

Accident response taken by MEXT (Environmental Radiation Monitoring)

Ministry of Education, Culture, Sports,
Science and Technology (MEXT)

Purpose

- In response to the accident at the Fukushima Daiichi Nuclear Power Plant, MEXT is conducting comprehensive environmental radiation monitoring
- The purposes of the monitoring are to contribute to
 - The safety and security of the public
 - Appropriate actions of the government

Outline of Monitoring (1/2)

- Monitoring area
 - Land, Marine, and Sky area
- Monitoring frequency --- Daily (basically)
- Partners
 - Prefectures, NPA, MOD, USDOE
 - JAEA, NUSTEC, JAMSTEC, JAXA, Universities
 - Electric companies

Outline of Monitoring (2/2)

● Monitoring items

➤ dose rate

- ✓ Measurement at fixed monitoring points
(MEXT & 47 Prefectures : All over Japan)
- ✓ Measurement by monitoring vehicle
- ✓ Measurement by aircraft
- ✓ Measurement at the sea

➤ Integrated dose

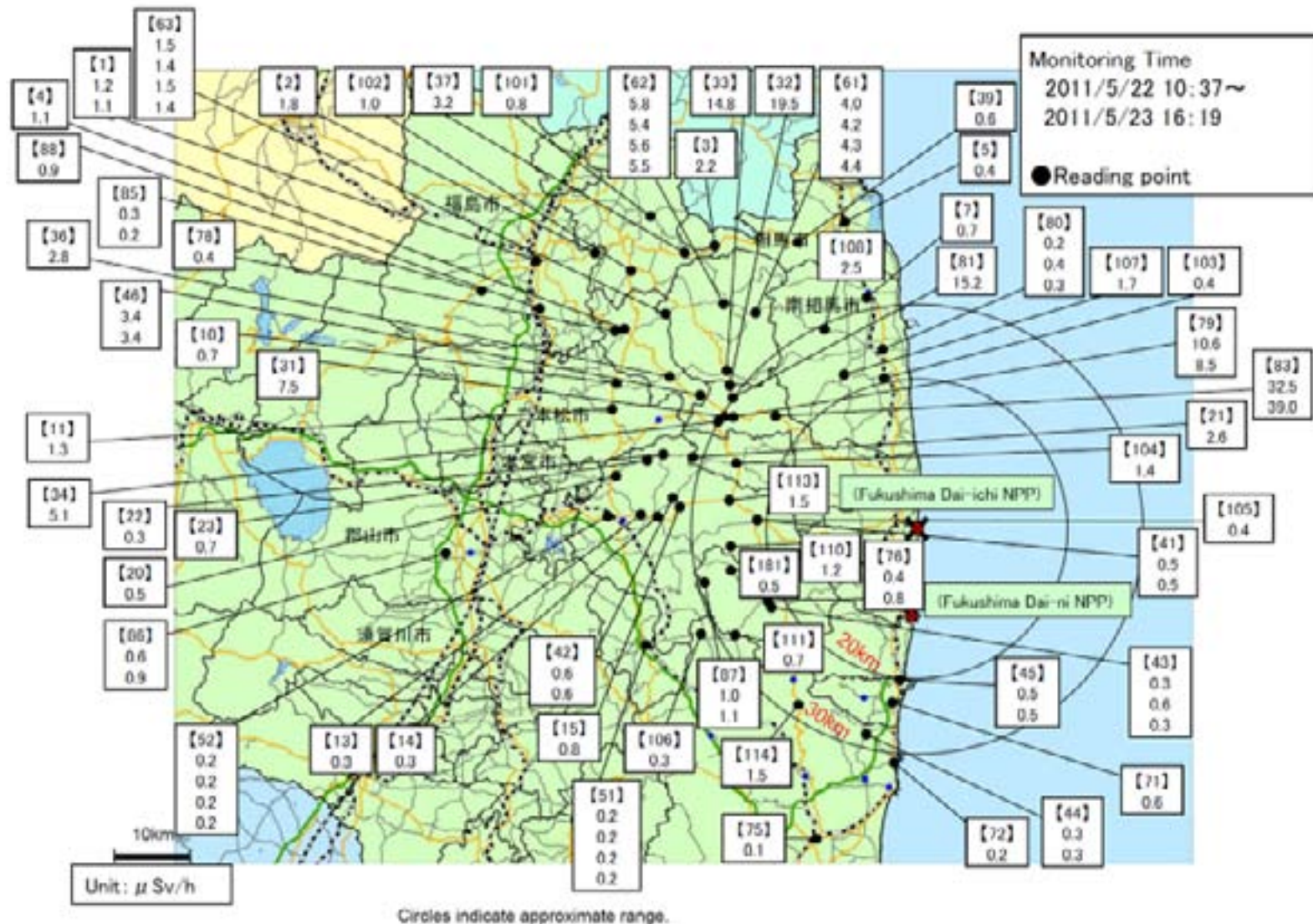
- ✓ Measurement at fixed monitoring points

➤ Radionuclide quantitative analyses (mainly ^{131}I & ^{137}Cs)

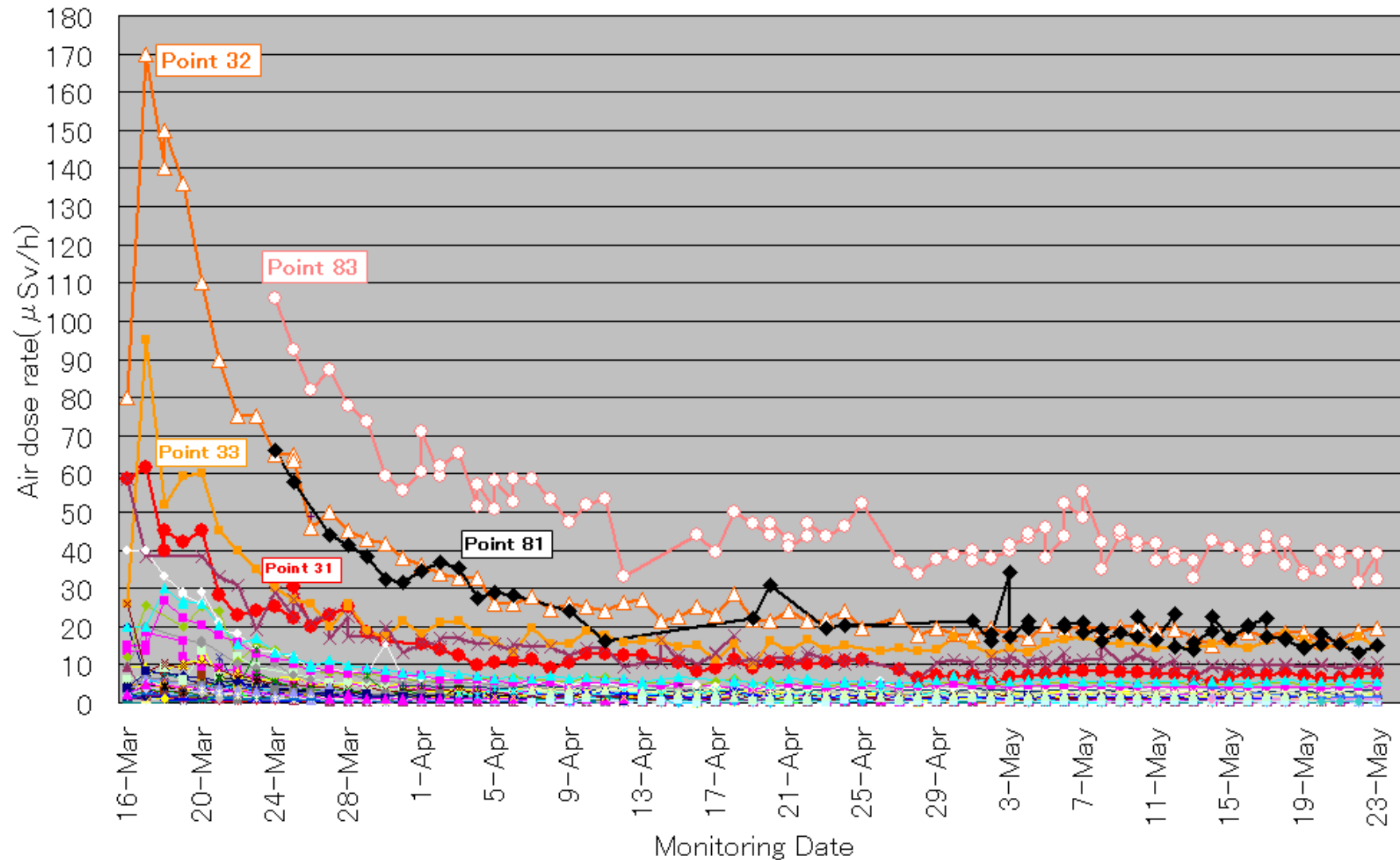
✓ Sampling items

- Dust, Soil, Pond water, Weed
- Drinking water, Fallout (47 Prefectures : All over Japan)
- Sea water, Sea-bottom soil

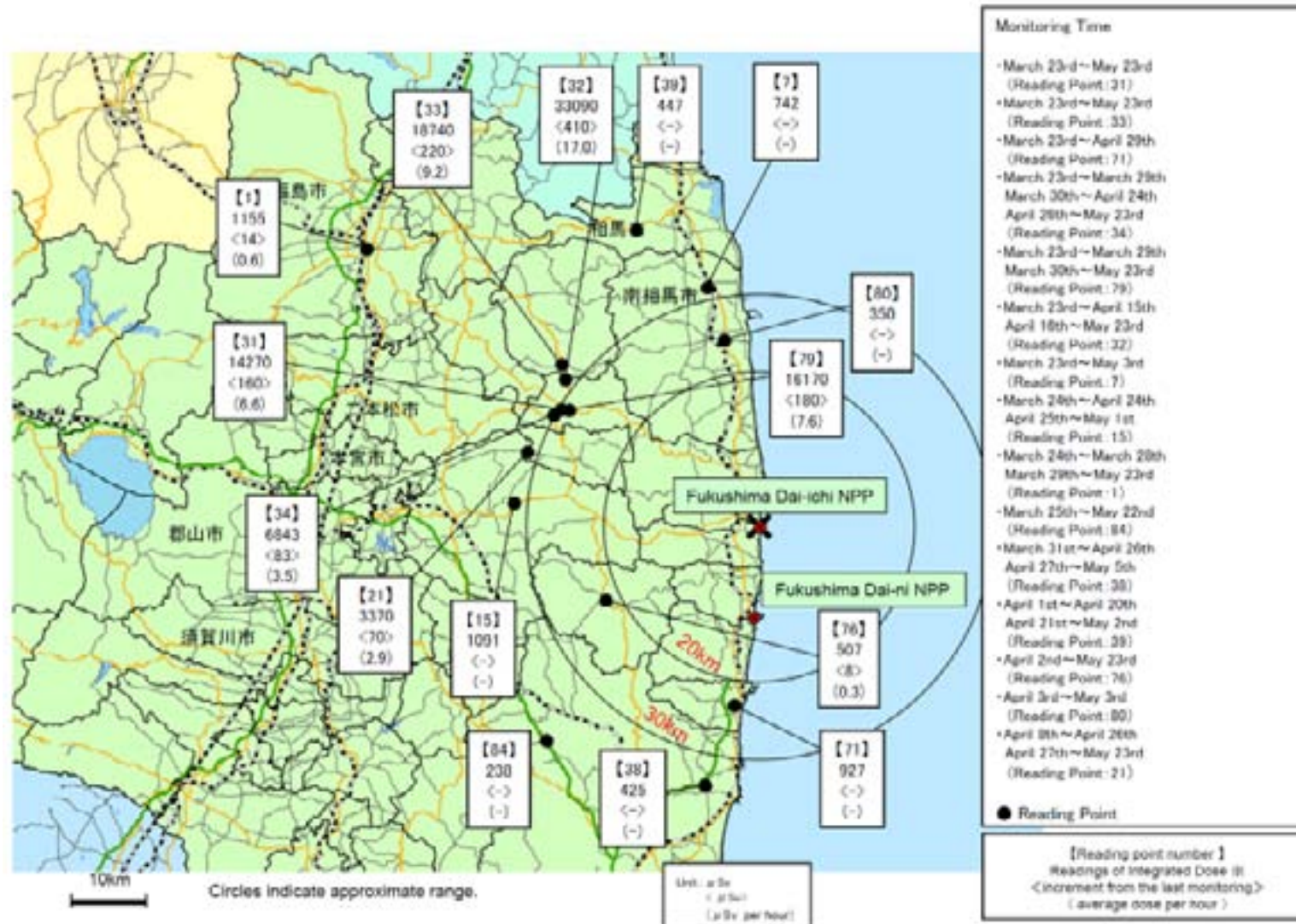
Dose rate measurement at fixed monitoring points (out of 20 Km zone of Fukushima Dai-ichi NPP)



