Assessment of Transport of Radioactive Contaminant in the Environment of Fukushima' (F-TRACE project) in November 2012. Main objective of this project is to implement a comprehensive system for predicting radioactive cesium transport in the future and the impact of various countermeasures by understanding transport of radioactive cesium from forests to living spheres and the sea through rivers and dams.

To understand radioactive cesium transport in forest, we have conducted forest investigation at Ogi district, Kawauchi Village and Yamakiya district, Kawamata Town, Fukushima Prefecture since December 2012. As a part of the investigation, we carried out geophysical exploration of soil structure with ground penetrating radar (GPR) with 100MHz and 500MHz radio wave.

In this presentation, we report correlation between imaging of soil structure obtained by GPR survey and depth profile of radioactive cesium in soil.

Keywords: ground penetrating radar, depth profile of radioactive cesium, F-TRACE project