Attachment

Statistics on Radiation Exposure Doses of Decontamination Workers and Other Items

15 April 2015

System of registration and management of radiation exposure doses for decontamination and related works

Objective of the system

【Objective】
A registration system was established for the relevant primary employer to know, the exposure dose of workers in the past as required for the case where workers would have worked for one or more other employers. This system is to be used with the radiation passbook system .

【Works to which the system is applied】
Works described below in the special decontamination areas(1) and intensive contamination survey areas(2)

① Decontamination and related works (Decontamination of soil and related works, works for collecting wastes, etc. and works for handling designated contaminated soil and wastes)
② Works under a designated dose rate (works at places where the dose rate is higher than 2.5 μSv/h, except those that fall into category ①)
③ Disposal works of accident-derived wastes, etc.

(Note 1) Areas decontaminated directly by the national government
(Note 2) Areas decontaminated by municipalities.

The statistics shown here involved the works described in ①and ② (only those at special decontamination areas in principle) and in ③.

Overview of the system of registration and management of radiation exposure doses for decontamination and related works

Overview of the system

1 Unified application of the radiation passbook

(1) Application for a passbook based on an application prepared by relevant subcontractors
(2) Filling out the passbook together with periodical notification to the relevant subcontractors of the exposure doses
(3) Checking and filling out the passbook of the decontamination/ionizing radiation medical-examination records and special educational records submitted by the relevant subcontractors.

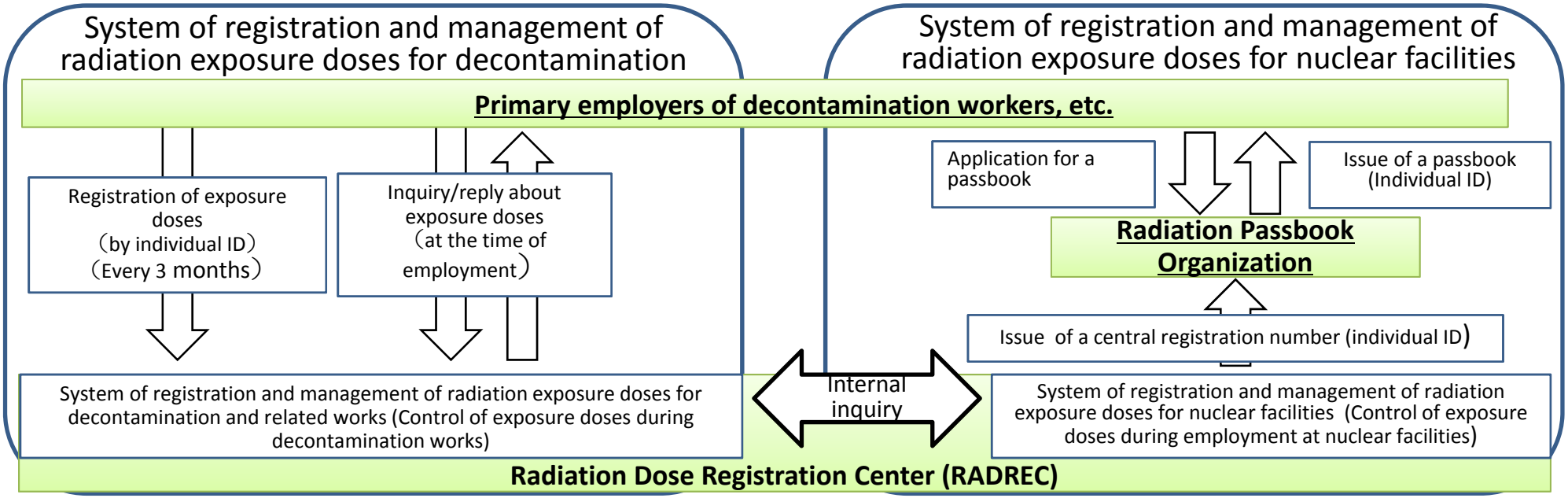
2 Registration of doses and inquires about career information Quarterly registration of all workers' radiation exposure doses, etc. to the Radiation Dose Registration Center (RADREC) from dedicated terminals （Regular registration of doses）

(2) Allow for inquiries of the past exposure doses, etc. of decontamination workers, etc. (career inquiries) from dedicated terminals
(3) Allow for inquiries of the career information on the nuclear system for decontamination workers, etc. (internal inquiries between the systems)）

3 Delivery of dose records and medical examination records

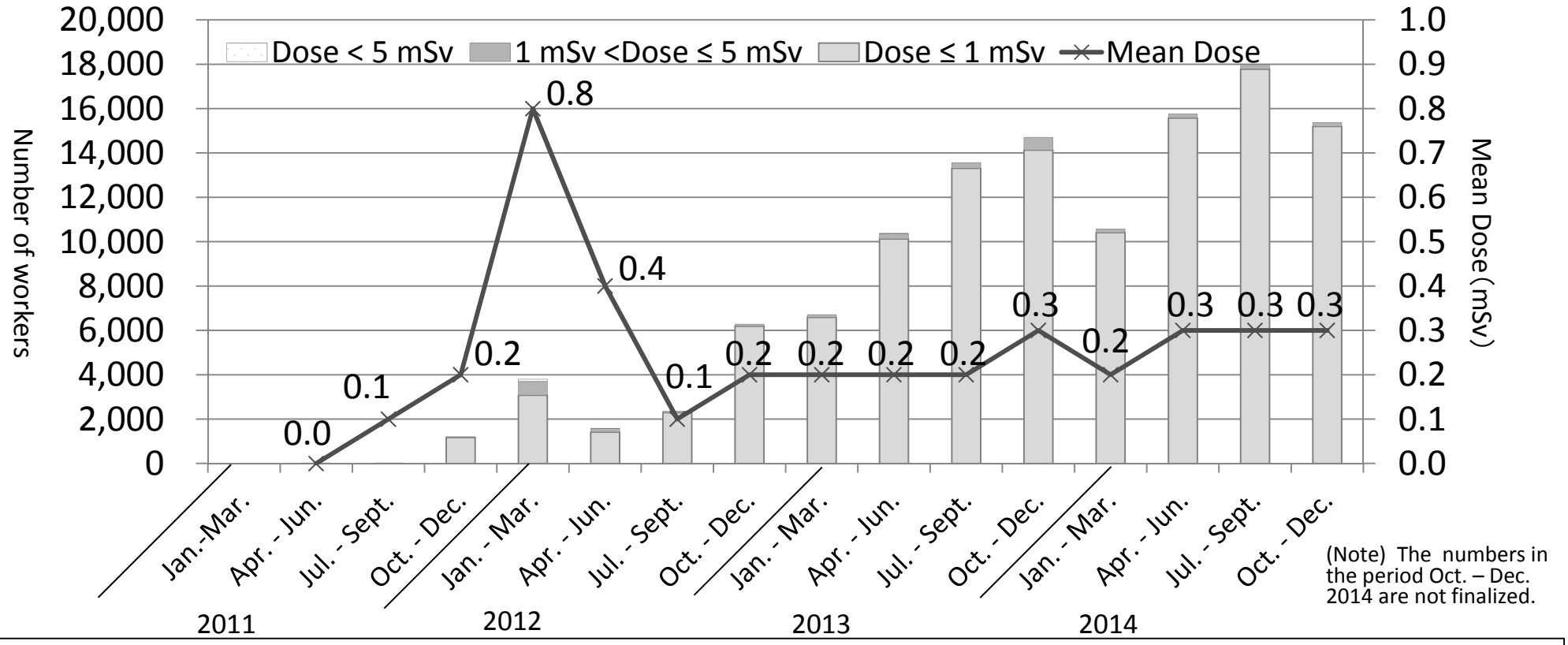
(1) Dose records shall be delivered to the Radiation Dose Registration Center (RADREC) at the end of the project (exempted from statutory mandatory data preservation)
(2) Decontamination/ionizing radiation medical-examination records and special educational records submitted by relevant subcontractors shall be delivered to the Radiation Dose Registration Center (RADREC) at the end of the project (exempted from statutory mandatory data preservation)

Only No.3 delivery of dose records and medical examination records will be conducted for works ① and ② at the highly contaminated survey areas



1 Quarterly Dose Distribution (Preliminary Values)

- The number of workers tended to increase quarterly.
- The mean dose was the highest (0.8 mSv) for the period January–March 2012, and then remained almost steady at 0.2 mSv-0.3 mSv after October–December 2012.