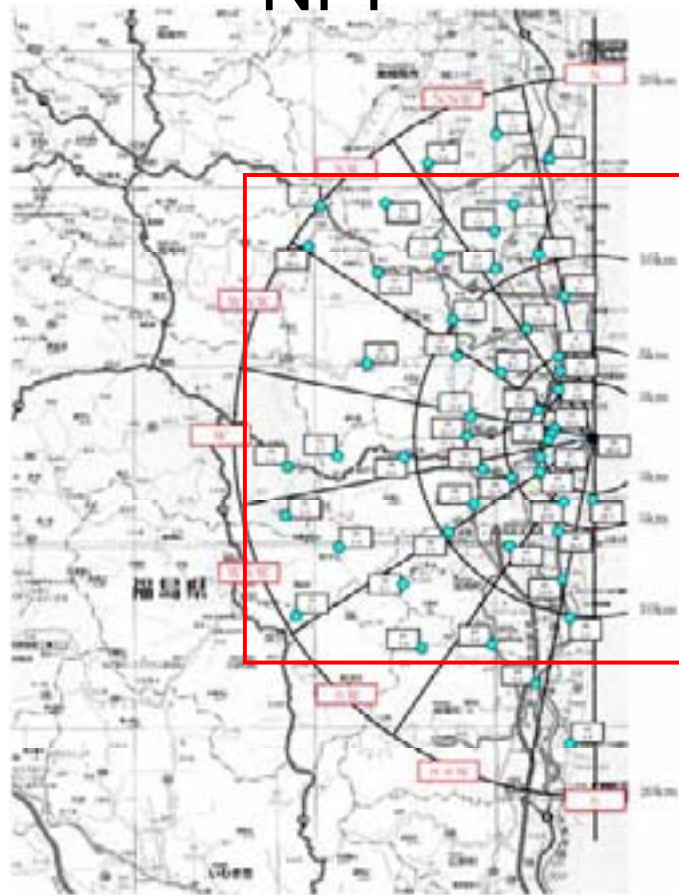
Chronological change of dose rate at fixed monitoring points (out of 20 km zone of Fukushima Dai-ichi NPP)



Measured value of Integrated dose at fixed monitoring points



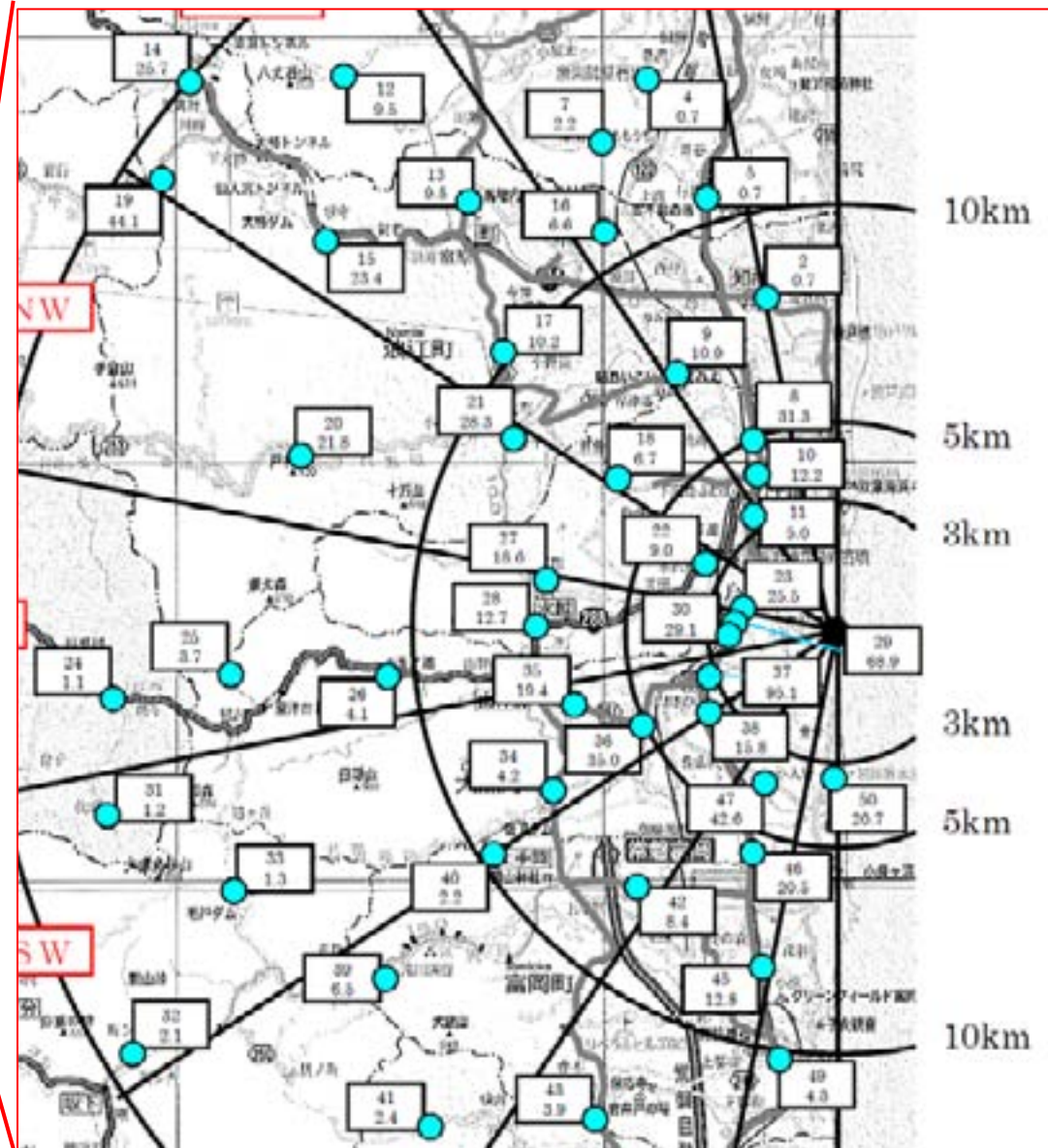
Results of dose rate measurement inside of 20 km zone of Fukushima Dai-ichi NPP



Readings of Radioactivity Concentration of Nuclides in the Air inside of the 20 km Zone of Fukushima Dai-ichi NPP

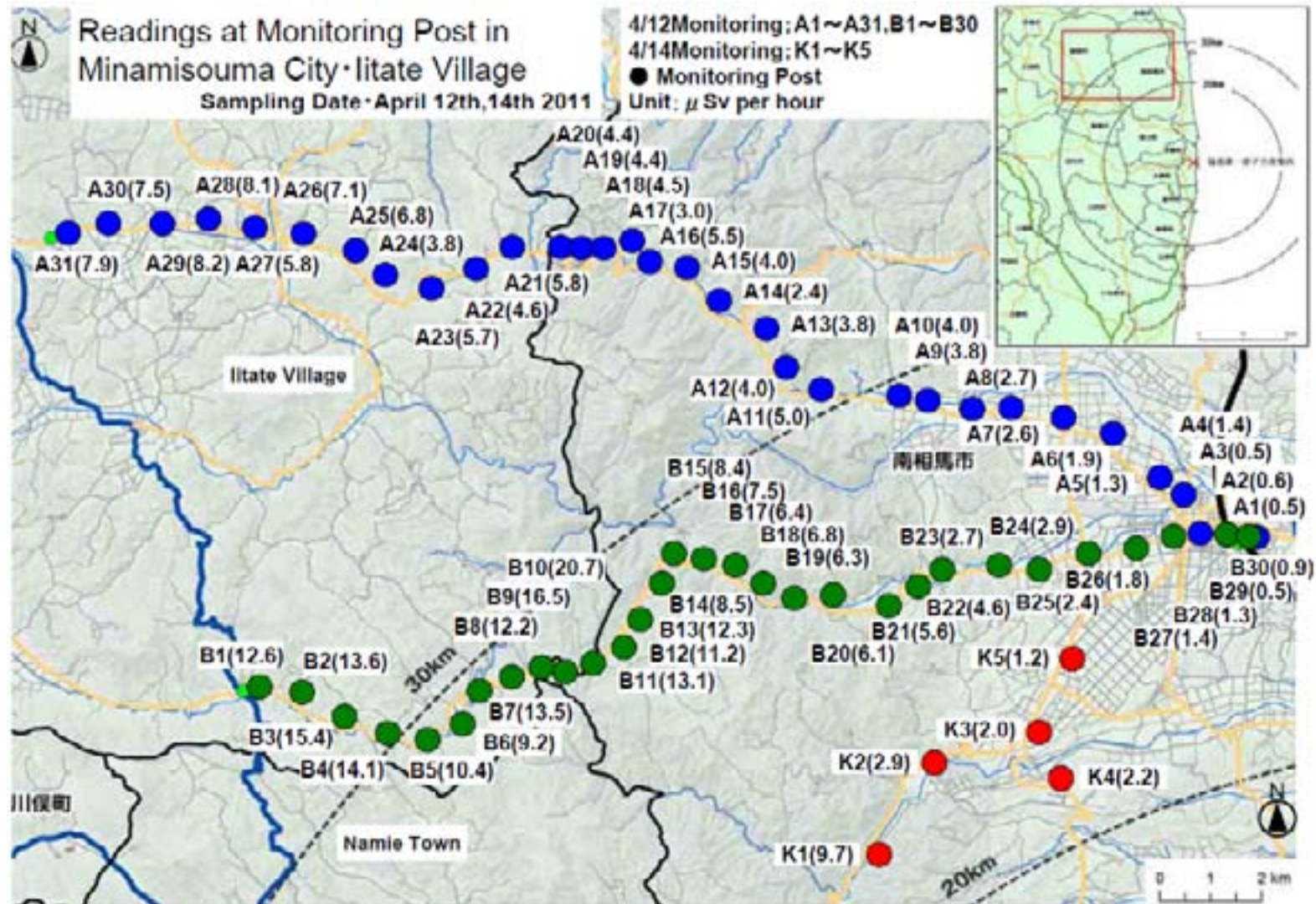
(Measuring date: May 20, 2011)

© Fukushima Dai-ichi NPP. The upper one is a point reading, the lower one is an area one.



(Unit : μSv/h)

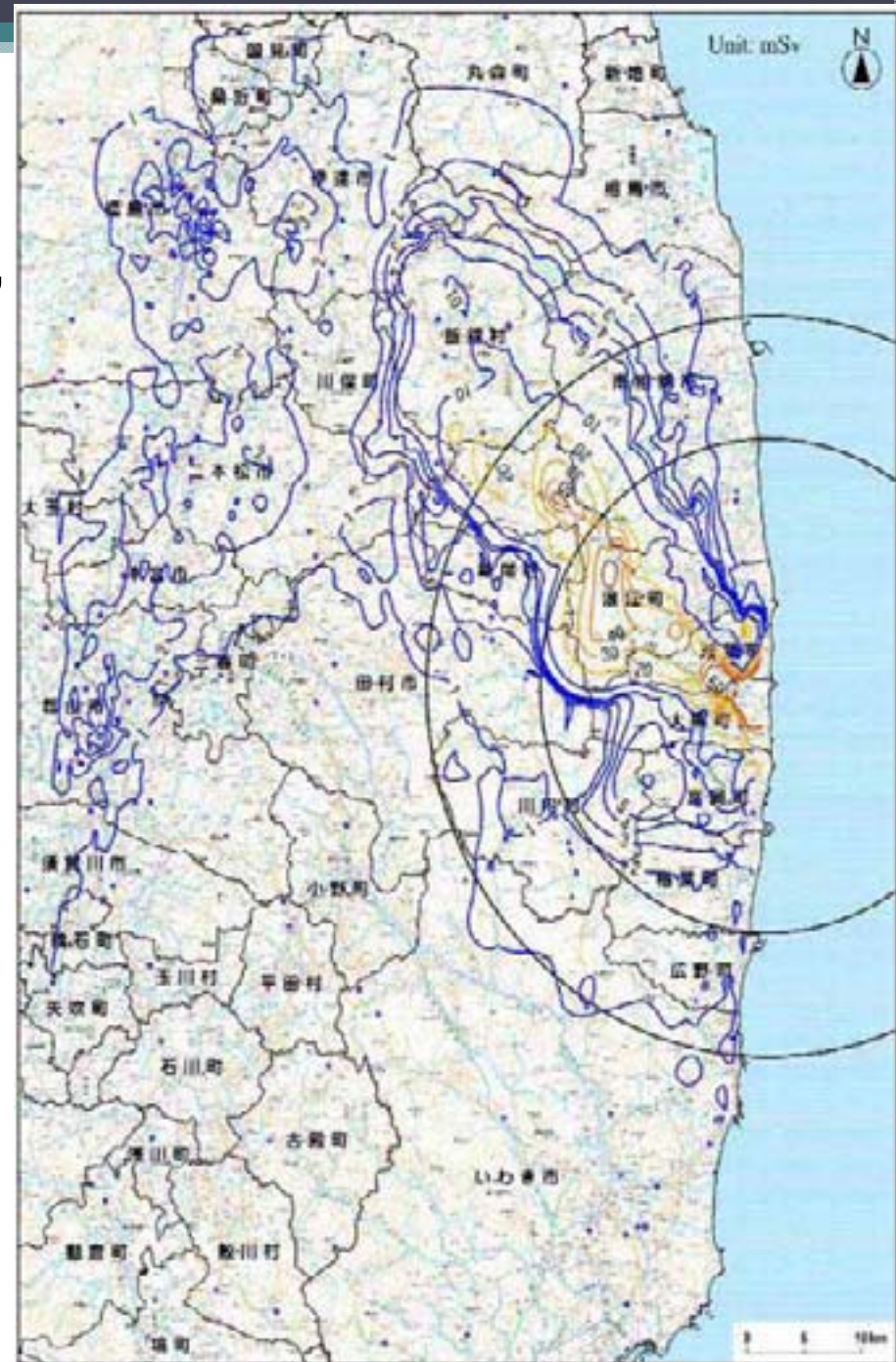
Results of dose rate measurement at the roadside by means of vehicle



