報道発表

文部科学省 MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY-JAPAN

March 13, 2012

Results of the Research on Distribution of Radioactive Substances Discharged by the Accident at TEPCO's Fukushima Dai-ichi NPP

MEXT has compiled the results of the project commenced on June 6, 2011, under the 2011 Strategic Funds for the Promotion of Science and Technology, entitled "Establishment of the Base for Taking Measures for Environmental Impact of Radioactive Substances — Study on Distribution of Radioactive Substances."

1. Concerning this research report

○ In the course of the project under the 2011 Strategic Funds for the Promotion of Science and Technology, entitled "Establishment of the Base for Taking Measures for Environmental Impact of Radioactive Substances — Study on Distribution of Radioactive Substances," MEXT has measured air dose rates at around 2,200 locations within approximately 100km from TEPCO's Fukushima Dai-ichi NPP (hereinafter referred to as "Fukushima Dai-ichi NPP"), and at the same time, has collected soil samples from the 5cm surface layer at around five points at each location to analyze nuclides, since June 6, 2011, prior to the rainy season, before any changes occurred on the soil surface, for the purpose of continuously checking the impact of radioactive substances deposited on the ground surface on the health of residents and the environment.

○ Based on the results thereof, MEXT compiled a research report and prepared distribution maps of air dose rates for said area, and also prepared soil concentration maps that indicate deposition as of June 14, 2011, of five types of gamma-ray emitting nuclides (Cs-134, Cs-137, I-131, Te-129m, and Ag-110m), as well as alpha-ray emitting nuclides (Pu-238 and Pu-239/240) and beta-ray emitting nuclides (Sr-89 and Sr-90).

○ As the deposition of radioactive substances on the ground surface is highly likely to vary significantly due to rain, wind, and other weather conditions, it is necessary to ascertain the detailed deposition and movement.

○ Therefore, in order to ascertain how radioactive substances discharged from Fukushima Dai-ichi NPP during around the same period have moved in forests, rivers, underground water, and deep into soil, MEXT conducted surveys on their deposition in respective natural environments and changes in their amounts during a certain period of time. MEXT has ascertained how radioactive cesium is deposited in various types of land used for various purposes, the depth distribution and

the ease of movement of radioactive substances in soil, the amount of radioactive substances in rivers, and changes in the amounts of radioactive substances before and after the rainy season, and also surveyed the movement of radioactive substances in forests, soil, underground water, and river water, as well as the movement of radioactive substances blown up from trees and soil. MEXT compiled all these results into the research report.

○ Furthermore, the Ministry of Agriculture, Forestry and Fisheries (MAFF) also carried out measurements of the concentration of radioactive substances contained in farmland soil, in cooperation with MEXT and Miyagi, Fukushima, Tochigi, Gunma, Ibaraki, and Chiba prefectures, with the aim of carrying out decontamination of farmland and other measures for assisting farming in the future. The measurement results show that the distribution of radiation levels over farmland soil has almost the same trend as the distribution of air dose rates, which has been made clear through surveys by MEXT.

○ MEXT and MAFF verified the validity of the measurement results at the Conference for the Preparation of Distribution Map of Radiation Dose, etc. established within MEXT, compiled the results into the "Report on the Preparation of Distribution Maps of Radiation Doses, etc.," and released it. (The abbreviated version of the report is attached here. The main text of the report is available at the following URL.)

○ Through this research, we were able to ascertain the detailed distribution of radioactive substances discharged by the accident at Fukushima Dai-ichi NPP as of June 2011, and the results are extremely useful for monitoring the future influences of radioactive substances. It is expected that the results of this research will be fully utilized for the future assessment of exposure doses, decontamination measures, and the estimation of changes in radiation levels over time.

2. Composition of the research report

- Report on the Preparation of Distribution Maps of Radiation Doses, etc. (Part 1)
- Report on the Research relating to Distribution Maps of Radiation Doses, etc. (Part 2)
- Report on the Research relating to Radiation Concentration Distribution Maps for Farmland Soil (Part3)

3. URL

http://radioactivity.mext.go.jp/ja/distribution_map_around_FukushimaNPP/#distribution_map

Emergency Operation Center
Oku
Tel : 03-5253-4111 Ex.4604, 4605