(Note) The numbers in the period Oct. – Dec. 2014 are not finalized.

[Notes]

・The figure shows quarterly dose distribution of workers for decontamination and related works, etc. in the period 2011- 2014.

・Numbers of workers are those actually engaged in decontamination works during the quarter.

・Data based on registration as of 30 March 2015 (To be corrected if the distribution of the quarter should be changed due to registration of additional doses).

Table 1-1 Statistics in 2011

Dose (mSv) \ Period	Jan. - Mar.	Apr. - Jun.	Jul - Sep.	Oct. - Dec.
Dose ≤ 1	—	4	2	1,174
1 < Dose ≤ 2	—	0	0	37
2 < Dose ≤ 3	—	0	0	1
3 < Dose ≤ 4	—	0	0	0
4 < Dose ≤ 5	—	0	0	0
5 < Dose ≤ 7.5	—	0	0	0
7.5 < Dose ≤ 10	—	0	0	0
10 < Dose ≤ 15	—	0	0	0
15 < Dose ≤ 20	—	0	0	0
20 < Dose	—	0	0	0
Total No. of workers	—	4	2	1,212
Mean Dose (mSv)	—	0.0	0.1	0.2
Max. Dose (mSv)	—	0.0	0.1	2.2
No. of project	—	2	2	7

Table 1-2 Statistics in 2012

Dose (mSv) \ Period	Jan. - Mar.	Apr. - Jun.	Jul - Sep.	Oct. - Dec.
Dose ≤ 1	3,083	1,418	2,297	6,193
1 < Dose ≤ 2	440	83	53	74
2 < Dose ≤ 3	69	32	11	18
3 < Dose ≤ 4	62	40	4	1
4 < Dose ≤ 5	46	7	0	0
5 < Dose ≤ 7.5	66	9	0	0
7.5 < Dose ≤ 10	28	0	0	0
10 < Dose ≤ 15	8	0	0	0
15 < Dose ≤ 20	0	0	0	0
20 < Dose	0	0	0	0
Total No. of workers	3,802	1,589	2,365	6,286
Mean Dose (mSv)	0.8	0.4	0.1	0.2
Max. Dose (mSv)	13.4	6.9	3.3	3.1
No. of project	13	18	22	25

Table 1-3 Statistics in 2013

Dose (mSv) \ Period	Jan. - Mar.	Apr. - Jun.	Jul - Sep.	Oct. - Dec.
Dose ≤ 1	6,591	10,128	13,316	14,137
1 < Dose ≤ 2	92	195	225	450
2 < Dose ≤ 3	12	32	31	99
3 < Dose ≤ 4	16	14	0	24
4 < Dose ≤ 5	4	4	0	0
5 < Dose ≤ 7.5	0	1	0	0
7.5 < Dose ≤ 10	0	0	0	0
10 < Dose ≤ 15	0	0	0	0
15 < Dose ≤ 20	0	0	0	0
20 < Dose	0	0	0	0
Total No. of workers	6,715	10,374	13,572	14,710
Mean Dose (mSv)	0.2	0.2	0.2	0.3
Max. Dose (mSv)	4.5	5.1	2.9	4.0
No. of project	26	26	36	38

Table 1-4 Statistics in 2014

Dose (mSv) \ Period	Jan. - Mar.	Apr. - Jun.	Jul - Sep.	Oct. - Dec.
Dose ≤ 1	10,411	15,581	17,785	15,207
1 < Dose ≤ 2	152	184	198	167
2 < Dose ≤ 3	13	2	5	5
3 < Dose ≤ 4	0	0	0	1
4 < Dose ≤ 5	0	0	0	0
5 < Dose ≤ 7.5	0	0	0	1
7.5 < Dose ≤ 10	0	0	0	0
10 < Dose ≤ 15	0	0	0	0
15 < Dose ≤ 20	0	0	0	0
20 < Dose	0	0	0	0
Total No. of workers	10,576	15,767	17,988	15,381
Mean Dose (mSv)	0.2	0.3	0.3	0.3
Max. Dose (mSv)	2.5	2.2	3.0	5.7
No. of project	38	39	56	62

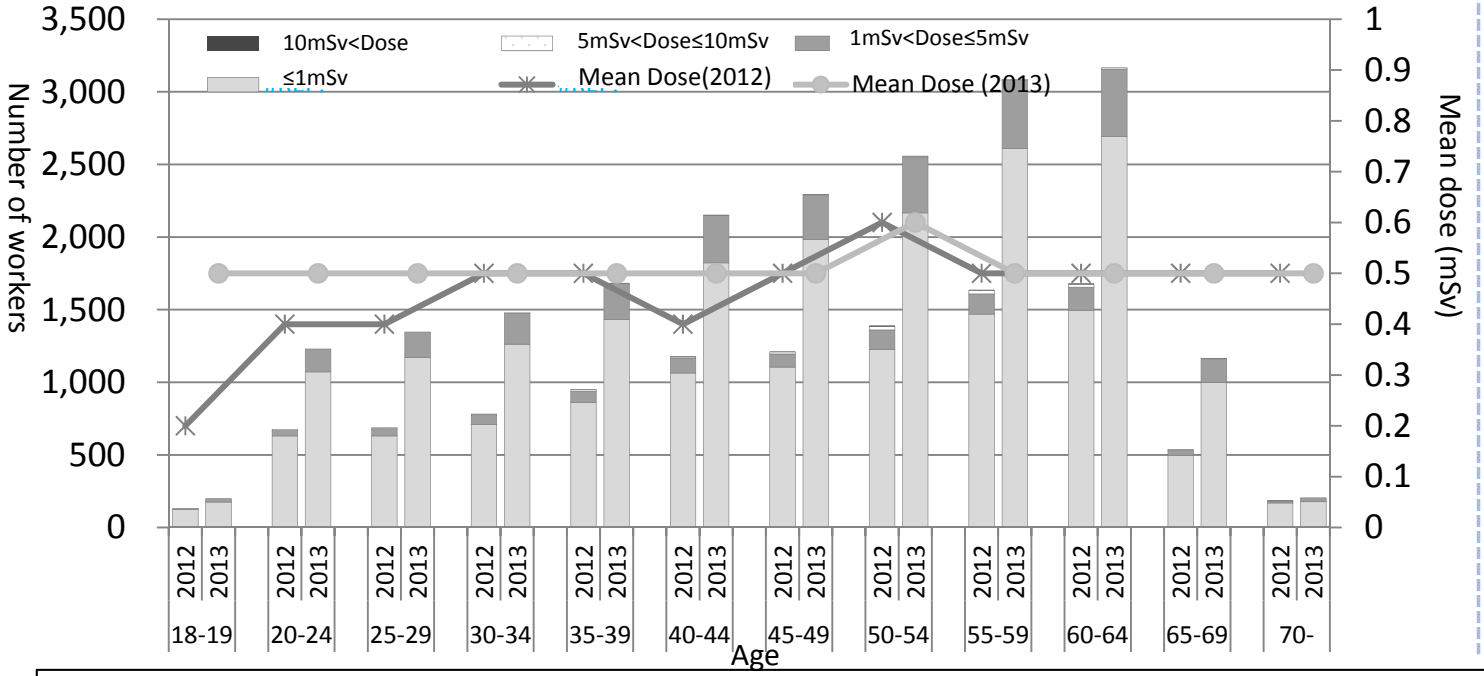
[Notes]