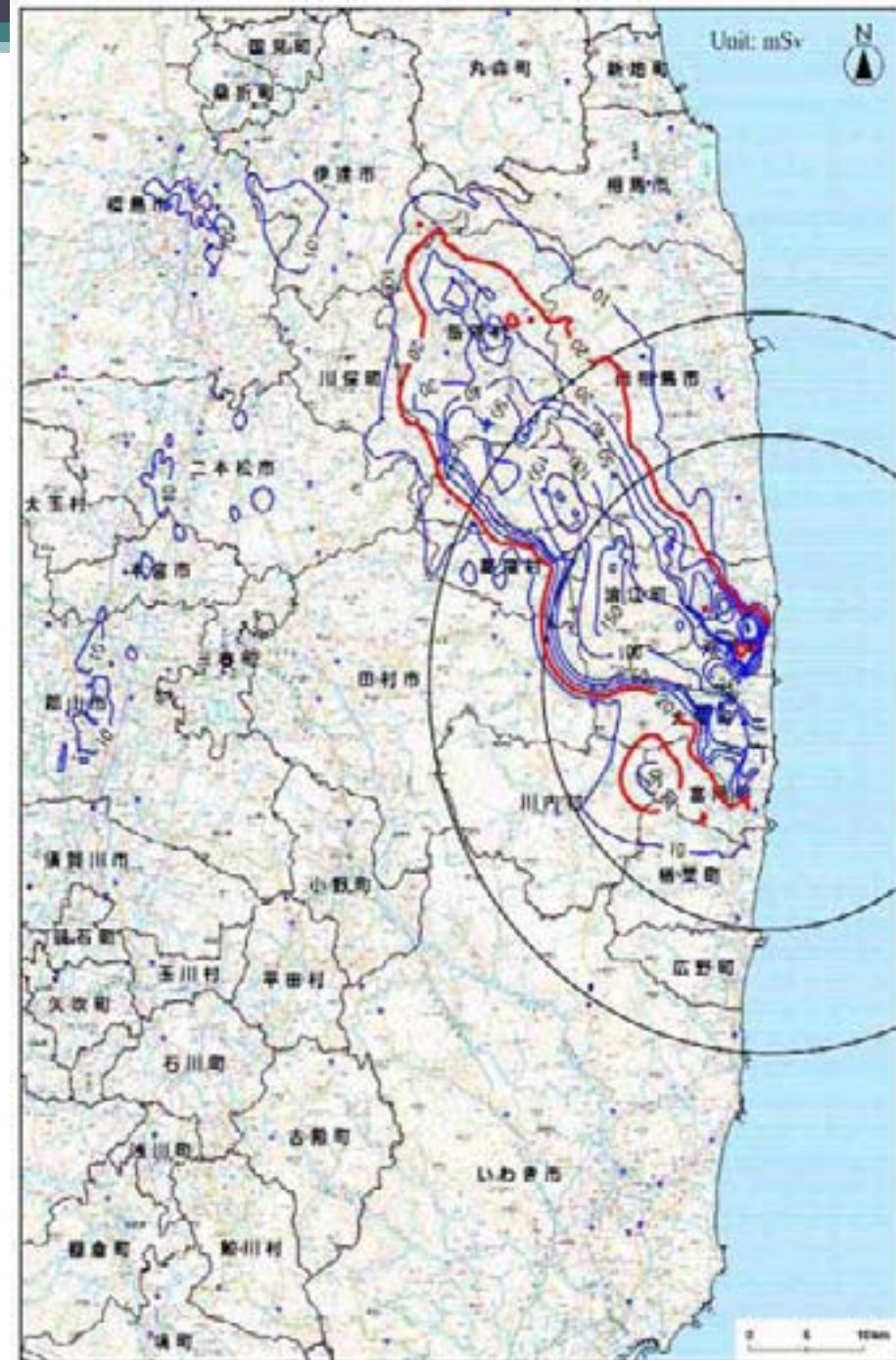
Dose Rate Map (as of May 11, 2011)



Integrated Dose Estimation Map (Integrated dose up until May 11, 2011)



Integrated Dose Estimation Map (Integrated dose up until March 11, 2012)



(Reference) Estimates of Integrated Dose at Each Continuous Monitoring Location based on Measured Values (1/2)
 (Based on the latest values indicated in the press releases at 10:00 and 13:00, April 24.)

Location Number	Location (Monitoring Area)	From Fukushima Dai-ichi NPP		Starting Date of Monitoring Air Dose Rate	Estimates of Integrated Dose 【B1】		Latest Readings (uSv/h) 【B3】	Estimates of Integrated Dose as of March 11, 2012 (uSv) 【B4】
		Direction	Distance		(uSv)	Note		
21-1 Planned evacuation zones								
87	Akagi Kamogata, Namie Town, Fukushima County	Northwest	24km	2011.3.24	44.3	【B7】	0.0016	75.4
88	Akagi Ichikawa, Namie Town, Fukushima County	Southwest	31km	2011.3.24	29.1	【B2】	0.0120	189.6
72	Akagi Teshigahara, Namie Town, Fukushima County	Northwest	31km	2011.3.16	23.8	【B4】	0.0185	118.2
79	Shimozushima Kayabuki, Namie Town, Fukushima County	West-northwest	29km	2011.3.16	16.6	【B5】	0.0097	56.2
81	Tsushima Nakayuki, Namie Town, Fukushima County	West-northwest	30km	2011.3.17	9.0	【B5】	0.0087	48.7
84	Tsushima Tadokori, Namie Town, Fukushima County	West-northwest	30km	2011.3.19	4.6	【B2】【B5】	0.0042	24.2
71	Kamogata, Kamogata Village, Fukushima County	West-northwest	17km	2011.3.17	7.7	【B7】	0.0011	18.0
104	Ara Oshino, Oshino-Daiichi, Kawasato Village, Fukushima County	Northwest	25km	2011.3.7	7.6	【B2】	0.0010	11.0
83	Nagashino, Itate Village, Soma County	Northwest	33km	2011.3.16	13.7	【B7】	0.0027	41.7
67	Kusano Tsuchi, Itate Village, Soma County	Southwest	30km	2011.3.17	5.1		0.0063	34.8
61	Yagiawa, Itate Village, Soma County	Northwest	30km	2011.3.17	4.3		0.0047	30.3
63	Nishiyoshi, Itate Village, Soma County	Northwest	44km	2011.3.17	7.0		0.0017	18.0
48	Yamashiro Mitsuhashiwa, Kawasato Town, Date County	West-northwest	14km	2011.3.17	3.3		0.0010	21.7
56	Yamashiro Oshino, Kawasato Town, Date County	West-northwest	40km	2011.3.20	3.7	【B2】	0.0034	19.6
21-2 Other zones								
109	Ohara Ushata, Haramachi Ward, Minami Soma City	West-northwest	30km	2011.3.7	3.4	【B7】	0.0070	13.6
107	Uda Minamiohatauchi, Haramachi Ward, Minami Soma City	West-northwest	29km	2011.3.7	3.0	【B2】	0.0070	11.9
8	Nishimachi, Koshino Ward, Minami Soma City	North	32km	2011.3.17	0.9		0.0010	5.5
103	Uda Minamigawa, Haramachi Ward, Minami Soma City	North	30km	2011.3.7	0.7	【B7】	0.0009	1.5
7	Tsutsuchi Motoyadate, Koshino Ward, Minami Soma City	West-northwest	32km	2011.3.17	0.8	【B5】	0.0006	3.2
101	Takemachi, Haramachi Ward, Minami Soma City	North	24km	2011.3.20	0.8	【B2】【B5】	0.0004	7.8
4	Kanabito, Ohta Tamaawa, Kawasato Town, Date County	Northwest	47km	2011.3.17	1.8		0.0015	8.1
76	Tsurugawa, Kawasato Town, Date County	Northwest	40km	2011.3.20	1.2	【B7】	0.0010	5.7
17	Ishida Haraawa, Watanabe Town, Date City	Southwest	40km	2011.3.10	3.4	【B2】	0.0078	21.2
2	Ishida Haraawa, Watanabe Town, Date City	Northwest	40km	2011.3.17	2.4		0.0079	16.0
102	Tsukidate Town, Date City	Northwest	30km	2011.3.7	1.3	【B7】	0.0007	4.8
101	Ara Matsuda, Ohta, Watanabe Town, Date City	Northwest	39km	2011.3.7	1.3	【B2】	0.0006	4.1
2	Ohama Takimori, Takahama City	Northwest	30km	2011.3.17	2.7		0.0017	10.6
89	Shikurayuki, Futatabi City	West-northwest	27km	2011.3.17	2.1	【B7】	0.0014	8.7
1	Nagashinocho, Fukushima City	Northwest	42km	2011.3.14	1.4	【B5】	0.0007	4.8
85	Ara Hamakita, Fukushima City	West-northwest	30km	2011.3.22	0.5	【B2】	0.0004	2.4
73	Kamogata, Ohgawa Town, Iwaki City	Southwest	30km	2011.3.20	1.4	【B7】	0.0011	6.6
72	Ara Katsuramachi, Hamaoka Town, Hamaoka Town, Iwaki City	South	31km	2011.3.20	0.7	【B2】	0.0009	4.0
44	Ara Yamagatawa, Ohama Ohama Town, Iwaki City	South-southwest	20km	2011.3.17	1.8		0.0005	9.4
74	Yamashiro Town, Iwaki City	South	31km	2011.3.20	0.8	【B2】	0.0005	3.0
74	Tatehaga, Ohgawa Town, Iwaki City	South-southwest	30km	2011.3.20	0.5	【B2】	0.0004	2.8
10	Makiya, Shirayama, Yutsukawa Town, Iwaki City	South-southwest	34km	2011.3.10	0.7	【B2】【B5】	0.0003	2.0
75	Uchiyamaawa Town, Iwaki City	South-southwest	41km	2011.3.20	0.3	【B2】	0.0001	1.7
106	Ara Shokusanawa, Ohgawa, Kawasato Town, Iwaki City	Southwest	30km	2011.3.7	0.2	【B2】	0.0001	1.6
84	Sano, Miya Town, Iwaki City	Southwest	39km	2011.3.20	0.3	【B2】【B5】	0.0002	1.0
43	Utsukishiro, Yamashiro, Soraba Town, Fukushima County	South	30km	2011.3.17	1.7		0.0001	4.7
11	Nagashino, Makiyama, Hamaoka Town, Fukushima County	North	23km	2011.3.20	1.8	【B2】【B5】	0.0001	1.1
11	Ara Minamida, Ota, Nishimatsu City	West-northwest	41km	2011.3.17	1.2		0.0000	3.4
10	Ara Nakayama, Haramachi, Nishimatsu City	West-northwest	44km	2011.3.17	0.9		0.0000	4.7
15	Ara Hamakita, Tsuruta, Nishimatsu City	West-northwest	17km	2011.3.19	0.8	【B2】	0.0000	4.5

(Reference) Estimates of Integrated Dose at Each Continuous Monitoring Location based on Measured Values (2/2)

(Based on the latest values indicated in the press releases at 10:00 and 13:00, April 24.)

