

(News Release)

The Results of Radioactive Material Monitoring of the Surface Water Bodies
within Miyagi Prefecture
(2nd time)

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In accordance with the Comprehensive Radiation Monitoring Plan determined by the Monitoring Coordination Meeting, the Ministry of the Environment (MOE) is continuing to monitor radioactive materials in water environments (surface water bodies (rivers, lakes and headwaters, and coasts), etc.).

Samples taken from the surface water bodies of Miyagi Prefecture during the period of January 23-February 24 (2nd time) have been measured as part of MOE's efforts to monitor radioactive materials; the results have recently been compiled and are released here.

The monitoring results of radioactive materials in surface water bodies carried out to date can be found at the following web page: <http://www.env.go.jp/jishin/rmp.html#monitoring>

1. Survey Overview

(1) Survey Locations

53 environmental reference points, etc. in the surface water bodies within Miyagi Prefecture

(Rivers: 37 locations, Lakes and headwaters: 4 locations, Coasts: 12 locations)

(2) Survey Method

- Measurement of concentrations of radioactive materials (radioactive iodine (I-131), radioactive cesium (Cs-134 and Cs-137)) in water and sediment
- Measurement of concentrations of radioactive materials and spatial dose-rate in soil in the surrounding environment of water and sediment sample collection points (river terraces, etc.)

2. Outline of Results (* denotes the results of the previous survey)

(1) Water Quality Lower detection limit: 1Bq/L)

- Radioactive iodine (I-131): Not detectable (ND) at any location (*ND at any location)
- Radioactive cesium (Cs-134, Cs-137): Not detectable (ND) at any location (*ND at any location)

<Reference>

“Regulatory Guide: Emergency Preparedness for Nuclear Facilities (Nuclear Safety Commission)” Standards for Restrictions on the Intake of Food and Drink (Drinking Water)

Radioactive iodine (I-131): 300Bq/kg or more

Radioactive cesium (total for Cs-134 + Cs-137): 200Bq/kg or more

(2) Sediment

- Radioactive iodine (I-131) ND at any location (Lower detection limit: 30Bq/kg (dried mud))
(* ND at any location)

- Radioactive cesium

(Rivers)

Cs-134: 12-1,100Bq/kg (dried mud)

Cs-137: 24-1,600Bq/kg (dried mud)

(*Cs-134: ND-5,000Bq/kg, Cs-137: ND-6,100Bq/kg)

(Lakes and headwaters)

Cs-134: 130-1,200Bq/kg (dried mud)

Cs-137: 220-1,800Bq/kg (dried mud)

(*Cs-134: 14-1,200Bq/kg, Cs-137: 17-1,400Bq/kg)

(Coasts)

Cs-134: ND-360Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

Cs-137: ND-470Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

(*Cs-134: ND-170Bq/kg, Cs-137: ND-230Bq/kg)

(3) Surrounding Environment

- Radioactive iodine (I-131) ND at any location (Lower detection limit: 30Bq/kg (dry))

- Radioactive cesium

(Rivers)

Cs-134: 45-1,600Bq/kg (dry)

Cs-137: 61-2,200Bq/kg (dry)

(*Cs-134: ND-2,600Bq/kg, Cs-137: ND-3,300Bq/kg)

(Lakes and headwaters)

Cs-134: 100-1,600Bq/kg (dry)

Cs-137: 130-2,300Bq/kg (dry)

(*Cs-134: 36-1,100Bq/kg, Cs-137: 75-1,500Bq/kg)

- Spatial dose

(Rivers) 0.03-0.36μSv/h

(Lakes and headwaters) 0.06-0.29μSv/h

(Annex for details)

(Map attached)

Future Plans

In coordination with relevant organizations, MOE intends to continue to measure radioactive materials in water, sediment, etc. in rivers, lakes, etc. in Fukushima Prefecture, its neighboring prefectures, etc.

○River (Miyagi Prefecture): Water Quality Monitoring Results

(Annex)