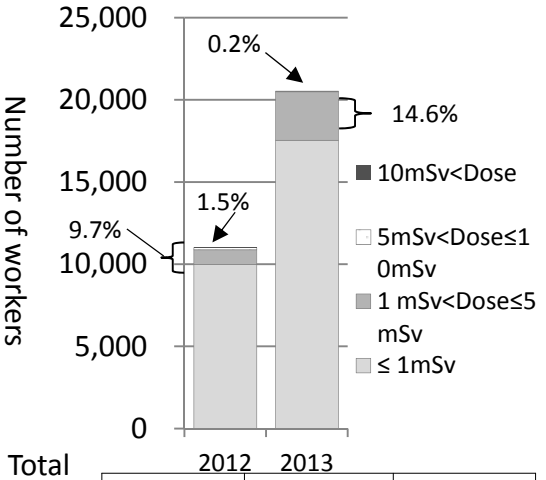
・How to read the table: The number “37” in the box of the dose row “1 < Dose≤ 2” and the period column “Oct. - Dec.” means that there were 37 workers who were engaged in the decontamination and related works during the period October to December 2011 and whose doses were in the range of 1 < Dose≤ 2.

・Data based on registration as of 30 March 2015 (To be corrected if the distribution of the quarter should be changed due to registration of additional doses)

2 Dose Distribution by Age (for Years 2012 and 2013)

- The distributions of numbers of workers had peaks for worker age groups of 55-59 and 60-64 in both 2012 and 2013 .
- The mean doses were almost the same at about 0.5 mSv irrespective of age.
- With regard to the dose distribution according to calendar years, the total numbers of workers were 11,058 in 2012 (Mean dose: 0.5 mSv; Max. dose: 13.9 mSv) and 20,564 in 2013 (Mean dose: 0.5 mSv; Max. dose: 6.7 mSv).
- The percentage of persons with a dose exceeding 5 mSv decreased from 1.5% in 2012 to 0.2% in 2013 while that for those exceeding 1 mSv increased from 9.7% in 2012 to 14.6% in 2013.





	2012	2013
Number of workers	11,058	20,564
Mean Dose	0.5mSv	0.5mSv
Max. Dose	13.9 mSv	6.7 mSv

[Notes]

・The figure shows the dose distribution by age of workers for decontamination and related works, etc. in 2012 and 2013.

・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January 2012) are managed assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

Table 2-1 Statistics in 2012

Dose (mSv) / Age	Number of decontamination workers										Total		Dose		
	Dose ≤ 1	1 < Dose ≤ 2	2 < Dose ≤ 3	3 < Dose ≤ 4	4 < Dose ≤ 5	5 < Dose ≤ 7.5	7.5 < Dose≤ 10	10 < Dose ≤15	15 < Dose ≤ 20	20 < Dose		(%)	Collective (man-mSv)	Mean (mSv)	Max. (mSv)
18-19	126	4	0	1	1	0	0	0	0	0	132	(1.2)	32.9	0.2	4.6
20-24	631	27	7	2	1	7	1	0	0	0	676	(6.1)	237.0	0.4	9.8
25-29	631	38	3	5	4	6	0	0	0	0	687	(6.2)	251.1	0.4	5.9
30-34	710	37	7	13	4	7	2	3	0	0	783	(7.1)	373.1	0.5	11.3
35-39	861	49	13	10	7	8	2	2	0	0	952	(8.6)	437.6	0.5	13.0
40-44	1,065	69	16	12	6	7	1	3	0	0	1,179	(10.7)	505.7	0.4	11.2
45-49	1,105	59	17	11	4	11	2	3	0	0	1,212	(11.0)	572.9	0.5	13.4
50-54	1,225	93	17	15	11	18	5	8	0	0	1,392	(12.6)	787.7	0.6	12.7
55-59	1,470	99	18	12	10	19	5	4	0	0	1,637	(14.8)	792.3	0.5	13.9
60-64	1,497	110	16	17	15	11	9	7	0	0	1,682	(15.2)	898.3	0.5	12.1
65-69	498	20	7	4	3	5	1	1	0	0	539	(4.9)	246.2	0.5	12.0
70-	170	11	1	1	0	3	0	1	0	0	187	(1.7)	91.1	0.5	10.8
Total No. of workers (%)	9,989 (90.3)	616 (5.6)	122 (1.1)	103 (0.9)	66 (0.6)	102 (0.9)	28 (0.3)	32 (0.3)	0 (0.0)	0 (0.0)	11,058	(100.0)	—	—	—
Collective Dose (man-mSv)	2,188.1	846.1	296.5	362.2	299.4	611.1	251.0	371.6	0.0	0.0	—		5,226.0	0.5	13.9

Table 2-2 Statistics in 2013

Dose (mSv) / Age	Number of decontamination workers										Total		Dose		
	Dose ≤ 1	1 < Dose ≤ 2	2 < Dose ≤ 3	3 < Dose ≤ 4	4 < Dose ≤ 5	5 < Dose ≤ 7.5	7.5 < Dose≤ 10	10 < Dose ≤15	15 < Dose ≤ 20	20 < Dose		(%)	Collective (man-mSv)	Mean (mSv)	Max. (mSv)
18-19	176	20	2	1	0	0	0	0	0	0	199	(1.0)	90.6	0.5	3.6
20-24	1,072	130	23	3	2	0	0	0	0	0	1,230	(6.0)	566.6	0.5	4.9
25-29	1,171	145	27	4	0	0	0	0	0	0	1,347	(6.6)	632.0	0.5	3.8
30-34	1,263	165	34	7	5	5	0	0	0	0	1,479	(7.2)	742.9	0.5	5.6
35-39	1,433	190	48	6	2	4	0	0	0	0	1,683	(8.2)	835.0	0.5	5.4
40-44	1,823	229	72	19	5	4	0	0	0	0	2,152	(10.5)	1,151.1	0.5	5.6
45-49	1,985	225	53	24	4	3	0	0	0	0	2,294	(11.2)	1,158.3	0.5	5.3
50-54	2,167	289	74	17	5	6	0	0	0	0	2,558	(12.4)	1,419.6	0.6	6.0
55-59	2,610	377	68	23	2	6	0	0	0	0	3,086	(15.0)	1,663.0	0.5	6.6
60-64	2,692	363	77	22	3	9	0	0	0	0	3,166	(15.4)	1,720.9	0.5	6.7
65-69	999	131	21	8	3	3	0	0	0	0	1,165	(5.7)	635.3	0.5	6.4
70-	178	19	5	1	2	0	0	0	0	0	205	(1.0)	104.7	0.5	4.5
Total No. of workers (%)	17,569 (85.4)	2,283 (11.1)	504 (2.5)	135 (0.7)	33 (0.2)	40 (0.2)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	20,564	(100.0)	—	—	—
Collective Dose (man-mSv)	5,578.1	3,110.0	1,202.8	460.7	147.4	220.7	0.0	0.0	0.0	0.0	—		10,719.8	0.5	6.7