Location Number	Location (Monitoring Area)	From Fukushima Dai-ichi NPP		Starting Date of Monitoring Air Dose Rate	Estimates of Integrated Dose 【※1】		Latest Readings (mSv/h) 【※3】	Estimates of Integrated Dose as of March 31, 2012 (mSv) 【※4】	
		Direction	Distance		(mSv)	Note			
89	Toyota Town, Koriyama City	West	40km	2011/4/3	2.1	【※2】	0.0017	10.1	
86	Ara Chosonobayashi, Otsuki Town, Koriyama City	West	63km	2011/3/27	1.2	【※2】	0.0012	6.8	
87	Hanano-uchi, Kamikawanuchi, Kawanuchi Village, Futaba County	West-southwest	29km	2011/3/27	0.9	【※2】	0.0009	5.1	
76	Ara Hayaruta, Kamikawanuchi, Kawanuchi Village, Futaba County	West-southwest	22km	2011/3/20	0.6	【※2】【※5】	0.0004	2.5	
43	Ara Miyaruta, Shimokawanuchi, Kawanuchi Village, Futaba County	West-southwest	23km	2011/3/16	0.5		0.0004	2.3	
20	Ara Shimo, Nitate, Funabiki Town, Tamara City	West	41km	2011/3/17	0.5	【※5】	0.0012	6.2	
42	Ara Tamaka, Yamane, Tokina Town, Tamara City	West	33km	2011/3/17	0.8		0.0008	4.3	
15	Ara Kashiwa, Yamane, Tokiwa Town, Tamara City	West	32km	2011/3/17	0.9		0.0006	3.6	
41	Furutachi, Miyakoshi Town, Tamara City	West	21km	2011/3/17	0.7		0.0006	3.5	
14	Ara Uchinouchi, Tokina, Tokina Town, Tamara City	West	34km	2011/3/17	0.3		0.0006	3.1	
23	Ara Suwayachi, Minamimotomi, Funabiki Town, Tamara City	West-northeast	39km	2011/3/17	0.6		0.0005	3.0	
52	Ara Habakamara, Funabiki, Funabiki Town, Tamara City	West	41km	2011/3/17	0.2		0.0003	1.7	
22	Ara Ushirota, Kamisuzuki, Funabiki Town, Tamara City	West-northeast	35km	2011/3/17	0.5		0.0007	1.4	
105	Furutachi, Miyakoshi Town, Tamara City	West	25km	2011/4/7	0.3		【※2】	0.0002	1.3
13	Ara Yakata, Tokiwa Town, Nishimaki	West	27km	2011/3/17	0.4			0.0001	0.9
12	Ara Otawakawashiro, Funabikimachi, Tamara City	West	39km	2011/3/17	0.3		0.0001	0.8	
39	Yamakawa-kamizuruki, Notara City	North-northeast	41km	2011/4/1	0.9	【※2】【※5】	0.0006	3.7	
5	Nakano-teranue, Sorama City	North-southwest	47km	2011/3/17	0.6		0.0004	2.5	
51	Uonemachi-tafamawari, Oho Town, Tamara County	West-southwest	39km	2011/3/17	0.3		0.0002	1.2	

This table was jointly compiled by the Nuclear Safety Commission, MEXT, and the Nuclear and Industrial Safety Agency.

*1 Shown values are integrated values monitored from 6:00, March 12 through 24:00, April 21. The same estimation method as that used by the Nuclear Safety Commission on March 28, 2011 is used, whereby the values are estimated by multiplying the monitored values by 0.6 in consideration of the reduction effect of wooden buildings (0.4) when staying outdoors for eight hours and indoors for 16 hours.

*2 For locations where the monitoring was started on or after March 19, the dose data for the period from March 16 to the day before the start of monitoring has been derived by assuming that the dose has changed in proportion to changes at Location No. 32, where the steepest dose change has been observed.

*3 Shown values are the latest air dose rates monitored by the time of the press release at 10:00, April 22. As for locations [*5] where actual values have been obtained by a simple integrating dosimeter, the values are the integrated values monitored since the time of the previous data sampling divided by the time lapsed.

*4 Shown values have been obtained by the same method as that mentioned in *1, while supposing that the latest monitored values [*3] will stay unchanged on and after April 22.

*5 For the period where actual values monitored by a simple integrating dosimeter are available, such values are indicated.

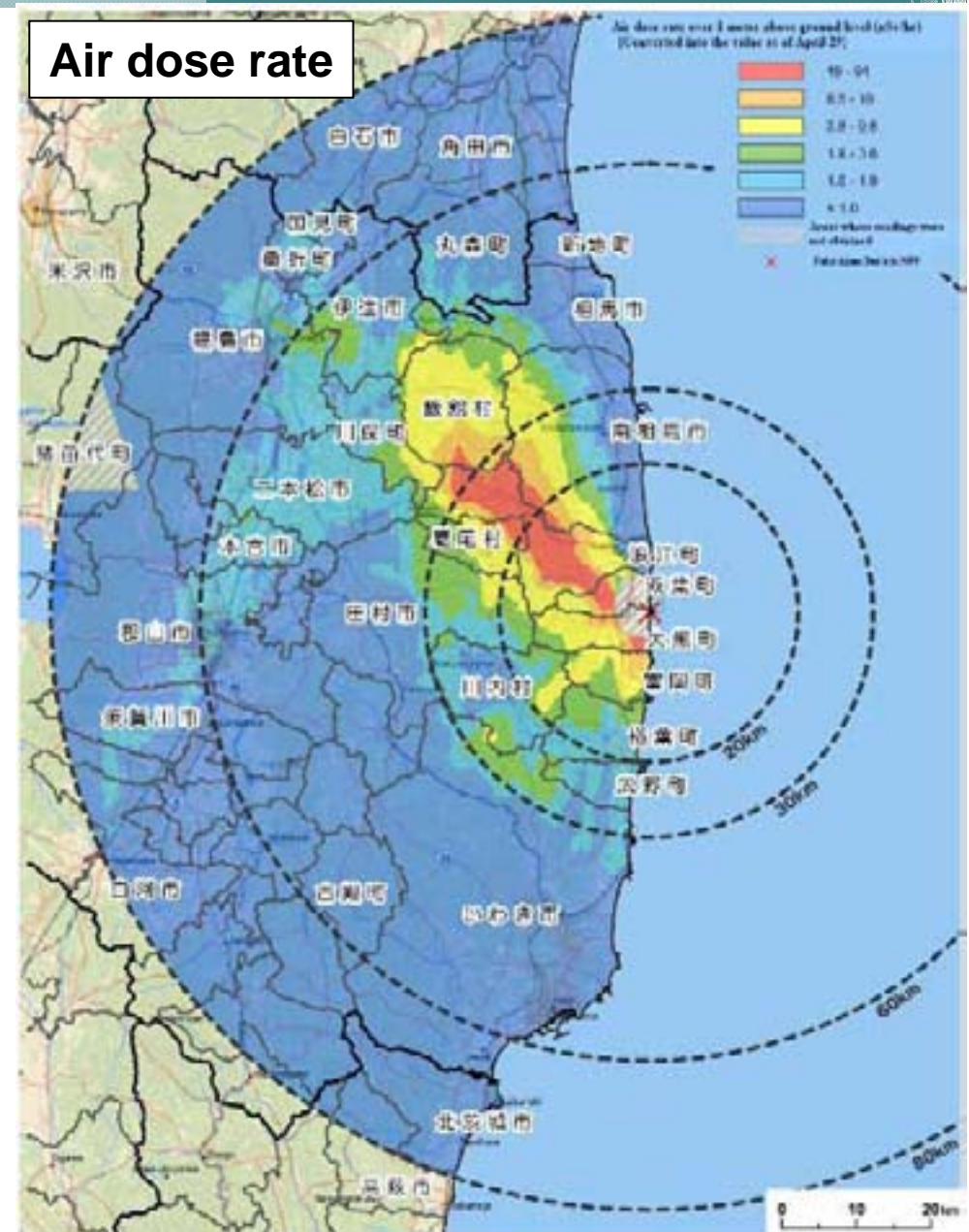
To prepare the isogram map of estimated (integrated) doses, the values for a total of 2,138 locations were used (the 63 locations mentioned above plus the air dose monitoring locations mentioned below [2,075 locations]).

- (1) Air dose rates observed in the emergency environmental monitoring conducted by Fukushima Prefecture from March 20 to April 21: 91 locations
- (2) Air dose rates observed in monitoring conducted by MEXT on April 9 in Katsurao Village and Namie Town: 16 locations
- (3) Air dose rates observed within the area covered by the isogram map in the grid survey conducted by Fukushima Prefecture from April 12 to April 16: 1,790 locations
- (4) Air dose rates observed inside the 20 km zone in monitoring conducted by MEXT and TEPCO on March 30 and 31, and April 2, 18 and 19: 178 locations

Results of airborne monitoring by MEXT and DOE

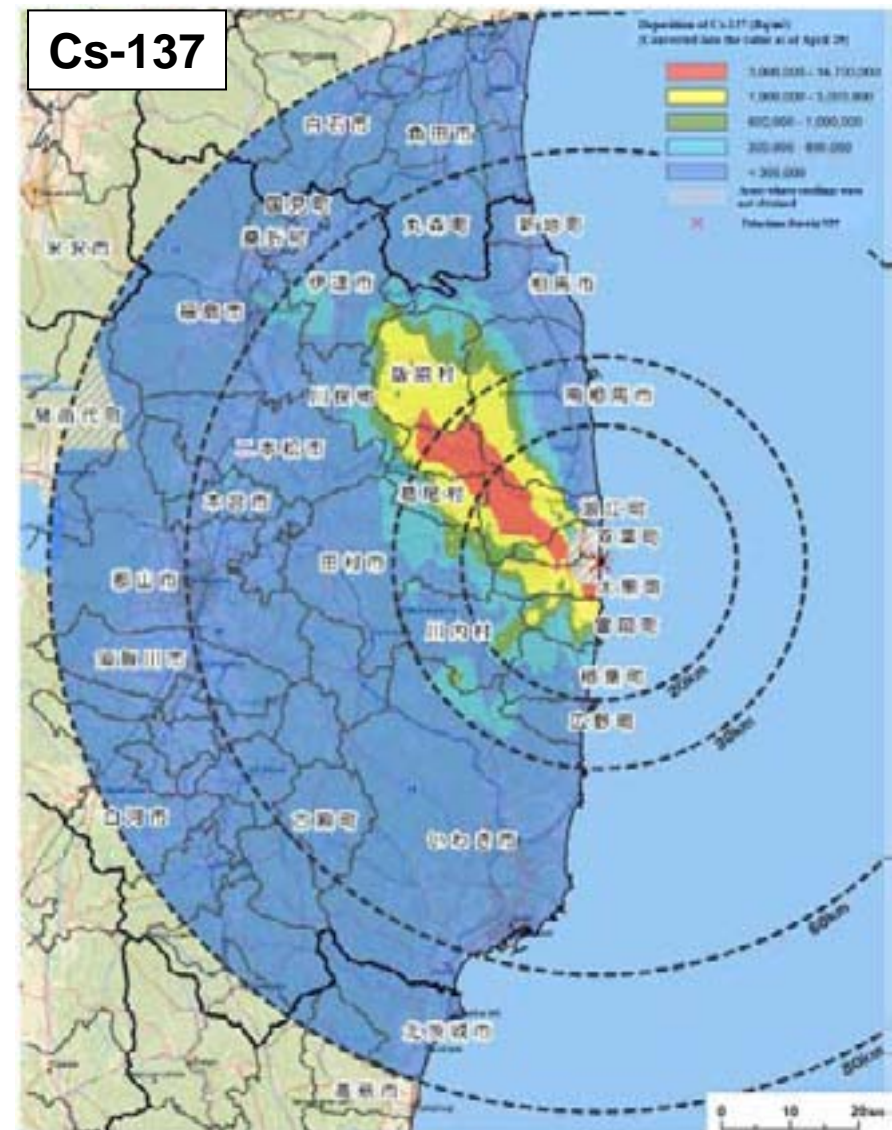
(Monitoring Spec)

- Monitoring mesh : 1 - 2km
- Target altitude of measurement :
Terrain clearance 150 - 300m
- Monitoring Term :
April 6th - April 12th
- Monitoring Items :
 - Air dose rate over 1 meter from ground level
 - Pollution situation of radionuclide deposited ground



Results of airborne monitoring by MEXT and DOE

Surface deposition of Cs inside 80 km zone of Fukushima Dai-ichi NPP



Radionuclide quantitative analyses out of 20 km zone of Fukushima Dai-ichi NPP



Results of radionuclide quantitative analyses out of 20 km zone of Fukushima Dai-ichi NPP (Example : Soil (1/2))