No.	Sampling point			Sampling date	Weather	Air temperature ℃	Full depth m	General items						Concentration of radioactive material Bq/L			Remarks				
	Water body	Point	Municipality					Water temperature ℃	Sampling depth m	Transparency cm	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137						
1	Shishiorigawa River			Kinzanbashi Bridge	Kesenumashi City	2012/2/24	Cloudy	2.8	0.30	2.8	0.0	100 or more	14.2	2	1.2	<1	<1	<1			
2				Namiitabashi Bridge	Kesenumashi City	2012/2/23	Cloudy	2.5	3.05	5.3	0.0	26	2190.0	33	63	<1	<1	<1			
3				Tateyamaohashi Bridge	Kesenumashi City	2012/2/23	Cloudy	2.6	1.05	2.0	0.0	23	15.8	20	21	<1	<1	<1			
4	Okawa River			Kamiyamabashi Bridge	Kesenumashi City	2012/2/23	Cloudy	2.6	2.26	2.5	0.0	27	127.4	43	56	<1	<1	<1			
5				Okawa River Estuary	Kesenumashi City	2012/1/27	Cloudy	-3.5	5.40	4.5	0.0	100 or more	4030.0	1	2.8	<1	<1	<1			
6	Omosegawa River			Ozakibashi Bridge	Kesenumashi City	2012/2/23	Cloudy	2.4	1.60	2.6	0.0	30	388.0	74	100	<1	<1	<1			
7	R K i t e a r k a S m y i s g t e w m a	Arimagawa River		Unandabashi Bridge	Kuriharashi City	2012/2/24	Sunny	3.0	0.20	1.0	0.0	84	20.3	5	7.0	<1	<1	<1			
8		Kinryugawa River		Obatabashi Bridge	Kuriharashi City	2012/2/24	Cloudy	3.5	0.30	1.2	0.0	67	17.7	9	8.7	<1	<1	<1			
9		Kitakamigawa River		Tomeohashi Bridge (Tome)	Tomeshi City	2012/2/21	Cloudy	3.8	1.00	1.7	0.0	100 or more	17.1	1	2.0	<1	<1	<1			
10		Hasamagawa River		Sanhasamagawa River	Domanbashi Bridge (Kurikoma Dam)	Kuriharashi City	2012/2/24	Sunny	3.4	0.90	4.8	0.0	73	27.4	8	8.0	<1	<1	<1		
11				Nihasamagawa River		Kajiyabashi Bridge	Kuriharashi City	2012/2/24	Cloudy	4.0	0.60	2.2	0.0	100 or more	14.5	4	3.8	<1	<1	<1	
12				Hasamagawa River		Hanayama Dam, inflow area	Kuriharashi City	2012/2/24	Snow	3.2	0.65	10.5	0.0	100 or more	9.0	5	3.2	<1	<1	<1	
13				Wakayanagi		Wakayanagi	Kuriharashi City	2012/2/21	Sunny	4.0	1.00	3.7	0.0	100 or more	19.5	4	4.1	<1	<1	<1	
14				Yamayoshi		Yamayoshi	Tomeshi City	2012/2/21	Cloudy	4.2	0.40	1.8	0.0	52	20.8	8	10	<1	<1	<1	
15		Eaigawa River		Eaigawa River	Todorokibashi Bridge (Todoroki)	Osakishi City	2012/2/24	Cloudy	4.6	0.40	3.0	0.0	100 or more	18.1	3	3.2	<1	<1	<1		
16				Shimuzukomon Weir		Osakishi City	2012/2/24	Sunny	4.7	0.30	3.9	0.0	96	23.6	4	4.6	<1	<1	<1		
17				In Furukawa District, Osakishi City		Shinborisaion, entrance	Osakishi City	2012/2/24	Sunny	4.1	1.85	3.1	0.0	54	40.5	9	12	<1	<1	<1	
18				Dekigawa River		Kogotabashi Bridge	Misatomachi Town	2012/2/24	Sunny	6.4	0.60	5.1	0.0	23	27.1	48	40	<1	<1	<1	