[Notes]

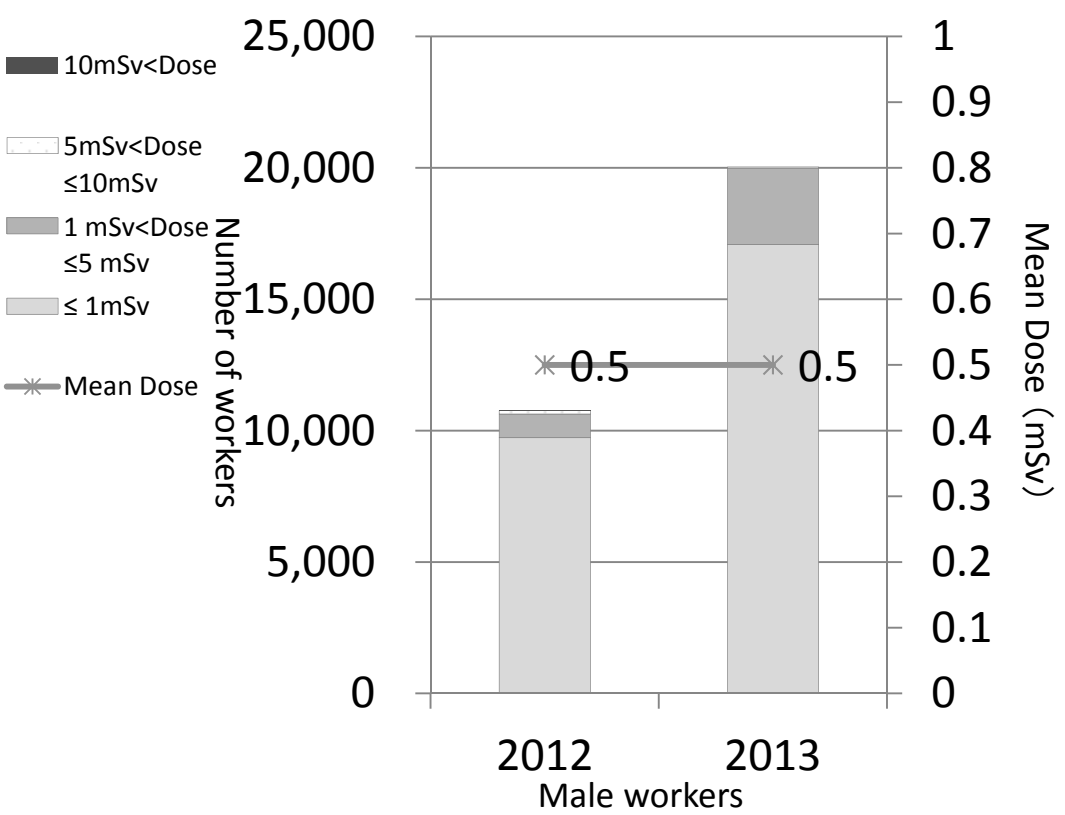
・How to read the table: The number “38” in the box of the age row “25-29” and the dose column “1 < Dose≤ 2” in Table 2-1 means that there were 38 workers who were engaged in the decontamination and related works during 2012.

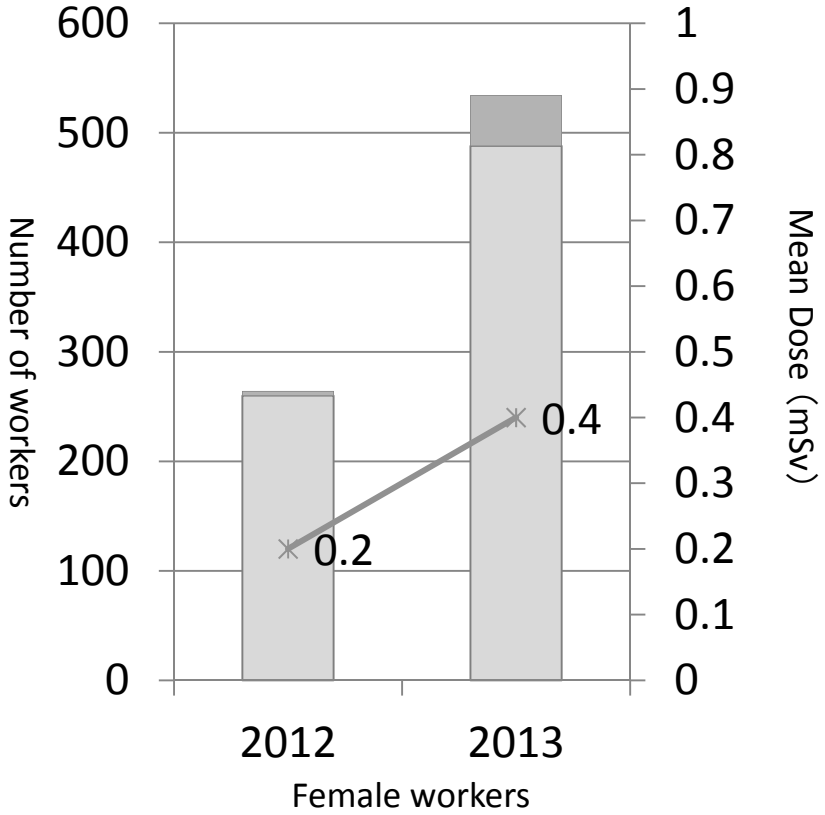
・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January 2012) are managed assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

3 Dose Distribution by Gender

- The percentages of female workers to male workers were low, being 2.4% in 2012 and 2.6% in 2013.
- The mean doses of the female workers were slightly lower than those of the male workers.





[Notes]

・The figure shows the dose distribution by gender of workers for decontamination and related works, etc. in 2012 and 2013.

・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January 2012) are managed assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

Table 3-1 Statistics in 2012

Gender / Dose (mSv)	Male (%)	Female (%)	Total (%)	Collective Dose man-mSv (%)
Dose ≤ 1	9,729 (90.1)	260 (98.5)	9,989 (90.3)	2,188.1 (41.9)
1 < Dose ≤ 2	612 (5.7)	4 (1.5)	616 (5.6)	846.1 (16.2)
2 < Dose ≤ 3	122 (1.1)	0 (0.0)	122 (1.1)	296.5 (5.7)
3 < Dose ≤ 4	103 (1.0)	0 (0.0)	103 (0.9)	362.0 (6.9)
4 < Dose ≤ 5	66 (0.6)	0 (0.0)	66 (0.6)	299.4 (5.7)
5 < Dose ≤ 7.5	102 (0.9)	0 (0.0)	102 (0.9)	611.1 (11.7)
7.5 < Dose ≤ 10	28 (0.3)	0 (0.0)	28 (0.3)	251.0 (4.8)
10 < Dose ≤ 15	32 (0.3)	0 (0.0)	32 (0.3)	371.6 (7.1)
15 < Dose ≤ 20	0 (0.0)	0 (0.0)	0 (0.0)	0.0 (0.0)
20 < Dose	0 (0.0)	0 (0.0)	0 (0.0)	0.0 (0.0)
Total No. of workers (%)	10,794 (100.0)	264 (100.0)	11,058 (100.0)	5,226.0 (100.0)
Ratio (%)	10,794 (97.6)	264 (2.4)		
Mean Dose (mSv)	0.5	0.2	0.5	
Collective Dose (man-mSv)	5,178.9	47.1	5,226.0	
Max. Dose (mSv)	13.9	1.4	13.9	