Sampling Date and Time (Working Time)	Sampling Point	Radiactivity Concentration (Bq/kg)								Air dose rate (μSv/h)	Remarks (Point, no monitoring)
		¹³⁷ I	¹³⁴ Cs	¹³⁷ Cs	¹⁰⁹ Tc	¹³² Tc	¹³⁵ Cs	¹³⁴ La	Other detected nuclides		
3-26 14:13		25,000	25,000	617						30.9	
3-26 15:15		22,000	1,558	1,600						17.0	
3-27 11:30		120,000	23,500	27,000						25.0	
3-28 10:29		120,000	21,900	25,000						22.0	
3-28 9:58		710,000	212,000	220,000						16.7	
3-30 10:50		710,000	202,000	200,000						16.3	
3-31 10:45		55,000	14,200	15,000						-	
4-1 10:28		79,000	21,400	23,000						15.4	
4-2 11:42		21,000	5,270	5,400						18.0	
4-3 10:38		80,000	26,000	27,000						12.5	
4-4 10:27		141,000	5,921	6,907						9.9	
4-5 10:42		103,070	42,639	48,205						15.8	
4-5 11:45		95,519	47,949	52,942						10.9	
4-7 10:30		75,391	46,347	51,147						11.4	
4-8 10:51		36,300	10,000	20,300						9.0	
4-10 10:17		55,758	42,917	54,225						12.0	
4-11 13:32		58,958	58,212	67,722						12.8	
4-12 10:00		54,507	46,408	48,235						12.3	
4-14 11:06		22,000	54,000	78,000						10.7	
4-15 10:45		18,000	18,000	22,000						10.5	
4-16 10:50		15,000	18,000	21,000						6.3	
4-17 10:40		17,000	13,000	15,000						8.2	
4-18 9:51		8,700	8,800	8,100						11.8	
4-20 10:48		29,000	51,000	62,000						10.6	
4-21 9:58		22,000	72,000	87,000						10.5	
4-22 10:29		88,000	180,000	210,000						10.1	
4-24 10:58		4,100	5,320	6,200						10.0	
4-25 10:31		11,100	28,000	33,000						11.2	
4-27 14:43		3,600	9,600	11,000						8.9	
4-28 9:48		7,400	28,000	42,000						7.8	
4-29 9:04		8,200	36,000	39,000						7.5	
4-30 10:59		3,100	14,000	14,000						6.8	
(5-1 14:40)											
5-1 9:55		4,500	29,000	29,000						7.3	
(5-2 17:20)											
5-2 10:35		9,000	26,000	21,000						5.4	
(5-219 18:1)											
5-2 10:31		5,200	25,000	30,000						5.4	
(5-3 9:51)											
(5-6 9:42)		4,700	21,000	24,000						6.9	
5-4 11:20		6,200	50,000	54,000						7.1	
(5-6 18:28)											
5-5 10:06		3,900	32,000	40,000						7.2	
5-5 10:00		2,200	25,000	21,000						7.2	
(5-8 11:04)											
5-5 10:29		2,400	14,000	14,000	5,500	Not Detectable	140	Not Detectable for Iodine		7.2	
(5-9 19:57)											
5-7 14:58		2,000	14,000	14,000	2,000	Not Detectable	130	Not Detectable for Iodine		7.8	
(5-9 18:10)											
5-8 10:01		4,100	38,000	44,000	21,000	Not Detectable	490	Not Detectable for Iodine		6.6	
(5-10 18:20)											
5-8 10:05		4,700	54,000	60,000	23,000	Not Detectable	580	Not Detectable for Iodine		7.9	
(5-11 17:02)											
5-10 10:14		4,700	42,000	50,000	20,000	Not Detectable	530	Not Detectable for Iodine		7.9	
(5-12 18:21)											
5-11 10:01		3,200	38,000	48,000	17,000	Not Detectable	220	Not Detectable for Iodine		7.6	
(5-14 15:42)											
5-12 10:04		3,300	42,000	48,000	21,000	Not Detectable	270	Not Detectable for Iodine	¹⁰⁹ Ag : 140	7.5	
(5-18 18:17)											
5-13 10:09		1,200	16,000	18,000	6,200	Not Detectable	110	Not Detectable for Iodine		6.9	
(5-15 14:38)											
5-14 10:29		1,400	22,000	25,000	7,800	Not Detectable	230	Not Detectable for Iodine		5.2	
(5-16 17:42)											
5-15 11:29		400	4,000	4,900	2,400	Not Detectable/Not Detectable	Not Detectable for Iodine			6.7	
(5-18 19:40)											
5-16 10:23		1,100	27,000	30,000	11,000	Not Detectable	260	Not Detectable for Iodine		7.5	
(5-19 18:24)											
5-17 11:49		1,200	10,000	12,000	4,800	Not Detectable	18	Not Detectable for Iodine		7.0	
(5-19 18:23)											

CS-122
(Black/Red/White/Black)

Fukushima county Name from
Tachibana

(1/2)

Results of radionuclide quantitative analyses out of 20 km zone of Fukushima Dai-ichi NPP (Example : Soil (2/2))

Sampling Point	Sampling Time and Date Monitoring Time #1	Radionuclide Concentration (Bq/kg)							Air dose rate (μ Sv/h)	Monitoring Point by monitoring car
		^{137}Cs	^{134}Cs	^{137}Cs	^{134}Cs	^{137}Cs	^{134}Cs	Other detected radionuclides		
	3-26 14:30	83,700	9,300	8,200					41.0	
	3-26 18:40	290,000	33,400	31,000					46.0	
	3-27 11:35	100,000	76,000	60,000					41.0	
	3-28 10:31	270,000	8,800	9,200					70.0	
	3-29 10:17	400,000	87,300	84,000					47.0	
	3-30 11:08	200,000	53,000	52,000					41.8	
	3-31 11:04	91,000	38,700	48,000					38.0	
	4-1 11:01	270,000	172,000	130,000					36.2	
	4-2 11:39	120,000	21,800	20,000					34.0	
	4-3 10:58	200,000	110,000	110,000					32.2	
	4-4 10:50	197,750	84,254	88,551					31.7	
	4-5 10:59	207,800	83,831	103,300					29.9	
	4-6 11:38	125,200	53,886	58,781					27.8	
	4-7 10:47	138,610	63,464	73,334					47.8	
	4-8 11:23	85,800	63,000	68,800					28.8	
	4-10 10:44	43,800	17,813	42,830					25.2	
	4-11 13:53	114,200	120,100	140,100					25.8	
	4-12 16:25	102,450	71,991	86,040					26.4	
	4-14 10:30	83,000	84,000	73,000					21.2	
	4-15 10:18	28,000	25,000	29,000					22.3	
	4-16 10:10	54,000	55,000	67,000					29.3	
	4-17 10:55	17,000	8,700	10,000					23.1	
	4-18 10:15	10,000	16,000	18,000					28.8	
	4-20 16:27	28,000	46,000	50,000					11.3	
	4-21 10:12	31,000	60,000	18,000					28.0	
	4-23 10:40	48,000	100,000	220,000					21.8	
	4-24 10:28	34,000	85,000	110,000					24.2	
	4-25 10:10	19,000	82,000	58,000					19.4	
	4-27 14:10	23,000	110,000	130,000					22.4	
	4-28 10:07 (4-29 10:34)	5,700	22,000	28,000					18.2	
	4-29 10:11 (4-30 10:46)	12,800	48,000	82,000					19.8	
	4-30 11:12 (5-1 14:46)	16,000	110,000	110,000					18.1	
	5-1 10:24 (5-2 17:30)	6,300	55,000	58,000					17.8	
	5-2 10:49 (5-3 10:10)	11,000	84,000	87,000					18.7	
	5-2 10:49 (5-3 10:21)	18,000	76,000	82,000					18.7	
	5-3 10:11 (5-3 9:40)	2,100	7,300	8,200					18.2	
	5-4 11:38 (5-6 10:21)	6,000	67,000	80,000					18.9	
	5-5 10:21 (5-9 11:06)	1,800	7,800	8,300					18.9	
	5-9 10:21 (5-9 11:06)	5,800	20,000	21,000					18.6	
	5-9 9:55 (5-9 10:28)	8,900	130,000	140,000	54,000	Not Detectable	1,500	Not Detectable	^{210}Po 420	18.8
	5-7 10:38 (5-9 10:00)	10,000	80,000	87,000	80,000	Not Detectable	1,000	Not Detectable	Not Detectable	19.4
	5-9 9:48 (5-10 10:13)	6,200	50,000	63,000	21,000	Not Detectable	780	Not Detectable	^{210}Po 180	17.6
	5-9 9:54 (5-11 17:04)	6,600	71,000	79,000	28,000	Not Detectable	780	Not Detectable	^{210}Po 240	20.1
	5-10 10:05 (5-12 10:14)	7,800	100,000	110,000	67,000	Not Detectable	1,000	Not Detectable	^{210}Po 270	20.2
	5-11 9:20 (5-14 5:52)	4,800	75,000	80,000	33,000	Not Detectable	810	Not Detectable	^{210}Po 330	18.3
	5-12 10:31 (5-14 15:18)	3,700	58,000	65,000	24,000	Not Detectable	500	Not Detectable	Not Detectable	18.8
	5-12 10:08 (5-15 14:31)	3,700	67,000	71,000	32,000	Not Detectable	540	Not Detectable	^{210}Po 210	17.2
	5-14 10:19 (5-16 17:42)	3,100	80,000	84,000	29,000	Not Detectable	470	Not Detectable	^{210}Po 190	18.2
	5-15 11:24 (5-16 10:00)	3,100	40,000	47,000	24,000	Not Detectable	710	Not Detectable	Not Detectable	17.3
	5-16 10:04 (5-16 10:10)	3,800	83,000	81,000	34,000	Not Detectable	630	Not Detectable	^{210}Po 290	18.5
	5-17 11:27 (5-19 10:24)	1,500	17,000	20,000	9,800	Not Detectable	Not Detectable	Not Detectable	Not Detectable	17.9

Results of radionuclide quantitative analyses out of 20 km zone of Fukushima Dai-ichi NPP (Sr, U and Pu)

Sample	Sampling Point (Number or Name)	Sampling Date	¹³¹ I	¹³⁴ Cs	¹³⁷ Cs	⁸⁸ Sr	⁹⁰ Sr	Unit
Land Soil	31* ²	3/17	30,000	2,300	2,300	13	3.3	Bq/kg WetSoil
Land Soil	32* ²	3/16	100,000	20,000	19,000	81	9.4	Bq/kg WetSoil
Land Soil	33* ³	3/16	160,000	52,000	51,000	260	32	Bq/kg WetSoil
Plant	Ootama Village	3/19	43,000	89,000	90,000	61	5.9	Bq/kg raw
Plant	Motomiya City	3/19	21,000	57,000	57,000	28	3.7	Bq/kg raw
Plant	Ono Town	3/19	22,000	12,000	12,000	12	1.8	Bq/kg raw
Plant	Nishigou Village	3/19	12,000	25,000	25,000	15	3.8	Bq/kg raw

Sr

- * 1 Plants are provided by Fukushima Pref.
- * 2 Namie Town
- * 3 Iitate Village

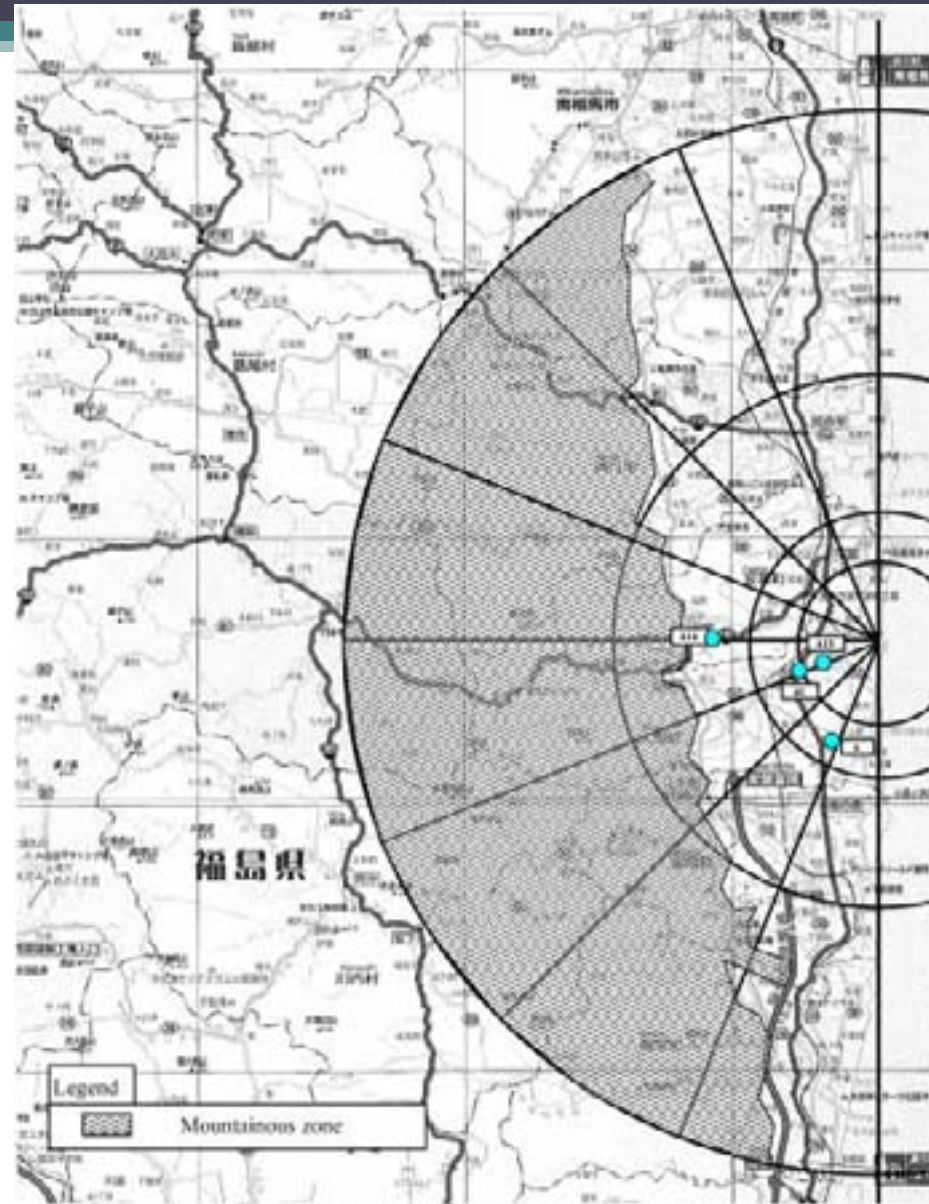
Only seven above-mentioned points were sampled and measured.

