

Deposition of radioactive materials in Iwate Prefecture, due to the Fukushima Nuclear Power Plant accident

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A catastrophic earthquake occurred on March 11, 2011, and the tsunami it triggered caused severe damage along the Pacific coastline of northeast Japan. The tsunami also caused an accident at Fukushima Dai-ichi Nuclear Power Plant (FNPP), resulting in the release of a massive amount of radioactive materials all over northeast and central Japan. MEXT, Japan, carried out several airborne monitoring surveys. However, it is not possible to determine the distribution of material deposited with low-level radioactivity of less than 0.1 micro Sv/h from airborne monitoring surveys. Radioactive materials have been detected in Iwate Prefecture in farm and livestock products, making it necessary to understand the accurate contamination status in this region.

Behavior of radioactive material is very similar to that of ashfall from volcanic eruptions. Therefore, it is possible to apply techniques from volcanology to the evaluation of the natural radiation dose. The author carried out detailed contamination mapping across Iwate Prefecture.

The results have already been released on the Internet (<http://www.poly.iwate-pu.ac.jp>, in Japanese), and more than 35,500 people have accessed it thus far. They use the survey results as a hazard map for radiation doses.

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