Table 3-2 Statistics in 2013

Sex / Dose (mSv)	Male (%)	Female (%)	Total (%)	Collective Dose man-mSv (%)
Dose ≤ 1	17,081 (85.3)	488 (91.4)	17,569 (85.4)	5,578.1 (52.0)
1 < Dose ≤ 2	2,244 (11.2)	39 (7.3)	2,283 (11.1)	3,110.0 (29.0)
2 < Dose ≤ 3	497 (2.5)	7 (1.3)	504 (2.5)	1,202.8 (11.2)
3 < Dose ≤ 4	135 (0.7)	0 (0.0)	135 (0.7)	460.7 (4.3)
4 < Dose ≤ 5	33 (0.2)	0 (0.0)	33 (0.2)	147.4 (1.4)
5 < Dose ≤ 7.5	40 (0.2)	0 (0.0)	40 (0.2)	220.7 (2.1)
7.5 < Dose ≤ 10	0 (0.0)	0 (0.0)	0 (0.0)	0.0 (0.0)
10 < Dose ≤ 15	0 (0.0)	0 (0.0)	0 (0.0)	0.0 (0.0)
15 < Dose ≤ 20	0 (0.0)	0 (0.0)	0 (0.0)	0.0 (0.0)
20 < Dose	0 (0.0)	0 (0.0)	0 (0.0)	0.0 (0.0)
Total No. of workers (%)	20,030 (100.0)	534 (100.0)	20,564 (100.0)	10,719.8 (100.0)
Ratio (%)	20,030 (97.4)	534 (2.6)		
Mean Dose (mSv)	0.5	0.4	0.5	
Collective Dose (man-mSv)	10,503.3	216.5	10,719.8	
Max. Dose (mSv)	6.7	2.9	6.7	

[Notes]

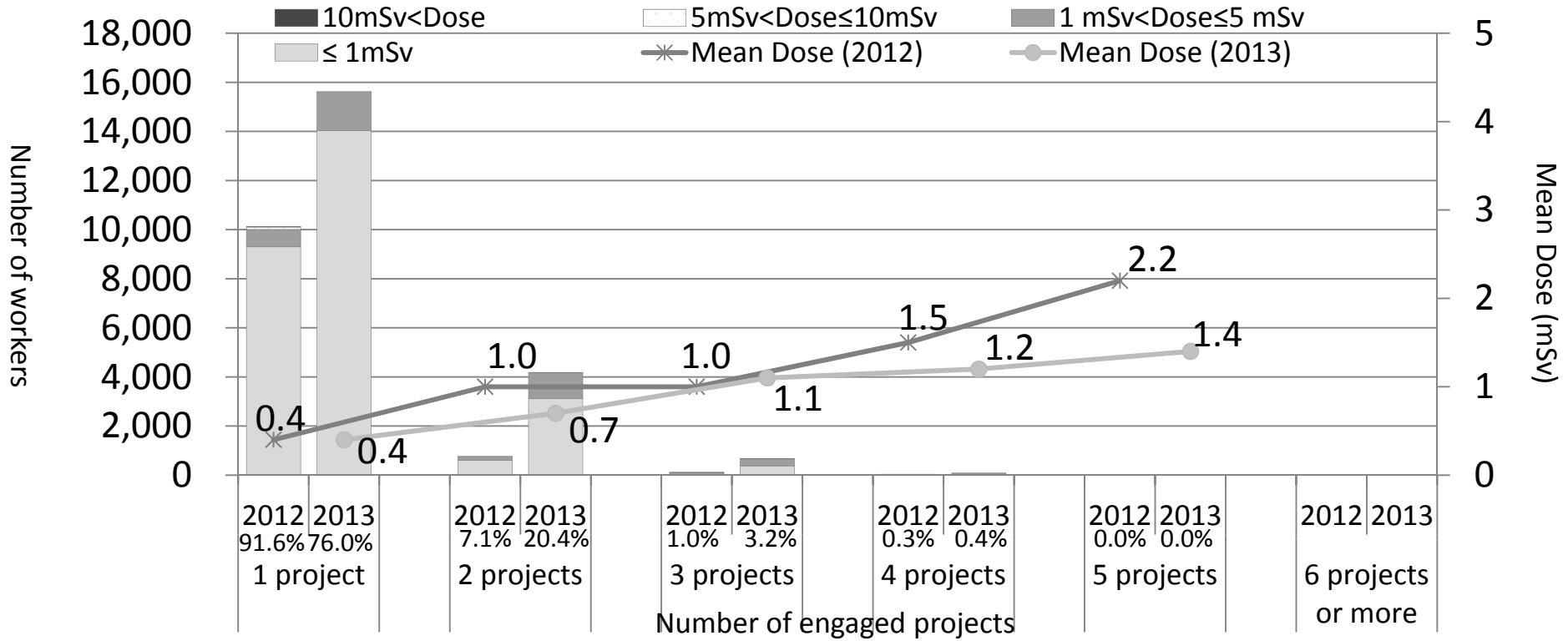
・How to read the table: The number “612” in the box of the row “1 < Dose≤ 2” and the gender column “male” in Table 3-1 means that there were 612 male workers whose doses were in the range of 1 < Dose≤ 2 during 2012.

・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January, 2012) are managed assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

4 Dose Distribution by Project Numbers

1. The percentage of workers who were engaged in 2 or more projects increased from 8.4% in 2012 to 24.0% in 2013.
2. The mean dose tended to increase according to the number of engaged projects. The highest mean doses were observed in the workers who had been engaged in 5 projects; 2.2 mSv in 2012 and 1.4 mSv in 2013.



[Notes]

・The figure shows the dose distribution by the number of projects that the workers for decontamination and related works, etc. were engaged in during the period of 2011-2013.

・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January 2012) are managed assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

Table 4-1 Statistics in 2012

No. of engaged project / Annual dose (mSv)	1	2	3	4	5	6 or more	Total	(%)
Dose ≤ 1	9,300	598	75	16	0	0	9,989	(90.3)
1 < Dose≤ 5	705	147	34	19	2	0	907	(8.2)
5 < Dose≤ 10	102	27	1	0	0	0	130	(1.2)
10 < Dose ≤ 15	24	8	0	0	0	0	32	(0.3)
15 < Dose ≤ 20	0	0	0	0	0	0	0	(0.0)
20 < Dose ≤ 25	0	0	0	0	0	0	0	(0.0)
25 < Dose ≤ 30	0	0	0	0	0	0	0	(0.0)
30 < Dose ≤ 40	0	0	0	0	0	0	0	(0.0)
40 < Dose ≤ 50	0	0	0	0	0	0	0	(0.0)
50 < Dose	0	0	0	0	0	0	0	(0.0)
Total No. of workers (%)	10,131 (91.6)	780 (7.1)	110 (1.0)	35 (0.3)	2 (0.0)	0 (0.0)	11,058 (100.0)	
Mean Dose (mSv)	0.4	1.0	1.0	1.5	2.2	0.0	0.5	

