Assessments by International Organizations

UNSCEAR 2013 Report (2/3): Data Used for Assessment of Public Exposure Doses [Reference]

Used measurement values, etc.

1. Internal exposure through inhalation and external exposure
   - (i) Deposition densities of radioactive materials on the ground surface measured on earth and from aircraft
   - (ii) Radioactivity concentrations in the air and on the ground surface estimated based on types and estimated amount of radioactive materials released from the reactor and through diffusion simulation
2. Internal exposure through ingestion
   - Radioactivity concentrations in foods and drinking water
     - (i) First year: Measurement data for concentrations of radionuclides in distributing foods and drinking water
     - (ii) Second year onward: Radioactivity concentrations in foods estimated through simulation based on soil contamination data; For marine products, radioactivity concentrations in seawater estimated based on measurement data in the sea area off Fukushima Prefecture and through diffusion simulation of radionuclides
   - Japanese people's food intake (based on the National Health and Nutrition Survey)

Out of the radioactive materials released due to the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS, Iodine-131, Cesium-134, and Cesium-137 are considered to have mainly contributed to people's exposure.

Doses can be assessed most reliably through the measurement using personal dosimeters in the case of external exposure and the measurement using whole-body counters in the case of internal exposure. Such data was partially available regarding the accident at the NPS but was not sufficient for calculating internal exposure doses for all people in Fukushima Prefecture as a whole and in other prefectures.

Therefore, the UNSCEAR conducted dose estimation based on the data indicated above and used other measurement data for verifying the calculation results.

[Relevant parts in the reports]

- UNSCEAR 2013 Report (prepared based on paragraphs 67 to 78 on pages 48 to 50, Scientific Annex A, Appendix A, and "IV. TRANSPORT AND DISPERSION IN THE OCEAN" of Appendix B)

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