UNSCEAR 2020/2021 Report(5/8): Results of the Assessment of Public Exposure Doses

Table 1. Average effective doses by area for the first one year and for the first ten years following the accident (mSv)*1							
Group		For the first one year following the accident		For the first ten years following the accident			
		20 years old (adults) *2	1 year old (infants)	20 years old (adults) *2	1 year old (infants)		
1ª	Fukushima Prefecture (evacuated municipalities)	0.046-5.5	0.15-7.8				
2	Fukushima Prefecture (other than evacuated municipalities)	0.079-3.8	0.12-5.3	0.16-11	0.22-14		
3	Prefectures neighboring Fukushima Prefecture ^b	0.10-0.92	0.15-1.3	0.25-2.5	0.34-3.4		
4	The rest of Japan	0.004-0.36	0.005-0.51	0.009-1.0	0.007-1.3		

Table 2. Estimated absorbed doses to the thyroid for the first one year following the accident (mGy)*1						
Group		For the first one year following the accident				
		20 years old (adults)*2	1 year old (infants)			
1°	Fukushima Prefecture (evacuated municipalities)	0.79-15	2.2-30			
2	Fukushima Prefecture (other than evacuated municipalities)	0.48-11	1.2-21			
3	Prefectures neighboring Fukushima Prefecture b	0.31-3.3	0.62-6.3			
4	The rest of Japan	0.034-0.48	0.087-0.74			

mSv: millisievert mGy: milligray

Table 1 shows the effective doses of residents in evacuated municipalities and residents in Fukushima Prefecture other than evacuated municipalities or in other prefectures, for both the first one year and the first ten years following the accident. Table 2 shows estimated absorbed doses to the thyroid of the same targeted residents for the first one year following the accident. For all these four groups, the average regional effective doses were lower than the estimated doses in the foregoing UNSCEAR 2013 Report (p.193 of Vol. 1, "Comparison of Reports (Assessment Results)").

Doses in the tables show those added to background doses due to natural sources of radiation, that is, estimated exposure doses from the radionuclides released into the environment due to the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS.

Ranges of doses show those of the average values among targeted groups by prefecture or by municipality in the targeted areas, or by evacuation scenario.

[Relevant parts in the Report]

 UNSCEAR 2020/2021 Report (prepared based on paragraph 158 on page 58 and paragraphs 166 to 169 on pages 64 to 66, ANNEX B)

Included in this reference material on March 31, 2023 Updated on March 31, 2024

a. Estimate evacuees' doses using 40 evacuation scenarios
b. Miyagi, Yamagata, Ibaraki, and Tochigi Prefectures

^{*1:} Ranges of the average values by evacuation scenario for Group 1, by municipality for Groups 2 and 3, and by prefecture for Group 4

^{*2:} Estimated doses for 10-year-old children are omitted here.