Table 4-2 Statistics in 2013

No. of engaged project / Annual dose (mSv)	1	2	3	4	5	6 or more	Total	(%)
Dose ≤ 1	14,028	3,121	382	35	3	0	17,569	(85.4)
1 < Dose≤ 5	1,565	1,055	280	49	6	0	2,955	(14.4)
5 < Dose≤ 10	29	10	1	0	0	0	40	(0.2)
10 < Dose ≤ 15	0	0	0	0	0	0	0	(0.0)
15 < Dose ≤ 20	0	0	0	0	0	0	0	(0.0)
20 < Dose ≤25	0	0	0	0	0	0	0	(0.0)
25 < Dose ≤ 30	0	0	0	0	0	0	0	(0.0)
30 < Dose ≤ 40	0	0	0	0	0	0	0	(0.0)
40 < Dose ≤ 50	0	0	0	0	0	0	0	(0.0)
50 < Dose	0	0	0	0	0	0	0	(0.0)
Total No. of workers (%)	15,622 (76.0)	4,186 (20.4)	663 (3.2)	84 (0.4)	9 (0.0)	0 (0.0)	20,564 (100.0)	
Mean Dose (mSv)	0.4	0.7	1.1	1.2	1.4	0.0	0.5	

[Notes]

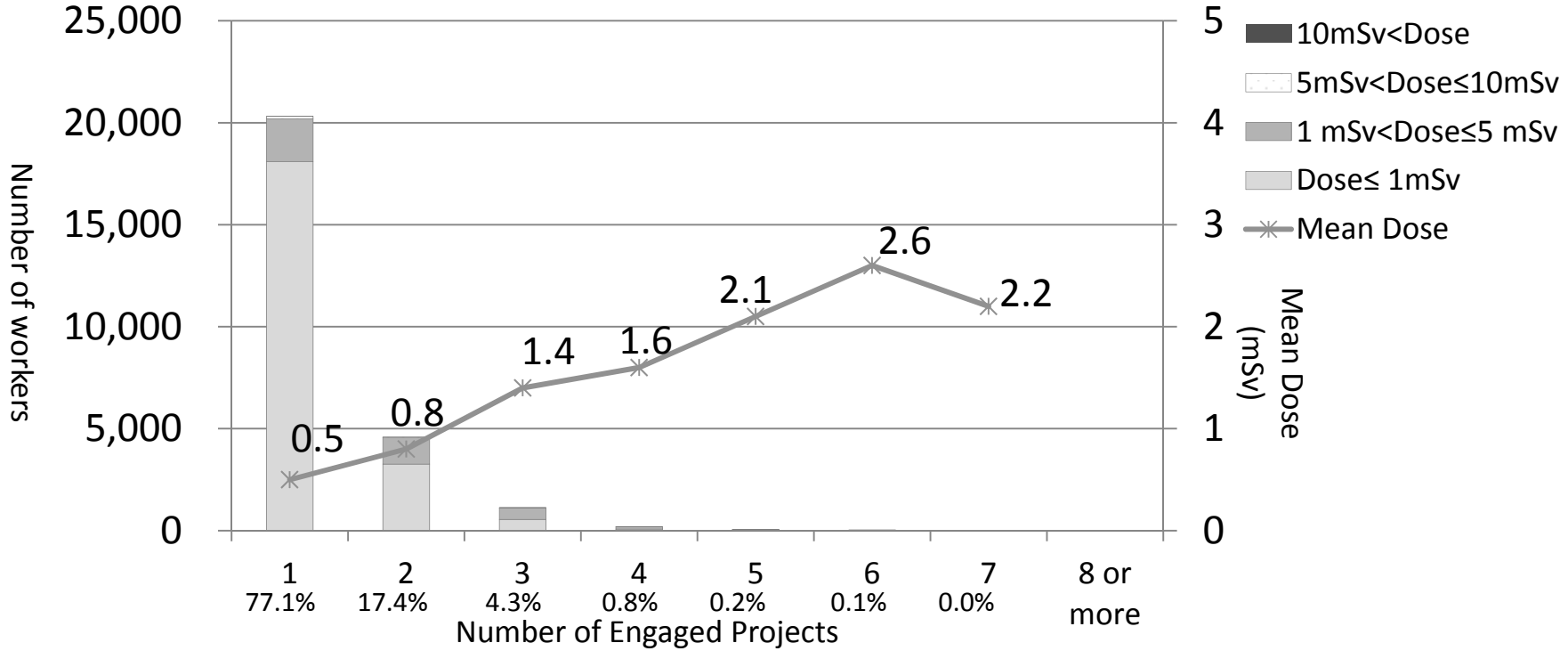
・How to read the table: The number “34” in the box of the dose row “1 < Dose≤ 5” and the no. of engaged projects column “3” in Table 4-1 means that there were 34 workers who were engaged in 3 decontamination and related projects and whose doses were in the range of 1 < Dose≤ 5 during 2012.

・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January 2012) are managed assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

5 Dose Distribution by Number of Engaged Projects during the Statutory Five Years

- According to the data in 2012-2013, the percentage of workers who were engaged in 2 or more projects was 22.9%, the maximum of which was 7 projects (26,382 in total during the two years).
- The mean dose tended to increase according to the number of engaged projects. The highest dose was 2.6 mSv for the workers who had been engaged in 6 projects.



[Notes]

・The figure shows the dose distribution by the number of engaged projects of the workers for decontamination and related works, etc. for the two years from January 2012 to December 2013 during the statutory five years.

・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January 2012) are handled assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

Table 5　Statistics in the Statutory Five Years (During the period 2012-2013)

No. of engaged projects / Dose (mSv)	1	2	3	4	5	6	7	8 or more	Total	(%)
Dose ≤ 1	18,106	3,263	551	73	15	5	2	0	22,015	(83.4)
1 < Dose ≤ 5	2,093	1,293	564	124	42	19	4	0	4,139	(15.7)
5 < Dose ≤ 11	122	34	19	7	7	4	1	0	194	(0.7)
10 < Dose ≤ 15	24	2	7	1	0	0	0	0	34	(0.1)
15 < Dose ≤ 20	0	0	0	0	0	0	0	0	0	(0.0)
20 < Dose ≤ 25	0	0	0	0	0	0	0	0	0	(0.0)
25 < Dose ≤ 30	0	0	0	0	0	0	0	0	0	(0.0)
30 < Dose ≤ 40	0	0	0	0	0	0	0	0	0	(0.0)
40 < Dose ≤ 50	0	0	0	0	0	0	0	0	0	(0.0)
50 < Dose ≤ 60	0	0	0	0	0	0	0	0	0	(0.0)
60 < Dose ≤ 70	0	0	0	0	0	0	0	0	0	(0.0)
70 < Dose ≤ 80	0	0	0	0	0	0	0	0	0	(0.0)
80 < Dose ≤ 90	0	0	0	0	0	0	0	0	0	(0.0)
90 < Dose ≤ 100	0	0	0	0	0	0	0	0	0	(0.0)
100 < Dose	0	0	0	0	0	0	0	0	0	(0.0)
Total No. of workers (%)	20,345 (77.1)	4,592 (17.4)	1,141 (4.3)	205 (0.8)	64 (0.2)	28 (0.1)	7 (0.0)	0 (0.0)	26,382 (100.0)	
Mean Dose (mSv)	0.5	0.8	1.4	1.6	2.1	2.6	2.2	0.0	0.6	

[Notes]

・How to read the table: The number “564” in the box of the dose row “1 < Dose ≤ 5” and the no. of engaged projects column “3” in Table 5 means that there were 564 workers who were engaged in 3 decontamination and related projects and whose doses were in the range of 1 < Dose ≤ 5 during 2012-2013.