19				Eaigawa River		Oikawabashi Bridge (Tandai)	Wakuyacho Town/Ishinomakishi City	2012/2/20	Sunny	5.8	1.00	4.2	0.0	100 or more	25.4	5	5.7	<1	<1	<1	
20		Kyukitakamigawa River		Kadonowaki	Ishinomakishi City	2012/2/20	Sunny	1.9	1.50	2.6	0.0	100 or more	892.0	3	3.2	<1	<1	<1			
21		Narusegawa River			Onobashi Bridge (Ono)	Higashimatsushima City	2012/2/20	Sunny	6.8	1.00	2.2	0.0	100 or more	17.5	4	4.4	<1	<1	<1		
22		Sunaoshigawa River			Tagajozeki Weir	Tagajoshi City	2012/2/16	Sunny	3.8	0.50	4.0	0.0	50	63.0	13	13	<1	<1	<1		
23					Nenbutsubashi Bridge	Tagajoshi City	2012/1/23	Sunny	4.4	3.25	5.2	0.0	76	4660.0	3	4.8	<1	<1	<1		
24		Teizan-unga Canal (Kyuunaoshigawa River)			Teizanbashi Bridge	Shiogamashi City/Shichigahamamachi Town/Tagajoshi City	2012/2/16	Sunny	4.0	2.20	6.4	0.0	21	4810.0	27	18	<1	<1	<1		
25		Nanakitagawa River System			Nanakitabashi Bridge	Sendaishi City	2012/2/16	Sunny	2.4	0.50	5.0	0.0	100 or more	35.3	2	4.1	<1	<1	<1		
26		Nanakitagawa River		Fukudaohashi Bridge	Sendaishi City	2012/2/16	Sunny	5.0	0.30	3.3	0.0	90	51.3	6	6.0	<1	<1	<1			
27	Umedagawa River		Fukudabashi Bridge	Sendaishi City	2012/2/16	Sunny	3.8	1.40	4.4	0.0	51	1660.0	9	11	<1	<1	<1				
28	Nanakitagawa River		Takasagobashi Bridge	Sendaishi City	2012/2/17	Snow	-2.6	2.30	2.6	0.0	67	2690.0	11	4.9	<1	<1	<1				
29	Natorigawa River System			Yuriageohashi Bridge	Sendaishi City/Natorishi City	2012/1/31	Cloudy	-0.7	0.80	1.1	0.0	100 or more	1985.0	2	2.7	<1	<1	<1			
30	Natorigawa River		Yakushibashi Bridge	Natorishi City	2012/2/17	Sunny	2.0	0.50	1.1	0.0	100 or more	22.4	<1	0.2	<1	<1	<1				
31	Masudagawa River		Koyamabashi Bridge	Natorishi City	2012/2/17	Sunny	2.0	0.80	3.0	0.0	100 or more	21.5	5	4.9	<1	<1	<1				
32			Bishamonbashi Bridge	Natorishi City	2012/2/17	Sunny	2.2	1.20	2.6	0.0	69	15.9	8	7.4	<1	<1	<1				
33	Abukumagawa River System			Shiroishigawa River	Shiroishishi City	2012/2/17	Cloudy	1.2	0.80	1.8	0.0	100 or more	12.0	6	4.9	<1	<1	<1			
34				Arakawa River		Niragambashi Bridge	Muratamachi Town/Ogawaramachi Town	2012/2/17	Cloudy	-0.4	0.50	2.4	0.0	72	24.3	7	8.8	<1	<1	<1	
35				Shiroishigawa River		Shirahatabashi Bridge	Shibatamachi Town	2012/2/17	Sunny	1.2	0.80	3.0	0.0	100 or more	18.1	2	2.8	<1	<1	<1	
36				Marumoribashi Bridge		Marumorimachi Town	2012/2/18	Sunny	-2.0	3.30	3.0	0.0	79	24.7	15	7.1	<1	<1	<1		
37	Abukumagawa River			Abukumaohashi Bridge (Iwanuma)	Iwanumashi City/Wataricho Town	2012/1/30	Sunny	1.5	0.40	2.0	0.0	100 or more	64.8	5	3.8	<1	<1	<1			

* Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

○River (Miyagi Prefecture): Sediment Monitoring Results

Sampling point				Sampling date	Weather	Air temperature ℃	Full depth m	General items			Concentration of radioactive material Bq/kg (dried mud)			Remarks		
No.	Water body	Point	Municipality					Mud temperature ℃	Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137			
1	Shishiorigawa River	Kinzanbashi Bridge	Kesennumashi City	2012/2/24	Cloudy	2.8	0.30	2.8	3	88.2	Gravel with sand	<30	91	120		
2		Namitabashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.5	3.05	5.5	5	47.3	Silt with sand	<30	330	480		
3	Okawa River	Tateyamaohashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.6	1.05	2.2	5	80.1	Sand with gravel	<30	46	69		
4		Kamiyamabashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.6	2.26	2.8	5	47.9	Silt with sand	<30	390	600		
5		Okawa River Estuary	Kesennumashi City	2012/1/27	Cloudy	-3.5	5.40	6.8	5	43.3	Gravel/silt with sand	<30	730	930		
6	Omosegawa River	Ozakibashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.4	1.60	5.0	3	42.5	Sand with silt	<30	1,000	1,500		
7	R K i t a S m y i s t a e w m a	Arimagawa River	Unandabashi Bridge	Kuriharashi City	2012/2/24	Sunny	3.0	0.20	1.2	3	89.1	Gravel with sand	<30	340	460	
8		Kinryugawa River	Obatabashi Bridge	Kuriharashi City	2012/2/24	Cloudy	3.5	0.30	1.2	3	82.6	Sand with gravel	<30	220	310	
9		Kitakamigawa River	Tomeohashi Bridge (Tome)	Tomeshi City	2012/2/21	Cloudy	3.8	1.00	2.0	10	40.8	Silt with sand	<30	35	63	
10		Hasamagawa River	Sanhasamagawa River	Domanbashi Bridge (Kurikoma Dam)	Kuriharashi City	2012/2/24	Sunny	3.4	0.90	4.0	3	72.7	Sand with gravel	<30	62	75
11			Nihasamagawa River	Kajiyabashi Bridge	Kuriharashi City	2012/2/24	Cloudy	4.0	0.60	2.0	3	77.8	Sand with gravel	<30	210	280
12			Hasamagawa River	Hanayama Dam, inflow area	Kuriharashi City	2012/2/24	Snow	3.2	0.65	10.0	3	81.2	Sand with gravel	<30	23	37
13			Wakayanagi	Kuriharashi River	Kuriharashi City	2012/2/21	Sunny	4.0	1.00	3.7	10	73.3	Sand	<30	260	410
14			Yamayoshi Bridge	Tomeshi City	2012/2/21	Cloudy	4.2	0.40	1.8	10	43.6	Silt	<30	590	750	
15		Eaigawa River	Eaigawa River	Todorokibashi Bridge (Todoroki)	Osakishi City	2012/2/24	Cloudy	4.6	0.40	4.2	5	64.1	Sand with gravel	<30	28	49
16			Shimuzukomon Weir	Osakishi City	2012/2/24	Sunny	4.7	0.30	4.8	5	73.7	Sand	<30	130	200	
17			In Furukawa District, Osakishi City	Shinborisaihon, entrance	Osakishi City	2012/2/24	Sunny	4.1	1.85	3.6	10	49.5	Sand with silt	<30	1,100	1,600
18			Dekigawa River	Kogotabashi Bridge	Misatomachi Town	2012/2/24	Sunny	6.4	0.60	4.7	10	51.0	Sand	<30	250	340
19			Eaigawa River	Oikawabashi Bridge (Tandai)	Wakuyacho Town/Ishinomakishi City	2012/2/20	Sunny	5.8	1.00	4.2	10	78.4	Sand with gravel	<30	72	100
20		Kyukitakamigawa River	Kadonowaki	Ishinomakishi City	2012/2/20	Sunny	1.9	1.50	2.6	10	74.0	Sand with silt	<30	76	99	
21		Narusegawa River	Onobashi Bridge (Ono)	Higashimatsushimashi City	2012/2/20	Sunny	6.8	1.00	2.8	10	77.4	Sand with silt	<30	31	43	
22		Sunaoshigawa River	Tagajozeki Weir	Tagajoshi City	2012/2/16	Sunny	3.8	0.50	5.4	5	68.7	Sand	<30	19	43	
23			Nenbutsubashi Bridge	Tagajoshi City	2012/1/23	Sunny	4.4	3.25	6.2	5	73.7	Sand with silt	<30	51	78	
24			Teizanbashi Bridge	Shiogamashi City/Shichigahamamachi Town/Tagajoshi City	2012/2/16	Sunny	4.0	2.20	7.2	5	73.3	Sand with silt	<30	36	59	
25		Nanakitagawa River System	Nanakitagawa River	Nanakitagawa River	Sendaishi City	2012/2/16	Sunny	2.4	0.50	4.0	5	77.4	Sand with gravel	<30	60	97
26	Fukudaohashi Bridge		Sendaishi City	2012/2/16	Sunny	5.0	0.30	2.8	5	76.6	Sand	<30	26	34		
27	Umedagawa River		Fukudabashi Bridge	Sendaishi City	2012/2/16	Sunny	3.8	1.40	4.0	5	68.1	Sand with silt	<30	120	180	
28	Takasagobashi Bridge		Sendaishi City	2012/2/17	Snow	-2.6	2.30	2.0	5	74.3	Sand with silt	<30	90	130		
29	Natorigawa River System	Natorigawa River	Yuriageohashi Bridge	Sendaishi City/Natorishi City	2012/1/31	Cloudy	-0.7	0.80	3.4	5	78.0	Sand with silt	<30	40	68	
30		Yakushibashi Bridge	Natorishi City	2012/2/17	Sunny	2.0	0.50	2.2	3	63.3	Sand with gravel	<30	19	28		
31		Masudagawa River	Koyamabashi Bridge	Natorishi City	2012/2/17	Sunny	2.0	0.80	2.2	5	73.7	Sand with silt	<30	46	70	
32		Bishamonbashi Bridge	Natorishi City	2012/2/17	Sunny	2.2	1.20	2.2	5	58.7	Sand with silt	<30	600	790		
33	Abukumagawa River System	Shiroishigawa River	Shiroishigawa River	Shiroishishi City	2012/2/17	Cloudy	1.2	0.80	1.8	10	76.3	Sand	<30	81	110	
34		Arakawa River	Niragamibashi Bridge	Muratamachi Town/Ogawaramachi Town	2012/2/17	Cloudy	-0.4	0.50	2.2	3	82.2	Sand with gravel	<30	12	24	
35		Shiroishigawa River	Shirahatabashi Bridge	Shibatamachi Town	2012/2/17	Sunny	1.2	0.80	2.8	5	75.1	Sand	<30	24	37	
36		Marumoribashi Bridge	Marumorimachi Town	2012/2/18	Sunny	-2.0	3.30	2.9	5	70.6	Sand	<30	630	840		
37	Abukumagawa River	Abukumaohashi Bridge (Iwanuma)	Iwanumashi City/Wataricho Town	2012/1/30	Sunny	1.5	0.40	3.0	5	73.1	Sand with silt	<30	310	450		

* Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

○River (Miyagi Prefecture): Surrounding Environment (River Terrace) Monitoring Results

Sampling point				Sampling date	Weather	Air temperature °C	Left bank				Right bank				Remarks			
							Soil			Air dose μSv/h	Soil			Air dose μSv/h				
							Property	Concentration of radioactive material Bq/kg (dry)			Property	Concentration of radioactive material Bq/kg (dry)						
No.	Water body	Point	Municipality	Radioactive iodine I-131	Radioactive cesium Cs-134	Radioactive cesium Cs-137		Radioactive iodine I-131	Radioactive cesium Cs-134	Radioactive cesium Cs-137								
1	Shishiorigawa River	Kinzanbashi Bridge	Kesennumashi City	2012/2/24	Cloudy	2.8	-	-	-	0.06	-	-	-	-	(Samples not collected due to snow on the ground)			
2		Namiitabashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.5	-	-	-	0.03	-	-	-	0.03	(Soil not exposed)			
3		Tateyamaohashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.6	Loamy	<30	250	370	0.07	Loamy	<30	220	350	0.07		
4	Okawa River	Kamiyamabashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.6	Sandy	<30	640	930	0.06	Sandy	<30	900	1,200	0.05		
5		Okawa River Estuary	Kesennumashi City	2012/1/27	Cloudy	-3.5	-	-	-	-	0.08	-	-	-	-	0.07		
6	Omosegawa River	Ozakibashi Bridge	Kesennumashi City	2012/2/23	Cloudy	2.4	-	-	-	0.03	-	-	-	-	0.03	(Soil not exposed)		
7	R K i i t e a r k a S m y i s g t a e w m a	Arimagawa River	Unandabashi Bridge	Kuriharashi City	2012/2/24	Sunny	3.0	Sandy	<30	1,300	1,700	0.13	Sandy	<30	970	1,300	0.10	
8		Kinryugawa River	Obatabashi Bridge	Kuriharashi City	2012/2/24	Cloudy	3.5	Sandy	<30	140	240	0.15	Sandy	<30	390	570	0.13	
9		Kitakamigawa River	Tomeohashi Bridge (Tome)	Tomeshi City	2012/2/21	Cloudy	3.8	Loamy	<30	460	640	0.11	Loamy	<30	190	280	0.08	
10		Hasamagawa River	Sanhasamagawa River	Domanbashi Bridge (Kurikoma Dam)	Kuriharashi City	2012/2/24	Sunny	3.4	-	-	-	-	-	-	-	-	-	(Samples not collected due to snow on the ground)
11			Nihasamagawa River	Kajiyabashi Bridge	Kuriharashi City	2012/2/24	Cloudy	4.0	-	-	-	-	-	-	-	-	-	(Samples not collected due to snow on the ground)
12			Hanayama Dam, inflow area	Kuriharashi City	2012/2/24	Snow	3.2	-	-	-	-	-	-	-	-	-	-	(Samples not collected due to snow on the ground)
13			Hasamagawa River	Wakayanagi	Kuriharashi City	2012/2/21	Sunny	4.0	Loamy	<30	340	450	0.10	Loamy	<30	370	540	0.18
14			Yamayoshidabashi Bridge	Tomeshi City	2012/2/21	Cloudy	4.2	Loamy	<30	110	160	0.07	Loamy	<30	250	360	0.09	
15		Eaigawa River	Eaigawa River	Todorokibashi Bridge (Todoroki)	Osakishi City	2012/2/24	Cloudy	4.6	-	-	-	-	Loamy	<30	380	490	0.05	(Samples not collected on the left bank due to snow on the ground)
16	Shimizukomon Weir		Osakishi City	2012/2/24	Sunny	4.7	Loamy	<30	1,000	1,400	0.08	Loamy	<30	130	230	0.10		