U and Pu

Sampling Point	Sampling Date and Time	radiation dose rate [μ Sv/h]	Pu-238	Pu-239+240	U-235/U-238
Around Kodeya in Kuzuo Village	3/23 About 10:20	43.5	Not Detectable (Below 0.1 Bq/kg)	Not Detectable (Below 0.1 Bq/kg)	0.00731
East Side of Hirusone Tunnel, Namie Town	3/23 About 10:40	46.5	Not Detectable (Below 0.1 Bq/kg)	Not Detectable (Below 0.1 Bq/kg)	0.00726
Akougi Namie Town	3/22 About 11:30	50.1	Not Detectable (Below 0.1 Bq/kg)	Not Detectable (Below 0.1 Bq/kg)	0.00723

* Isotope abundance ratio of U-235/U-238 in a state of nature : 0.00725

Readings of
Radioactivity
Concentration in the
Soil inside of the 20 km
Zone of Fukushima
Dai-ichi NPP
(Monitoring points)



Monitoring points for radioactivity concentration of radionuclides in the air
inside of the 20 km zone of Fukushima Dai-ichi NPP

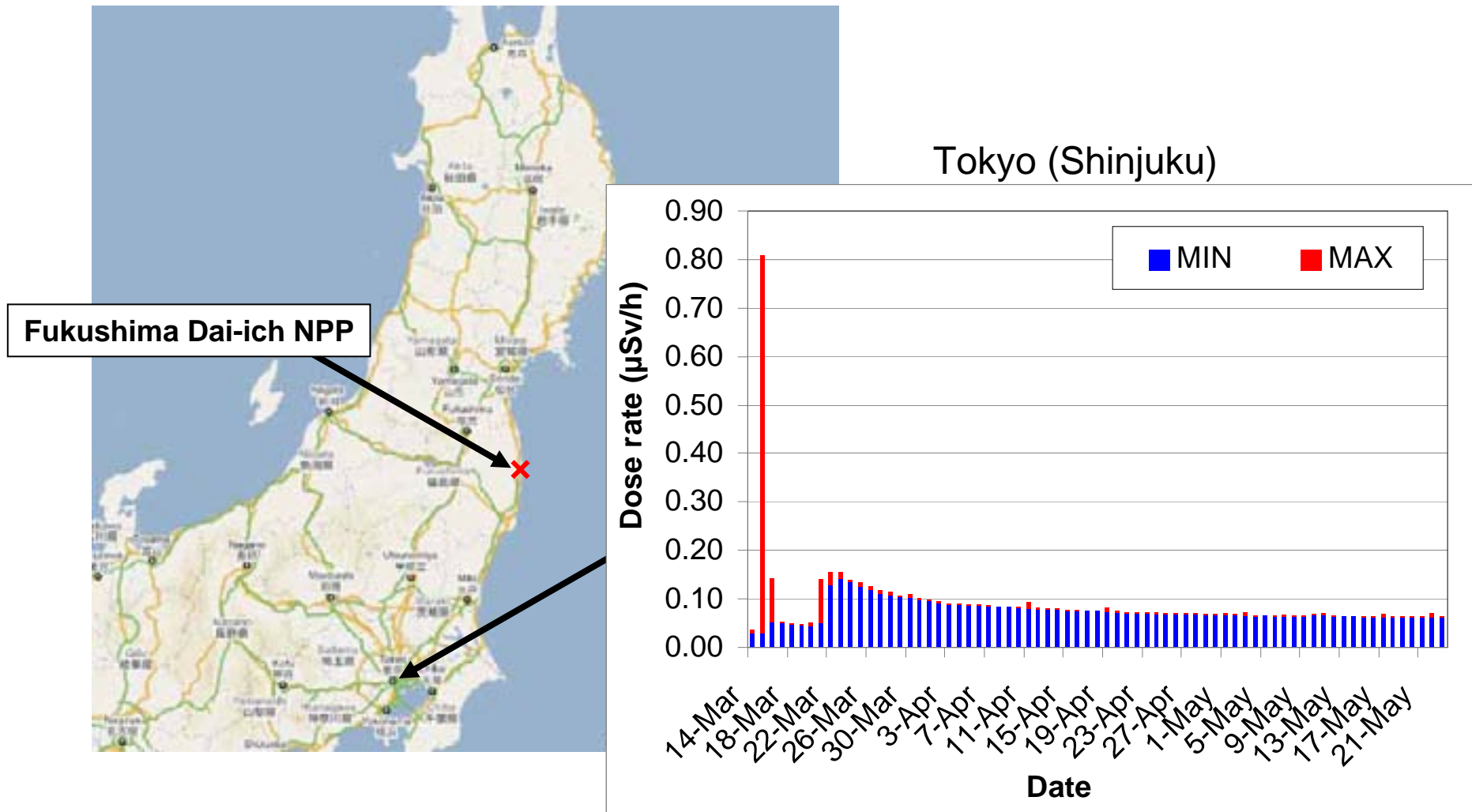
(Monitoring dates: May 3, 2011)

* Figures in boxes are monitoring point numbers

Readings of Radioactivity Concentration in the Soil inside of the 20 km Zone of Fukushima Dai-ichi NPP (Monitoring date: May 3, 2011)

Location Number	Location (Monitoring Area)	Readings of Radioactivity Concentration		
		Monitoring Date and Time	Nuclide	Radioactivity Concentration (Bq/kg)
6	Okuma town Oaza Kumagawa (About 4km South/South/West)	May 3 14:52	¹³¹ I	9,500
			¹³⁴ Cs	18,000
			¹³⁶ Cs	250
			¹³⁷ Cs	17,000
			^{129m} Te	8,800
41	Okuma town Oaza Ottozawa (About 3km West/South/West)	May 3 14:55	¹³¹ I	11,000
			¹³⁴ Cs	52,000
			¹³⁶ Cs	760
			¹³⁷ Cs	49,000
			^{129m} Te	23,000
A13	Okuma town Oaza Ottozawa (About 2km West/South/West)	May 3 14:54	¹³¹ I	110,000
			¹³⁴ Cs	270,000
			¹³⁶ Cs	3,400
			¹³⁷ Cs	270,000
			^{129m} Te	180,000
A14	Futaba county Futaba town Oaza Yamada (About 2km West)	May 3 14:53	¹³¹ I	7,200
			¹³⁴ Cs	5,000
			¹³⁶ Cs	87
			¹³⁷ Cs	5,000
			^{129m} Te	7,300

Results of environmental radiation monitoring by 47 Prefectures (Dose rate)



Results of environmental radiation monitoring by 47 Prefectures (Fallout and Drinking water)

2011-5-21 13:00 (Bq/g)

Prefecture (City)	Fallout			Remarks
	I-131	Cs-134	Cs-137	
1 Hokkaido/Sapporo	Not Detectable	Not Detectable	Not Detectable	
2 Aomori/Aomori	Not Detectable	Not Detectable	Not Detectable	
3 Iwate/Morioka	Not Detectable	Not Detectable	Not Detectable	
4 Miyagi	-	-	-	Not by national Institute of the earthquake disaster center
5 Akiita/Akita	Not Detectable	Not Detectable	Not Detectable	
6 Yamagata/Yamagata	Not Detectable	Not Detectable	Not Detectable	
7 Fukushima/Fukushima	Not Detectable	Not Detectable	Not Detectable	
8 Ibaraki/Hitachinaka	Not Detectable	Not Detectable	Not Detectable	
9 Tochigi/Utsunomiya	Not Detectable	Not Detectable	Not Detectable	
10 Gunma/Maebashi	Not Detectable	Not Detectable	Not Detectable	
11 Saitama/Saitama	Not Detectable	Not Detectable	2.3	
12 Chiba/Chiba	Not Detectable	Not Detectable	Not Detectable	
13 Tokyo/Shinjuku	Not Detectable	Not Detectable	Not Detectable	
14 Kanagawa/Chiyoda	Not Detectable	Not Detectable	Not Detectable	
15 Niigata/Niigata	Not Detectable	Not Detectable	Not Detectable	
16 Toyama/Toyama	Not Detectable	Not Detectable	Not Detectable	
17 Ishikawa/Kanazawa	Not Detectable	Not Detectable	Not Detectable	
18 Fuku/Fuku	Not Detectable	Not Detectable	Not Detectable	
19 Yamaguchi/Yufu	Not Detectable	Not Detectable	Not Detectable	
20 Nagano/Nagano	Not Detectable	Not Detectable	Not Detectable	
21 Gifu/Kakamigahara	Not Detectable	Not Detectable	Not Detectable	
22 Shizuoka/Shizuoka	Not Detectable	Not Detectable	Not Detectable	
23 Aichi/Nagoya	Not Detectable	Not Detectable	Not Detectable	
24 Mie/Yokkaichi	Not Detectable	Not Detectable	Not Detectable	
25 Shiga/Otsu	Not Detectable	Not Detectable	Not Detectable	
26 Kyoto/Kyoto	Not Detectable	Not Detectable	Not Detectable	
27 Osaka/Osaka	Not Detectable	Not Detectable	Not Detectable	
28 Hyogo/Kobe	Not Detectable	Not Detectable	Not Detectable	
29 Nara/Nara	Not Detectable	Not Detectable	Not Detectable	
30 Wakayama/Wakayama	Not Detectable	Not Detectable	Not Detectable	
31 Tottori/Tottori	Not Detectable	Not Detectable	Not Detectable	
32 Shimane/Matsue	Not Detectable	Not Detectable	Not Detectable	
33 Okayama/Okayama	Not Detectable	Not Detectable	Not Detectable	
34 Hiroshima/Hiroshima	Not Detectable	Not Detectable	Not Detectable	
35 Yamaguchi/Yamaguchi	Not Detectable	Not Detectable	Not Detectable	
36 Tokushima/Tokushima	Not Detectable	Not Detectable	Not Detectable	
37 Kagawa/Takamatsu	Not Detectable	Not Detectable	Not Detectable	
38 Ehime/Yawatahama	Not Detectable	Not Detectable	Not Detectable	
39 Kochi/Kochi	Not Detectable	Not Detectable	Not Detectable	
40 Fukuoka/Fukuoka	Not Detectable	Not Detectable	Not Detectable	
41 Saga/Saga	Not Detectable	Not Detectable	Not Detectable	
42 Nagasaki/Nagasaki	Not Detectable	Not Detectable	Not Detectable	
43 Kumamoto/Utsunomiya	Not Detectable	Not Detectable	Not Detectable	
44 Oita/Oita	Not Detectable	Not Detectable	Not Detectable	
45 Miyazaki/Miyazaki	Not Detectable	Not Detectable	Not Detectable	
46 Kagoshima/Kagoshima	Not Detectable	Not Detectable	Not Detectable	
47 Okinawa/Naha	-	-	-	Under adjustment of the equipment

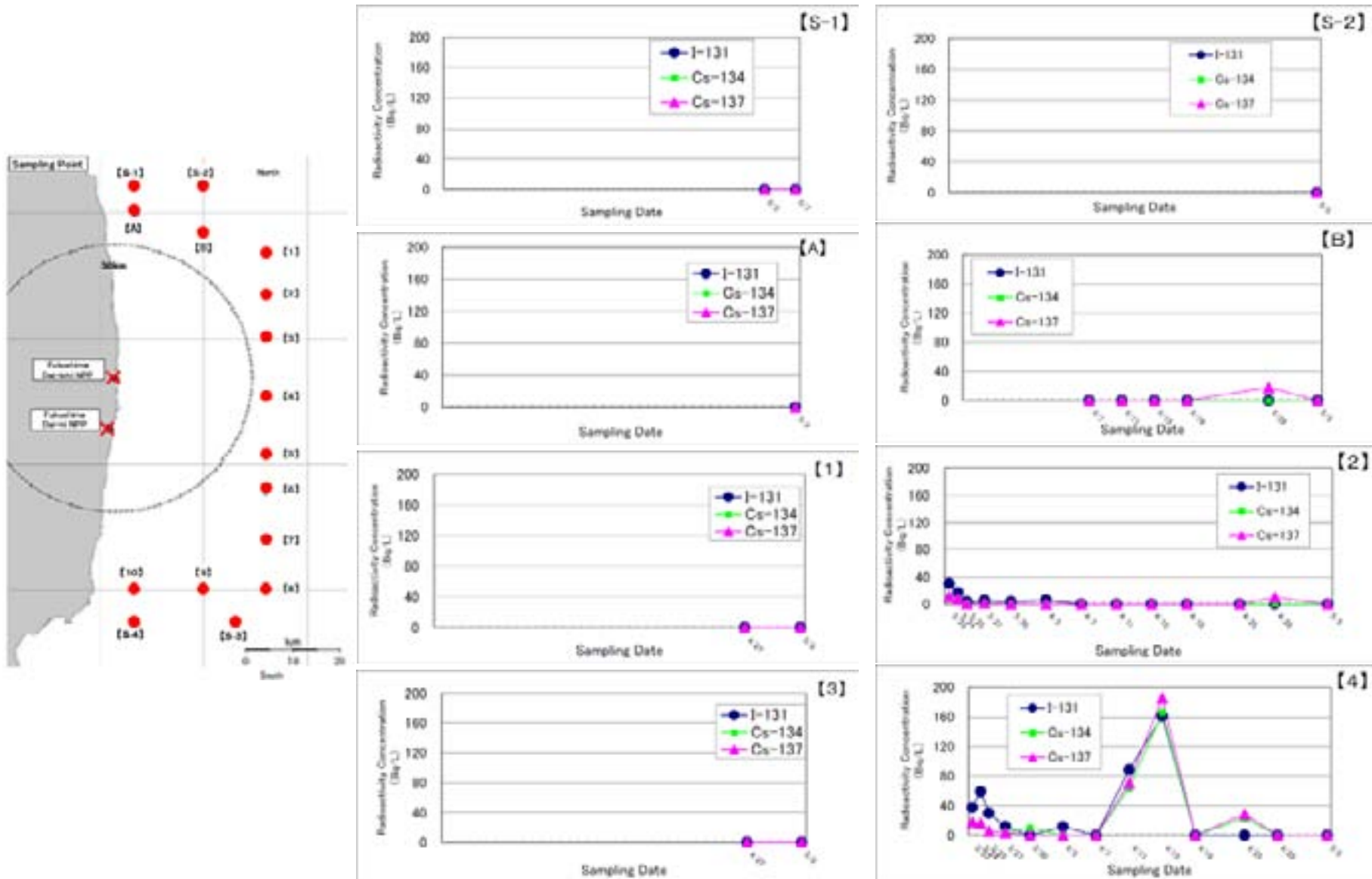
2011-5-23 13:00 (Bq/g)