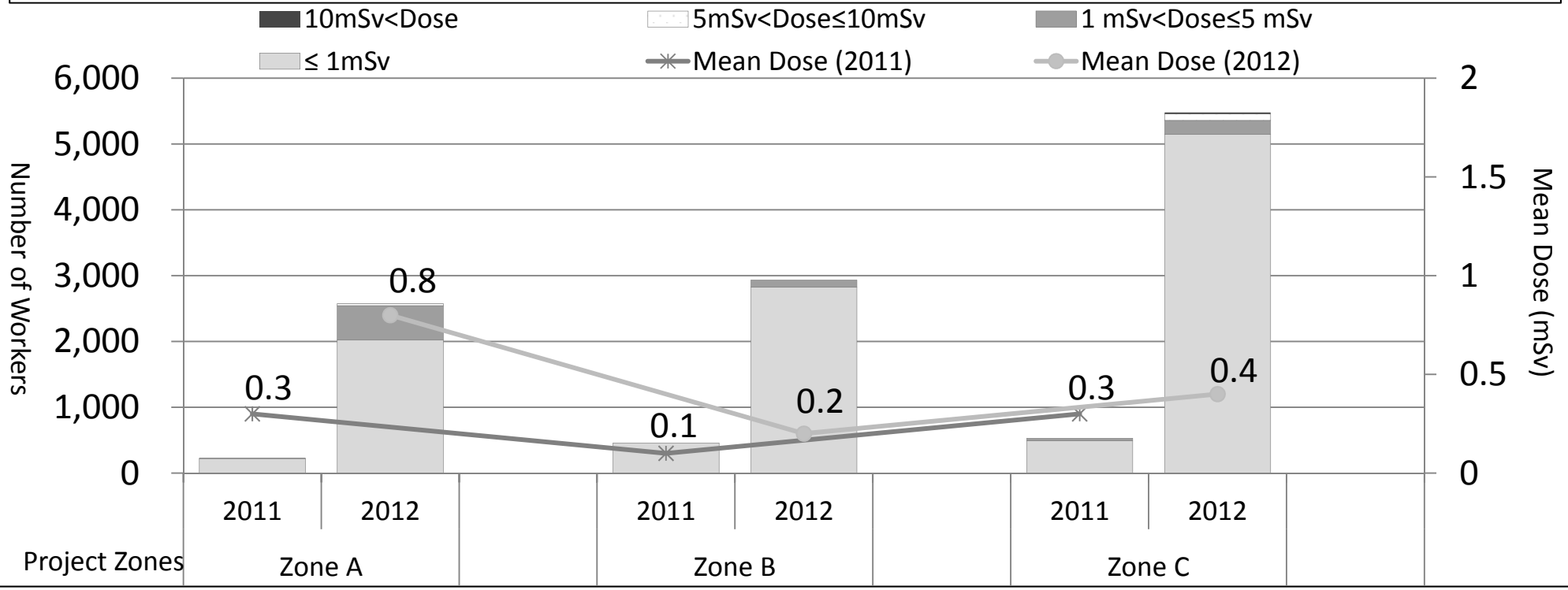
・Dose distribution and number of projects that workers for decontamination and related works, etc. were engaged in during the two years from January 2012 to December 2013 during the statutory five years.

・The doses before the date of enforcement of the Ionizing Radiation Ordinance for Decontamination (1 January 2012) are managed assuming that these are due to exposure to radiation on 1 January 2012, according to the guidelines on decontamination and related works, so that it would be a conservative evaluation.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

6 Dose Distribution by Zone（2011-2012）

- The numbers of workers increased in 2013 by factors of six to eleven compared to the numbers in 2012. The largest increase was found in the southern part (Zone C)
- The mean dose for workers was 1 mSv or less in both 2011 and 2012, and for all areas. The largest mean dose was 0.8 mSv in Zone A in 2012.



[Notes]

- The area zones are based on those used in ordering the decontamination demonstration projects in 2011 and 2012.
- The doses for each project were assigned to zones according to the main work area declared by each employer.
  - Zone A: Iitate Village, Kawamata Town, Minamisoma City and Namie Town
  - Zone B: Kazurao Village, Tamura City, Futaba Town and Tomioka Town
  - Zone C: Kawauchi Village, Hirono Town, Naraha Town and Okuma Town
- The statistics are not given by individual municipality because there were projects that included two or more municipalities.
- Data based on the registration as of 30 March 2015.

Table 6-1 Statistics in 2011

Municipalities / Annual dose (mSv)	Zone A	Zone B	Zone C	Other zones	Total
Dose ≤ 1	224	460	494	1	1,179
1 < Dose ≤ 2	2	0	35	0	37
2 < Dose ≤ 3	0	0	1	0	1
3 < Dose ≤ 4	0	0	0	0	0
4 < Dose ≤ 5	0	0	0	0	0
5 < Dose ≤ 7.5	0	0	0	0	0
7.5 < Dose ≤ 10	0	0	0	0	0
10 < Dose ≤ 15	0	0	0	0	0
15 < Dose ≤ 20	0	0	0	0	0
20 < Dose	0	0	0	0	0
Total No. of workers (%)	226 (18.6)	460 (37.8)	530 (43.5)	1 (0.1)	1,217 (100.0)
Mean Dose (mSv)	0.3	0.1	0.3	0.1	0.2
Collective Dose (man-mSv)	72.7	25.8	172.1	0.1	270.7

Table 6-2 Statistics in 2012

Municipalities / Annual dose (mSv)	Zone A	Zone B	Zone C	Other zones	Total
Dose ≤ 1	2,023	2,830	5,168	0	10,021
1 < Dose ≤ 2	416	71	63	0	550
2 < Dose ≤ 3	55	24	48	0	127
3 < Dose ≤ 4	30	9	67	0	106
4 < Dose ≤ 5	21	1	35	0	57
5 < Dose ≤ 7.5	27	0	71	0	98
7.5 < Dose ≤ 10	4	0	27	0	31
10 < Dose ≤ 15	2	0	22	0	24
15 < Dose ≤ 20	0	0	0	0	0
20 < Dose	0	0	0	0	0
Total No. of workers (%)	2,578 (23.4)	2,935 (26.6)	5,501 (49.9)	0 (0.0)	11,014 (100.0)
Mean Dose (mSv)	0.8	0.2	0.4	0.0	0.4
Collective Dose (man-mSv)	1,963.9	732.4	2,259.1	0.0	4,955.3

[Notes]

・How to read the table: The number “35” in the box of the dose row “1 < Dose ≤ 2” and the municipalities column “Zone C” in Table 6-1 means that there were 35 workers who were engaged in the decontamination works, etc. in Zone C and whose doses were in the range of 1 < Dose ≤ 2 in 2013 .

・The area zones are based on that used in ordering the decontamination demonstration projects in 2011 and 2012.

・The doses for each project are assigned to zones according to the main work area declared by each employer.

Zone A: Iitate Village, Kawamata Town, Minamisoma City and Namie Town

Zone B: Kazurao Village, Tamura City, Futaba Town and Tomioka Town

Zone C: Kawauchi Village, Hirono Town, Naraha Town, Okuma Town, and Others

※ In 2013, Tomioka Town was assigned to Zone C, Okuma Town to Zone B and Hirono Town to Others.

