

Basic Survey (Radiation Dose Estimates) Reported on 24 August 2014

1. Simplified questionnaire

As of 30 June 2014, 52,490 have responded to the simplified questionnaire, which increased the response rates to 26.4%, 2.6% up from the previous one (Table 1).

Table 1 Response rates to the Basic Survey As of 30 June 2014			
Target population		2,055,533	/
Response	Original questionnaire	489,163	23.8%
	Simplified questionnaire*	52,490	2.6%
	Total	541,653	26.4%
*Preliminary figures Fractions have been rounded.			

The following tables show the results of the original and simplified questionnaires combined.

2. Response Rates and Radiation Dose Estimates

2.1 Response Rates of Residents

The overall effective response rate to the Basic Survey (radiation dose estimates), intended for the entire population of Fukushima Prefecture, was 26.4% (541,653/2,055,533) as of 30 June 2014.

Providing the simplified questionnaires increased the response rates among 0- to 19-year-old participants (Table 2). It also increased the response rates in the Aizu area to the 20% level (Table 3).

Response Rates by Age Group								
Table 2		As of 30 June 2014						
Age group	0-9	10-19	20-29	30-39	40-49	50-59	60≤	Total
Proportion	43.9%	33.5%	17.0%	23.3%	21.4%	22.1%	27.2%	26.4%

2.2 Radiation Dose Estimates

Doses have been estimated for 508,388 of 541,653 respondents (93.9%) as of 30 June 2014, and the results have been returned to 491,093 respondents (Table 3).

Area(preceding and full-scale surveys)	Target population a	Response b	Response rates c=b/a	Completed dose estimation d	Proportion e=d/b	Returned results f	Proportion g=f/b
Kempoku	504,079	146,567	29.1%	139,410	95.1%	135,984	92.8%
Kenchu	557,344	130,676	23.4%	122,824	94.0%	119,017	91.1%
Kennan	152,231	32,293	21.2%	29,512	91.4%	28,184	87.3%
Aizu	267,217	53,567	20.0%	46,808	87.4%	42,022	78.4%
Minami-aizu	30,787	6,036	19.6%	4,884	80.9%	4,440	73.6%
Soso	195,640	88,646	45.3%	85,412	96.4%	84,884	95.8%
Iwaki	348,235	83,868	24.1%	79,538	94.8%	76,562	91.3%
Total	2,055,533	541,653	26.4%	508,388	93.9%	491,093	90.7%

Including Yamakiya of Kawamata, Namie and Iitate.

We have been estimating doses for non-residents who were visiting or staying in Fukushima Prefecture at the time of the accident. (Table 4)

Number of request a	Response b	Response rates c=b/a	Completed dose estimation d	Proportion e=d/b	Returned results f	Proportion g=f/b
3,823	2,087	54.6%	1,864	89.3%	1,860	89.1%

3. Results of Radiation Dose Estimates

Table 5 shows the numbers of completed dose estimates (see Table 3)—excluding the data in the estimation period less than four months—within a range of values.

Radiation doses for a total of 430,076 residents have been estimated to date. The results for 421,394 respondents (excluding radiation workers) suggest that the doses for about 88% of the respondents in Kempoku area and about 93% in Kenchu area were <2 mSv. The doses for approximately 89% of the respondents in Kennan area and more than 99% of those in Aizu and Minami-aizu areas were <1 mSv. Doses for about 78% of respondents in the Soso area and more than 99% of respondents in Iwaki were also <1 mSv.

Effective Dose (mSv)	Total	Excluding radiation workers				By area (excluding radiation workers)													
						Kempoku *		Kenchu		Kennan		Aizu		Minami-aizu		Soso **		Iwaki	
<1	266,517	261,140	62.0%	94.0%	23,669	20.5%	53,547	52.2%	21,892	88.5%	37,114	99.3%	3,775	99.2%	54,509	77.5%	66,634	99.1%	
1-2	137,081	134,848	32.0%	99.8%	77,265	67.0%	41,613	40.5%	2,826	11.4%	254	0.7%	29	0.8%	12,266	17.4%	595	0.9%	
2-3	22,950	22,600	5.4%		13,811	12.0%	7,115	6.9%	12	0.0%	16	0.0%	0	—	1,621	2.3%	25	0.0%	
3-4	1,457	1,382	0.3%	5.7%	433	0.4%	369	0.4%	0	—	1	0.0%	0	—	576	0.8%	3	0.0%	
4-5	536	494	0.1%	0.2%	39	0.0%	5	0.0%	0	—	0	—	0	—	449	0.6%	1	0.0%	
5-6	426	373	0.1%		16	0.0%	2	0.0%	0	—	0	—	0	—	354	0.5%	1	0.0%	
6-7	263	225	0.1%	0.1%	10	0.0%	0	—	0	—	0	—	0	—	215	0.3%	0	—	
7-8	151	114	0.0%		1	0.0%	0	—	0	—	0	—	0	—	113	0.2%	0	—	
8-9	113	73	0.0%	0.0%	1	0.0%	0	—	0	—	0	—	0	—	72	0.1%	0	—	
9-10	68	39	0.0%		0	—	0	—	0	—	0	—	0	—	39	0.1%	0	—	
10-11	65	33	0.0%	0.0%	0	—	0	—	0	—	0	—	0	—	33	0.0%	0	—	
11-12	52	31	0.0%		1	0.0%	0	—	0	—	0	—	0	—	30	0.0%	0	—	
12-13	35	13	0.0%	0.0%	0	—	0	—	0	—	0	—	0	—	13	0.0%	0	—	
13-14	33	12	0.0%		0	—	0	—	0	—	0	—	0	—	12	0.0%	0	—	
14-15	27	6	0.0%	0.0%	0	—	0	—	0	—	0	—	0	—	6	0.0%	0	—	
≥15	302	11	0.0%		0	—	0	—	0	—	0	—	0	—	11	0.0%	0	—	
Total	430,076	421,394	100.0%	100.0%	100.0%	115,246	100%	102,651	100%	24,730	100%	37,385	100%	3,804	100%	70,319	100%	67,259	100%
Max	66mSv	25mSv				11mSv		5.9mSv		2.6mSv		3.6mSv		1.9mSv		25mSv		5.9mSv	
Mean value	0.9mSv	0.8mSv				1.4mSv		1.0mSv		0.6mSv		0.2mSv		0.1mSv		0.8mSv		0.3mSv	

* Including Yamakiya of Kawamata.
** Including Namie and Iitate.

Percentages have been rounded and may not total to 100%.

4. Evaluation of the results

The latest effective radiation dose estimates showed similar trends to those observed so far. Since previous epidemiological studies¹ indicate no significant health effects at doses ≤100 mSv, we concluded that radiation doses estimated so far are unlikely to cause adverse effects on health, although this conclusion is based on external radiation doses estimated only for the first four months following the accident.

References

- 1) Sources and effects of ionizing radiation, United Nations Scientific Committee on the Effects of Atomic Radiation, UNSCEAR 2008 Report to the General Assembly, with scientific annexes.