Prefecture (City)	Drinking Water			Remarks
	I-131	Cs-134	Cs-137	
1 Hokkaido/Sapporo	ND	ND	ND	
2 Aomori/Aomori	ND	ND	ND	
3 Iwate/Morioka	ND	ND	ND	
4 Miyagi	-	-	-	Refer to the website of Miyagi Pref. http://www.pref.miyagi.jp/kokusai/en/accidents_fukushima_nuclear.htm
5 Akiita/Akita	ND	ND	ND	
6 Yamagata/Yamagata	ND	ND	ND	
7 Fukushima/Fukushima	-	-	-	Refer to the website of Fukushima Pref. http://www.pref.fukushima.jp/index_e.html
8 Ibaraki/Hitachinaka	ND	ND	ND	
9 Tochigi/Utsunomiya	ND	ND	ND	
10 Gunma/Maebashi	ND	ND	ND	
11 Saitama/Saitama	ND	0.13 [Under the reference]	ND	
12 Chiba/Chiba	ND	ND	ND	
13 Tokyo/Shinjuku	ND	ND	ND	
14 Kanagawa/Chiyoda	ND	ND	ND	
15 Niigata/Niigata	ND	ND	ND	
16 Toyama/Toyama	ND	ND	ND	
17 Ishikawa/Kanazawa	ND	ND	ND	
18 Fuku/Fuku	ND	ND	ND	
19 Yamaguchi/Yufu	ND	ND	ND	
20 Nagano/Nagano	ND	ND	ND	
21 Gifu/Kakamigahara	ND	ND	ND	
22 Shizuoka/Shizuoka	ND	ND	ND	
23 Aichi/Nagoya	ND	ND	ND	
24 Mie/Yokkaichi	ND	ND	ND	
25 Shiga/Otsu	ND	ND	ND	
26 Kyoto/Kyoto	ND	ND	ND	
27 Osaka/Osaka	ND	ND	ND	
28 Hyogo/Kobe	ND	ND	ND	
29 Nara/Nara	ND	ND	ND	
30 Wakayama/Wakayama	ND	ND	ND	
31 Tottori/Tottori	ND	ND	ND	
32 Shimane/Matsue	ND	ND	ND	
33 Okayama/Okayama	ND	ND	ND	
34 Hiroshima/Hiroshima	ND	ND	ND	
35 Yamaguchi/Yamaguchi	ND	ND	ND	
36 Tokushima/Tokushima	ND	ND	ND	
37 Kagawa/Takamatsu	ND	ND	ND	
38 Ehime/Yawatahama	ND	ND	ND	
39 Kochi/Kochi	ND	ND	ND	
40 Fukuoka/Fukuoka	ND	ND	ND	
41 Saga/Saga	ND	ND	ND	
42 Nagasaki/Nagasaki	ND	ND	ND	
43 Kumamoto/Utsunomiya	ND	ND	ND	
44 Oita/Oita	ND	ND	ND	
45 Miyazaki/Miyazaki	ND	ND	ND	
46 Kagoshima/Kagoshima	ND	ND	ND	
47 Okinawa/Naha	-	-	-	On setting up the equipment

ND = Not Detectable

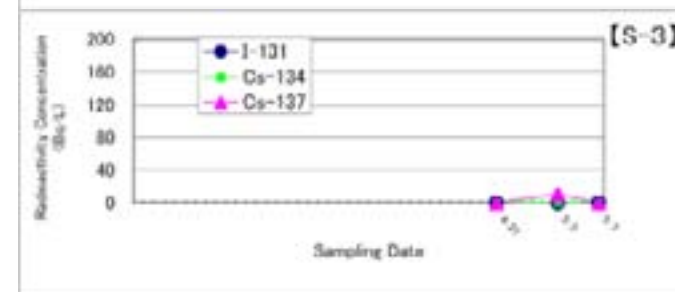
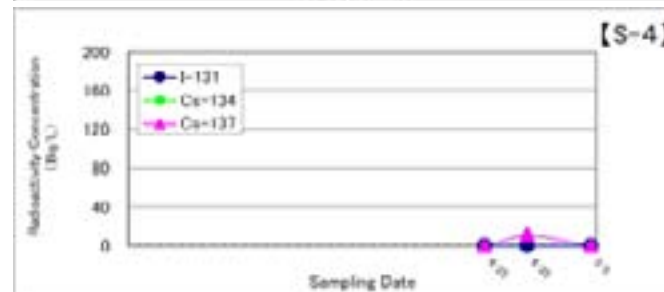
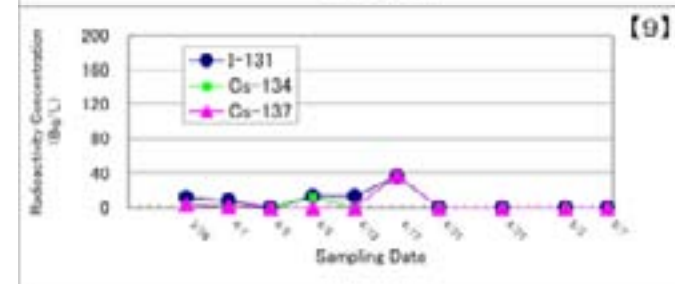
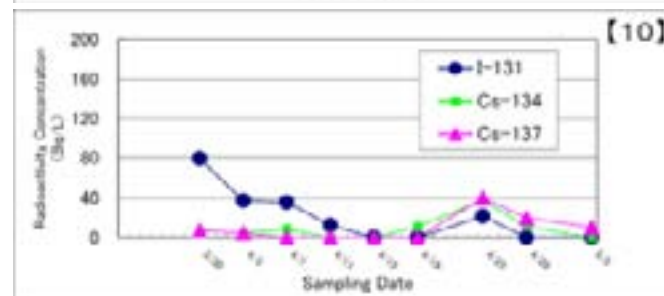
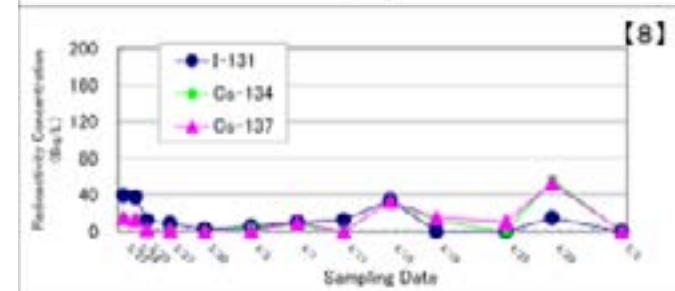
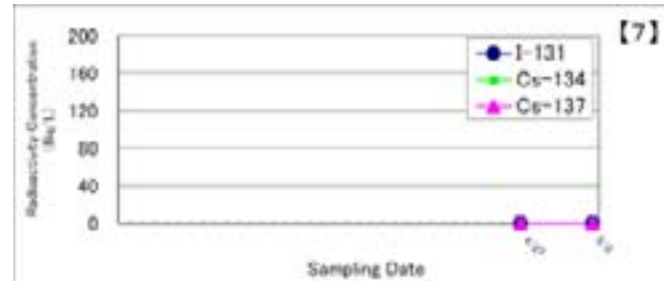
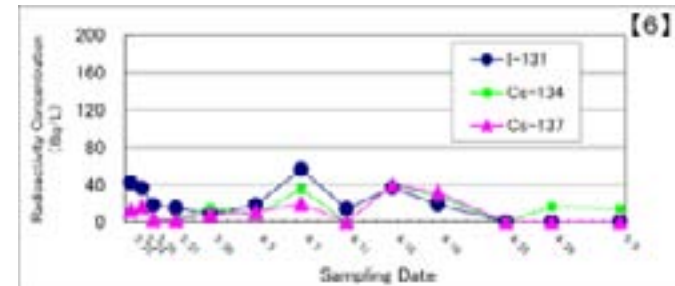
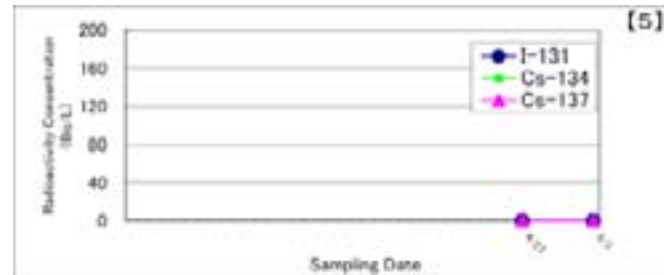
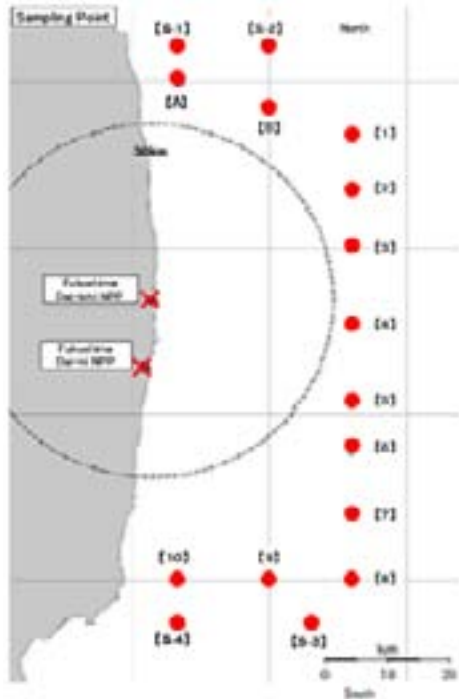
Results of radionuclide quantitative analyses

(Sea water; out of 30 km zone of Fukushima Dai-ichi NPP; 1/2)

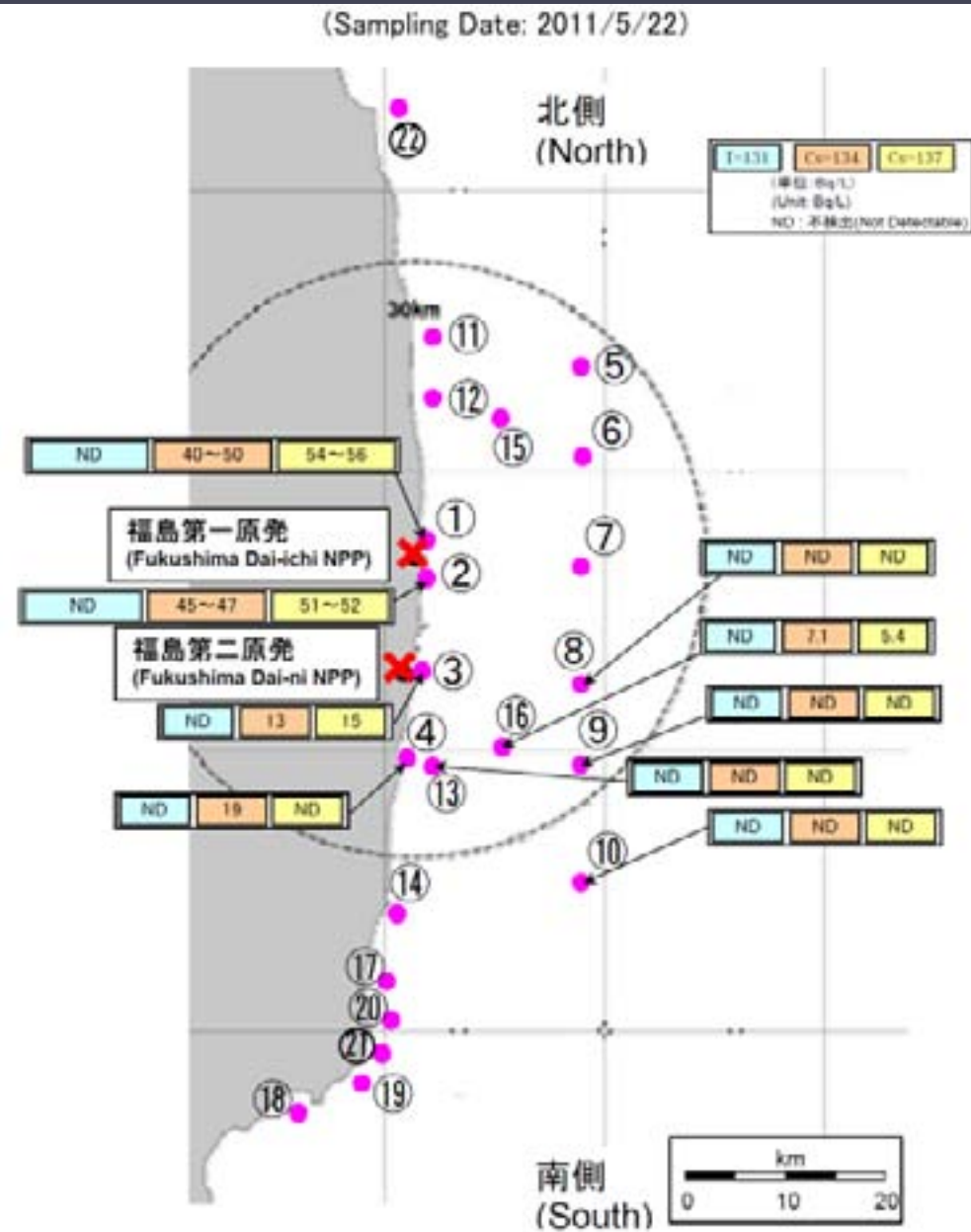


Results of radionuclide quantitative analyses

(Sea water; out of 30 km zone of Fukushima Dai-ichi NPP; 2/2)