17	In Furukawa District, Osakishi City		Shinborisaihon, entrance	Osakishi City	2012/2/24	Sunny	4.1	Loamy	<30	340	490	0.07	Loamy	<30	170	250	0.07	
18	Dekigawa River		Kogotabashi Bridge	Misatomachi Town	2012/2/24	Sunny	6.4	Loamy	<30	310	400	0.09	Loamy	<30	100	160	0.08	
19	Eaigawa River		Oikawabashi Bridge (Tandai)	Wakuyacho Town/Ishinomakishi City	2012/2/20	Sunny	5.8	Loamy	<30	73	93	0.07	Loamy	<30	140	180	0.08	
20	Kyukitakamigawa River	Kadonowaki	Ishinomakishi City	2012/2/20	Sunny	1.9	Loamy	<30	67	93	0.07	Loamy	<30	91	100	0.08		
21	Narusegawa River	Onobashi Bridge (Ono)	Higashimatsushimashi City	2012/2/20	Sunny	6.8	Loamy	<30	190	280	0.09	Loamy	<30	51	75	0.10		
22	Sunaoshigawa River	Tagajozeki Weir	Tagajoshi City	2012/2/16	Sunny	3.8	Loamy	<30	45	61	0.07	Loamy	<30	71	99	0.08		
23		Nonbutsubashi Bridge	Tagajoshi City	2012/1/23	Sunny	4.4	Loamy	<30	230	290	0.07	Loamy	<30	170	230	0.08		
24	Teizan-unga Canal (Kiyusunaoshigawa River)	Teizanbashi Bridge	Shiogamashi City/Shichigahamamachi Town/Tagajoshi City	2012/2/16	Sunny	4.0	Loamy	<30	70	100	0.08	Loamy	<30	150	240	0.09		
25	Nanakitagawa River System	Nanakitagawa River	Nanakitabashi Bridge	Sendaishi City	2012/2/16	Sunny	2.4	Loamy	<30	340	490	0.08	Loamy	<30	190	290	0.08	
26		Fukudaohashi Bridge	Sendaishi City	2012/2/16	Sunny	5.0	Loamy	<30	91	110	0.09	Loamy	<30	210	300	0.09		
27		Umedagawa River	Fukudabashi Bridge	Sendaishi City	2012/2/16	Sunny	3.8	Loamy	<30	72	130	0.09	Loamy	<30	110	160	0.10	
28		Nanakitagawa River	Takasagobashi Bridge	Sendaishi City	2012/2/17	Snow	-2.6	Loamy	<30	270	380	0.09	Loamy	<30	250	350	0.07	
29	Natorigawa River System	Natorigawa River	Yuriageohashi Bridge	Sendaishi City/Natorishi City	2012/1/31	Cloudy	-0.7	Loamy	<30	53	77	0.11	Loamy	<30	290	350	0.11	
30		Yakushibashi Bridge	Natorishi City	2012/2/17	Sunny	2.0	Loamy	<30	450	630	0.13	Loamy	<30	480	720	0.11		
31		Koyamabashi Bridge	Natorishi City	2012/2/17	Sunny	2.0	Loamy	<30	500	690	0.12	Loamy	<30	290	410	0.13		
32		Bishamonbashi Bridge	Natorishi City	2012/2/17	Sunny	2.2	Loamy	<30	240	320	0.10	Loamy	<30	380	540	0.10		
33	Abukumagawa River System	Shiroishigawa River	Before the confluence with Kawagawana River (Nanashibashi Bridge)	Shiroishishi City	2012/2/17	Cloudy	1.2	-	-	-	-	-	-	-	-	(Samples not collected due to snow on the ground)		
34		Arakawa River	Niragamibashi Bridge	Muratamachi Town/Ogawaramachi Town	2012/2/17	Cloudy	-0.4	Loamy	<30	460	670	0.18	Loamy	<30	760	1,100	0.17	
35		Shiroishigawa River	Shirahatabashi Bridge	Shibatamachi Town	2012/2/17	Sunny	1.2	Loamy	<30	160	180	0.15	Loamy	<30	200	280	0.18	
36		Marumoribashi Bridge	Marumomachi Town	2012/2/18	Sunny	-2.0	Loamy	<30	610	830	0.29	Loamy	<30	240	320	0.22		
37	Abukumagawa River	Abukumaohashi Bridge (Iwanuma)	Iwanumashi City/Wataricho Town	2012/1/30	Sunny	1.5	Loamy	<30	1,600	2,200	0.36	Loamy	<30	580	820	0.25		

* Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd.

* Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

○Lake and Headwater (Miyagi Prefecture): Water Quality Monitoring Results

Sampling point			Sampling date	Weather	Air temperature °C	Full depth m	General items						Concentration of radioactive material Bq/L			Remarks	
No.	Water body						Point	Water temperature °C	Sampling depth m	Secchi disk depth m	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium		
			Cs-134		Cs-137												
1	Kitakamigawa River	Izunuma Lake	Lake exit	2012/2/21	Sunny	2.0	0.8	1.0	0.0	0.25	23.1	80	100	<1	<1	<1	(Samples collected only from the surface layer due to low water level)
2	System	Naganuma Lake	Lake exit	2012/2/21	Sunny	3.8	2.3	3.8	0.0	2.3 or more	17.9	2	3.8	<1	<1	<1	(Samples collected near the previous point due to freezing)
3	Amanuma Lake		Lake exit	2012/2/17	Sunny	0.8	0.8	2.2	0.0	0.8 or more	53.1	6	4.0	<1	<1	<1	
4	Bagyunuma Lake		Lake exit	2012/2/18	Sunny	-3.2	-	-	-	-	-	-	-	-	-	-	(Samples not collected due to freezing)

*Sampling points are listed from north to south.

○Lakes and Headwater (Miyagi Prefecture): Sediment and Surrounding Environment (Lake Shore) Monitoring Results

Sampling point			Sampling date	Weather	Air temperature °C	Full depth m	Sediment						Surrounding environment (lake shore)					Remarks		
No.	Water body						Point	General items				Concentration of radioactive material Bq/kg (dried mud)		Property	Soil				Air dose μSv/h	
			Mud temperature °C	Mud sampling depth cm	Mud content %	Property		Radioactive iodine I-131	Radioactive cesium		Radioactive iodine I-131	Concentration of radioactive material Bq/kg (dry)								
		I-131					Cs-134		Cs-137	Property		I-131	Cs-134	Cs-137	μSv/h					
1	Kitakamigawa River		Izunuma Lake	Lake exit	2012/2/21	Sunny		2.0			0.8					2.3	10	22.4	Silt	<30
2	System	Naganuma Lake	Lake exit	2012/2/21	Sunny	3.8	2.3	4.6	10	17.4	Silt	<30	130	220	Loamy	<30	100	130	0.06	(Samples collected near the previous point due to freezing)
3	Amanuma Lake		Lake exit	2012/2/17	Sunny	0.8	0.8	3.0	3	77.8	Sand with gravel	<30	1,200	1,800	Loamy	<30	130	170	0.10	
4	Bagyunuma Lake		Lake exit	2012/2/18	Sunny	-3.2	-	-	-	-	-	-	-	-	Loamy	<30	1,600	2,300	0.29	(Sediment not collected due to freezing)

*Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd.

*Sampling points are listed from north to south.

○Coast (Miyagi Prefecture): Water Quality Monitoring Results

Sampling point			Sampling date	Weather	Air temperature °C	Full depth m	General items						Concentration of radioactive material Bq/L			Remarks
No.	Water body	Point					Water temperature °C	Sampling depth m	Secchi disk depth m	Salinity	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium		
														Cs-134	Cs-137	
1	Kesenumawan Bay (B)	Offshore of Hachigasaki	2012/1/27	Snow	-1.0	7.0	6.9	0.5	5.0	33.5	1	1.2	<1	<1	<1	
		1 m from the bottom	-	-	-	-	7.0	6.0	-	33.6	1	1.2	<1	<1	<1	
2	Kesenumawan Bay (C)	Offshore of Oshimakita	2012/1/27	Cloudy	-1.0	38.1	7.0	0.5	6.0	33.2	1	1.5	<1	<1	<1	
		1 m from the bottom	-	-	-	-	7.7	37.1	-	33.7	<1	0.8	<1	<1	<1	
3	Kesenumawan Bay (C)	K-2 (Futatsune)	2012/1/27	Cloudy	-1.4	9.0	6.4	0.5	5.9	33.5	1	1.4	<1	<1	<1	
		1 m from the bottom	-	-	-	-	6.2	8.0	-	33.5	1	1.6	<1	<1	<1	
4	All other neighboring sea areas	Oppawan Bay (Jyusanhama Beach)	2012/2/23	Snow	4.8	17.8	5.7	0.5	4.0	31.6	2	2.4	<1	<1	<1	
		1 m from the bottom	-	-	-	-	6.5	16.8	-	33.4	4	5.1	<1	<1	<1	
5	Neighboring sea area of Ishinomaki (C)	Mangokuura Lake, M-6 (center)	2012/2/23	Cloudy	4.8	3.9	4.5	0.5	3.9 or more	32.8	1	1.5	<1	<1	<1	
		1 m from the bottom	-	-	-	-	4.4	2.9	-	32.7	1	1.5	<1	<1	<1	
6	Neighboring sea area of Ishinomaki (B-3)	Offshore of Kitakumagawa River Estuary	2012/2/23	Cloudy	4.7	8.9	4.7	0.5	3.8	21.6	3	3.8	<1	<1	<1	
		1 m from the bottom	-	-	-	-	5.5	7.9	-	32.8	2	2.0	<1	<1	<1	
7	Neighboring sea area of Ishinomaki (C)	Offshore of Naruse	2012/2/23	Cloudy	4.8	15.8	5.2	0.5	4.4	32.2	2	2.3	<1	<1	<1	(Samples were collected near the previous point as there were culture rafts at the sampling point.)
		1 m from the bottom	-	-	-	-	5.3	14.8	-	33.4	4	4.2	<1	<1	<1	
8	Matsushimawan Bay (B)	Nishihama Beach	2012/2/23	Cloudy	4.6	14.1	3.6	0.5	1.7	33.0	11	9.3	<1	<1	<1	
		1 m from the bottom	-	-	-	-	3.5	13.1	-	32.9	11	9.5	<1	<1	<1	
9	Neighboring sea area of Sendai Port (A)	Naiko Inner Port, 4-Nai	2012/1/24	Sunny	3.2	18.9	6.1	0.5	1.6	32.6	5	6.4	<1	<1	<1	
		1 m from the bottom	-	-	-	-	6.6	17.9	-	33.0	9	17	<1	<1	<1	
10	Neighboring sea area of Sendai Port (B)	Gamo-3	2012/1/24	Sunny	2.5	16.7	6.1	0.5	1.2	32.6	6	8.6	<1	<1	<1	
		1 m from the bottom	-	-	-	-	6.7	15.7	-	33.2	23	26	<1	<1	<1	
11	All other neighboring sea areas	Ido-5	2012/1/24	Sunny	2.5	5.3	5.6	0.5	1.7	31.5	7	7.2	<1	<1	<1	
		1 m from the bottom	-	-	-	-	5.6	4.3	-	32.7	7	6.5	<1	<1	<1	
12	Offshore of Abukumagawa River Estuary		2012/1/24	Sunny	2.2	10.0	6.0	0.5	1.2	31.4	10	12.0	<1	<1	<1	
		1 m from the bottom	-	-	-	-	6.7	9.0	-	33.3	49	31.0	<1	<1	<1	

