Geophysical Research Abstracts
Vol. 15, EGU2013-3795, 2013
EGU General Assembly 2013

Transfer of fallout radionuclides derived from Fukushima NPP accident: 1 year study on transfer of radionuclides through hydrological processes

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Previous experiences such as Chernobyl Nuclear Power Plant accident have confirmed that fallout radionuclides on the ground surface migrate through natural environment including soils and rivers. Therefore, in order to estimate future changes in radionuclide deposition, migration process of radionuclides in forests, soils, ground water, rivers should be monitored. However, such comprehensive studies on migration through forests, soils, ground water and rivers have not been conducted so far. Here, we present the following comprehensive investigation was conducted to confirm migration of radionuclides through natural environment including soils and rivers.
1)Study on depth distribution of radiocaesium in soils within forests, fields, and grassland
2)Confirmation of radionuclide distribution and investigation on migration in forests
3)Study on radionuclide migration due to soil erosion under different land use
4)Measurement of radionuclides entrained from natural environment including forests and soils
5)Investigation on radionuclide migration through soil water, ground water, stream water, spring water under different land use
6)Study on paddy-to-river transfer of radionuclides through suspended sediments
7)Study on river-to-ocean transfer of radionuclides via suspended sediments
8)Confirmation of radionuclide deposition in ponds and reservoirs