・ The statistics are not given by individual municipality because there were projects that included two or more municipalities

・Data based on registration as of 30 March 2015.

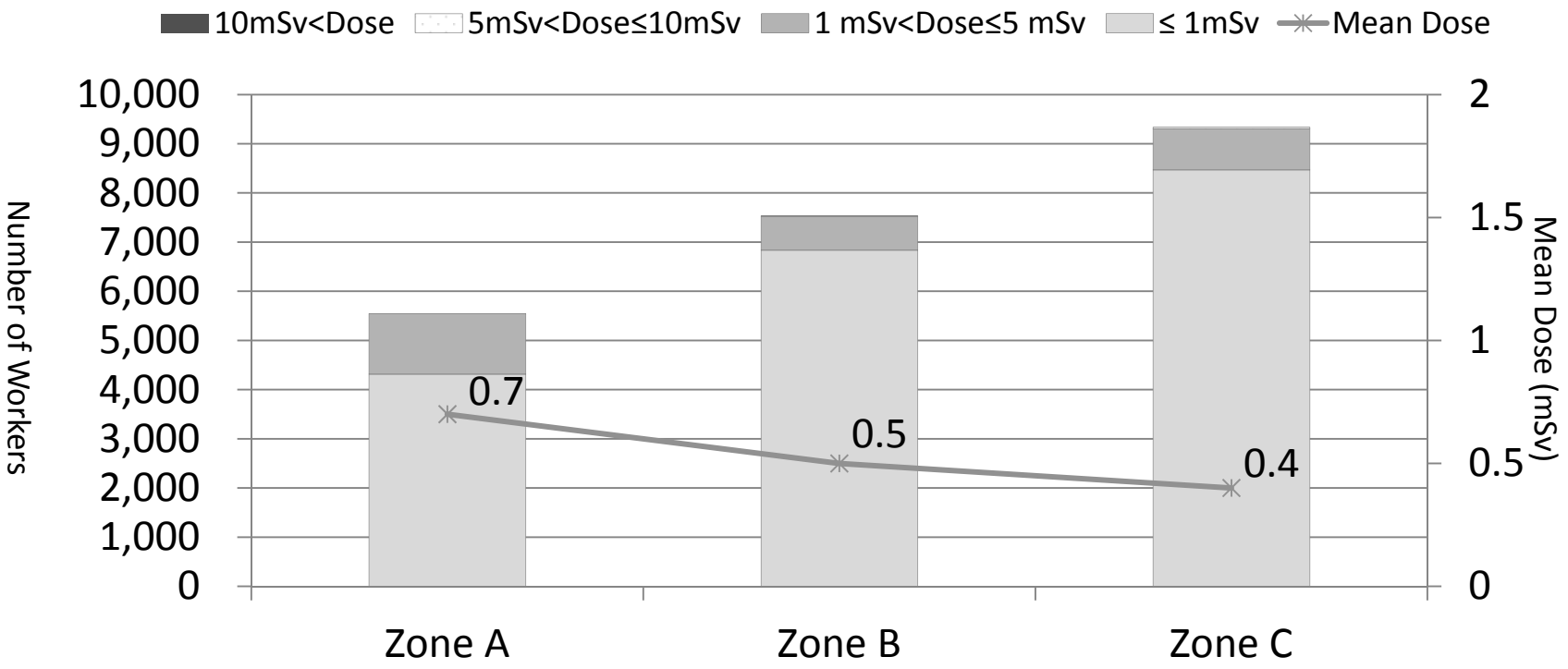
[Points to be noted]

・The mean doses do not necessarily reflect the ambient dose rate of the area, since working hours, working days, etc. of workers for decontamination and related works, etc. are not taken into account.

・Monitoring information of environmental radioactivity level is available on the NRA (Nuclear Regulation Authority) website and monitoring information of ambient dose rate in Fukushima is available on the website of Fukushima Prefecture for ambient dose rate.

6 Dose Distribution by Zone (2013)

- The number of workers was the largest in the southern part (Zone C).
- The mean doses were 1 mSv or less for all areas. The highest mean dose was 0.7 mSv in Zone A.



[Notes]

・The areas are divided (from the north) into Zone A, Zone B and Zone C in 2013 as shown below. Zones are different than those for the decontamination demonstration projects as used in 2011 and 2012 for the underlined municipalities.

Zone A: Iitate Village, Kawamata Town, Minamisoma City and Namie Town

Zone B: Kazurao Village, Tamura City, Futaba Town and Okuma Town

Zone C: Kawauchi Village, Tomioka Town and Naraha Town

Other: Municipalities not included in the special decontamination areas

・The dose data for each project are classified by areas according to the main work areas declared by each employer.

・ The statistics are not given by individual municipality because there were projects that included two or more municipalities.

・Data based on registration as of 30 March 2015 (Data of 2014 not finalized)

Table 6-3 Statistics in 2013

Municipalities / Annual dose (mSv)	Zone A	Zone B	Zone C	Other zones	Total
Dose ≤ 1	4,317	6,838	8,469	177	19,801
1 < Dose ≤ 2	1,034	505	644	0	2,183
2 < Dose ≤ 3	165	134	139	0	438
3 < Dose ≤ 4	31	42	33	0	106
4 < Dose ≤ 5	0	8	22	0	30
5 < Dose ≤ 7.5	0	2	30	0	32
7.5 < Dose ≤ 10	0	0	0	0	0
10 < Dose ≤ 15	0	0	0	0	0
15 < Dose ≤ 20	0	0	0	0	0
20 < Dose	0	0	0	0	0
Total No. of workers (%)	5,547 (24.6)	7,529 (33.3)	9,337 (41.3)	177 (0.8)	22,590 (100.0)
Mean Dose (mSv)	0.7	0.5	0.4	0.0	0.5
Collective Dose (man-mSv)	3,788.7	3,405.1	3,525.4	0.6	10,719.8

[Notes]

・How to read the table: The number “644” in the box of the dose row “1 < Dose ≤ 2” and the municipalities column “Zone C” in Table 6-3 means that there were 644 workers who were engaged in the decontamination works, etc. in Zone C and whose doses were in the range of 1 < Dose ≤ 2 in 2013 .

・The areas are divided (from the north) into Zone A, Zone B and Zone C in 2013 as shown below. Zones are different than those for the decontamination demonstration projects as used in 2011 and 2012 for the underlined municipalities.

Zone A: Iitate Village, Kawamata Town, Minamisoma City and Namie Town

Zone B: Kazurao Village, Tamura City, Futaba Town and Okuma Town

Zone C: Kawauchi Village, Tomioka Town and Naraha Town

Other: Municipalities not included in the special decontamination areas

・The dose data for each project are classified by areas according to the main work areas declared by each employer.

・ The statistics are not given by individual municipality because there were projects that included two or more municipalities.

・Data based on registration as of 30 March 2015.

[Points to be noted]

・The mean doses do not necessarily reflect the ambient dose rate of the area, since working hours, working days, etc. of workers for decontamination and related works, etc. are not taken into account.

・Monitoring information of environmental radioactivity level is available on the NRA (Nuclear Regulation Authority) website and monitoring information of ambient dose rate in Fukushima is available on the website of Fukushima Prefecture for ambient dose rate.

Progress of decontamination in the area where is decontaminated directly by the national government
(As of March, 2015): From MOE web site