Results of radionuclide quantitative analyses (Sea water; inside of the 30 km Zone of Fukushima Dai-ichi NPP and coast area)



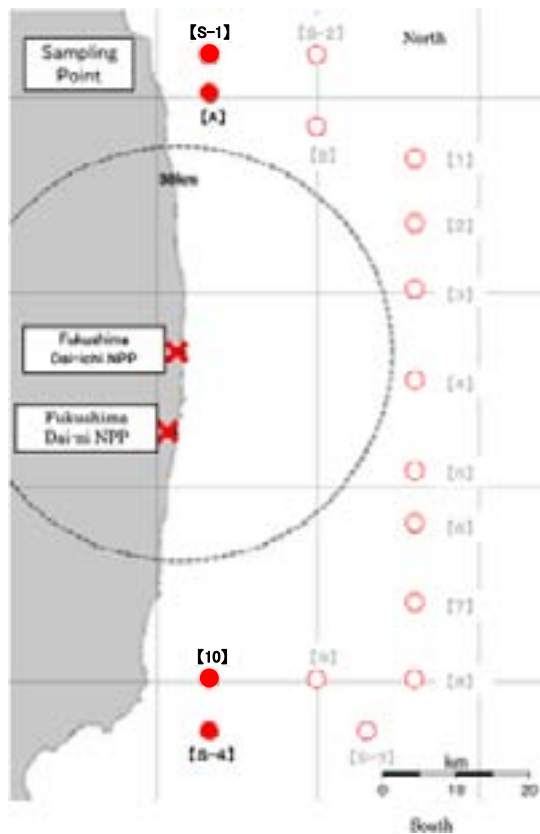
*全て上層

(All sampling depth of all data: Outer Layer)

*東京電力(株)の発表 (<http://www.tepco.co.jp/cc/press/index11-j.html>) をもとに文部科学省が作成

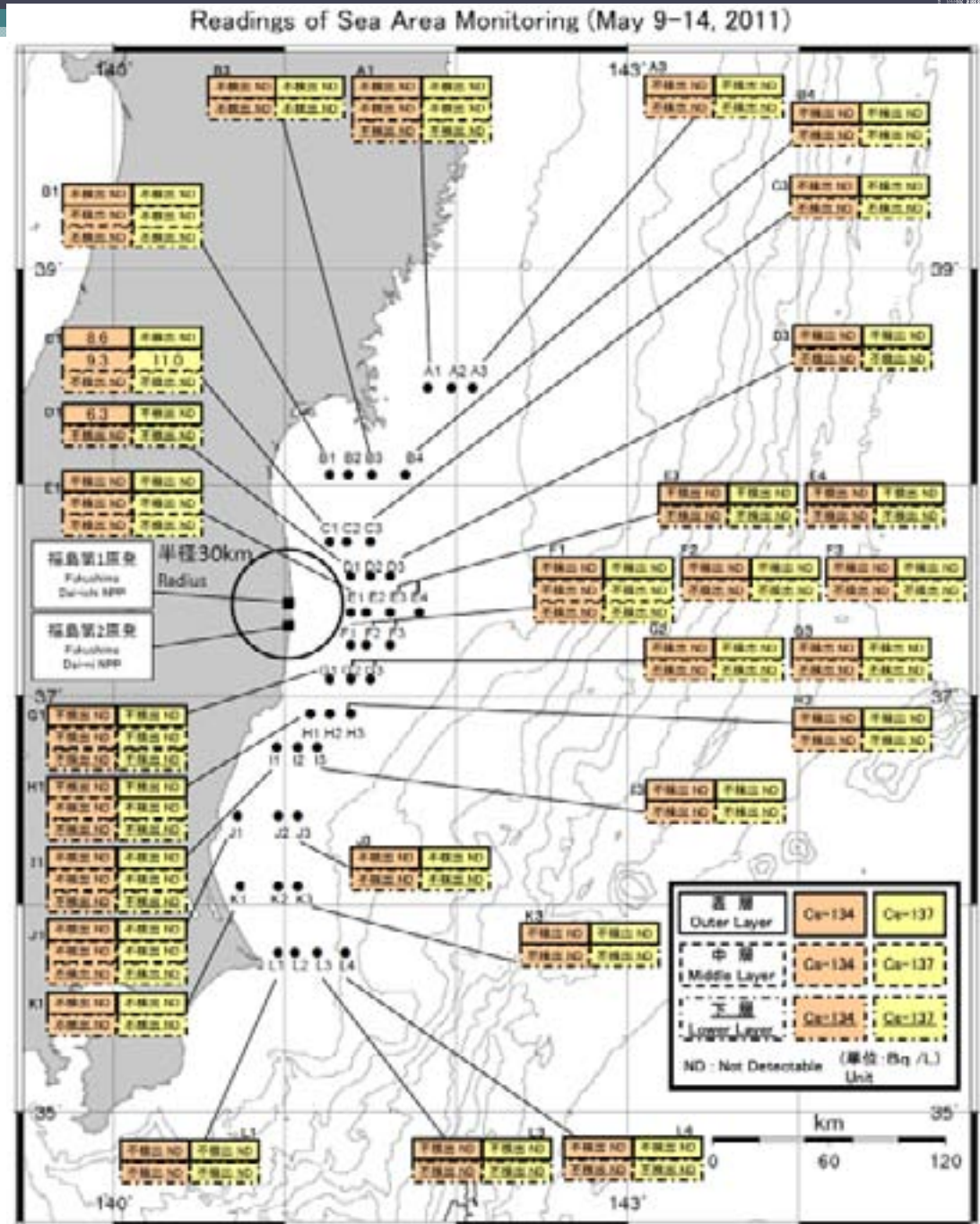
(Based on the press release of TEPCO (<http://www.tepco.co.jp/cc/press/index11-j.html>))

Results of radionuclide quantitative analyses (Sea soil; out of 30 km zone of Fukushima Dai-ichi NPP)

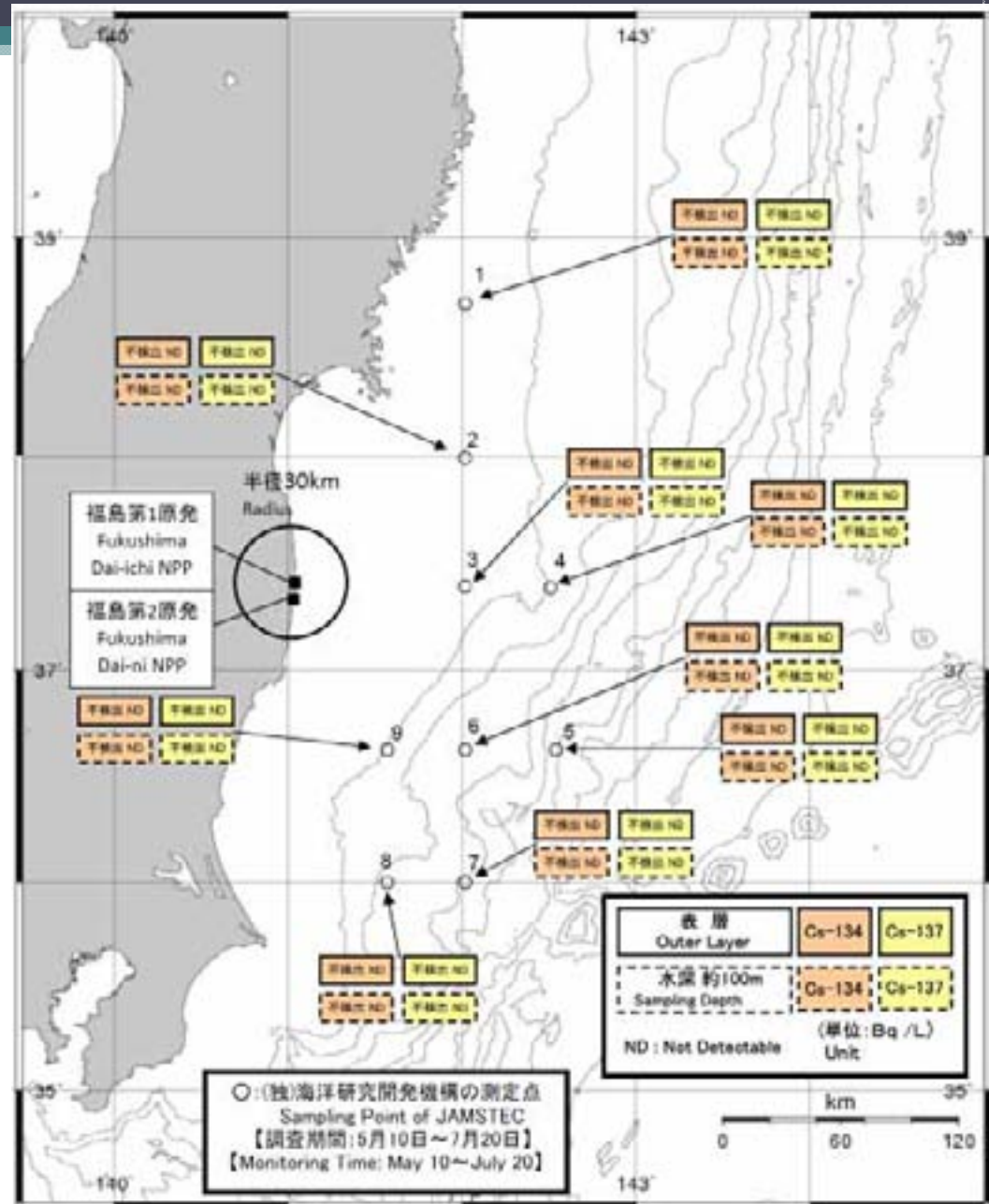


Sampling Point	Sampling Time and Date	Radioactivity Concentration (Bq/g)		
		I-131	Cs-134	Cs-137
[S-4]	2011/4/29 6:21	28.4	25.3	32.3
[A]	2011/5/3 6:55	Not detectable	80.2	93.9
[10]	2011/5/5 13:56	36	100	100
[S-1]	2011/5/7 7:12	7.1	61	65

Readings of Sea Area Monitoring at offshore of Miyagi, Fukushima and Ibaraki Prefecture (1/2)



Readings of Sea Area Monitoring at offshore of Miyagi, Fukushima and Ibaraki Prefecture (2/2)



上記測定点の海水温度及び塩分濃度については、独立行政法人 海洋研究開発機構の下記Webにて公開している。
The readings of temperatures and salinity levels of seawater at the measurement points are put on the websites of JAMSTEC below:
<http://www.godac.jamstec.go.jp/monitoringdata/>

Publication of the measurement results



Sitemap 日本語版

Welcome to the Ministry of Education, Culture, Sports, Science & Technology in Japan

Reading of environmental radioactivity level



- [Reading of environmental radioactivity level \(English version\)](#)
- [環境放射線水準調査結果 \(Reading of environmental radioactivity level, Chinese\)](#)
- [환경 방사능 수준 조사 결과 \(Reading of environmental radioactivity level, Korean\)](#)

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UPDATE

2011.03.20 [others]

[Reading of environmental radioactivity level by prefecture, Time series data \(Graph\) \(English version\)](#)

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Future Plan

(For the recovery after the accident on Fukushima-Daiich NPP)

- For the purpose of the recovery after the accident on Fukushima-Daiich NPP, the environmental radiation monitoring operation will be enhanced in order to
 - Adding the monitoring point of land and sea area monitoring
 - Strengthening of analysis of radioactive strontium concentration
 - Updating detailed map of dose rate and integrated dose
 - Making detailed contamination map of soil