*Sampling points are listed from north to south.

○Coast (Miyagi Prefecture): Sediment Monitoring Results

Sampling point			Sampling date	Weather	Air temperature °C	Full depth m	Sediment							Remarks
Water body	Point	Mud temperature °C					Mud sampling depth cm	Mud content %	Property	Concentration of radioactive material Bq/kg (dried mud)				
										Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137			
1	Kesenumawan Bay (B)	Offshore of Hachigasaki	2012/1/27	Snow	-1.0	7.0	5.9	3	79.7	Sand with gravel	<30	<10	<10	
2	Kesenumawan Bay (C)	Offshore of Oshimakita	2012/1/27	Cloudy	-1.0	38.1	7.4	5	36.0	Silt	<30	61	97	
3	Kesenumawan Bay (C)	K-2 (Futatsune)	2012/1/27	Cloudy	-1.4	9.0	6.2	5	64.0	Sand with silt	<30	14	31	
4	All other neighboring sea areas	Oppawan Bay (Jyusanhama Beach)	2012/2/23	Snow	4.8	17.8	5.2	10	46.7	Silt	<30	170	220	
5	Neighboring sea area of Ishinomaki (C)	Mangokuura Lake, M-6 (center)	2012/2/23	Cloudy	4.8	3.9	4.6	10	45.7	Silt with sand	<30	29	46	
6	Neighboring sea area of Ishinomaki (B-3)	Offshore of Kitakumagawa River Estuary	2012/2/23	Cloudy	4.7	8.9	5.1	5	73.4	Sand	<30	10	15	
7	Neighboring sea area of Ishinomaki (C)	Offshore of Naruse	2012/2/23	Cloudy	4.8	15.8	5.4	5	59.5	Sand with silt	<30	95	110	(Samples were collected near the previous point as there were culture rafts at the sampling point.)
8	Matsushimawan Bay (B)	Nishihama Beach	2012/2/23	Cloudy	4.6	14.1	3.8	10	31.1	Silt	<30	360	470	
9	Neighboring sea area of Sendai Port (A)	Naiko Inner Port, 4-Nai	2012/1/24	Sunny	3.2	18.9	7.7	10	31.6	Silt with sand	<30	93	120	
10	Neighboring sea area of Sendai Port (B)	Gamo-3	2012/1/24	Sunny	2.5	16.7	7.0	5	60.3	Sand with silt	<30	220	320	
11	All other neighboring sea areas	Ido-5	2012/1/24	Sunny	2.5	5.3	5.4	3	83.4	Sand	<30	10	18	
12	Offshore of Abukumagawa River Estuary		2012/1/24	Sunny	2.2	10.0	6.6	3	78.0	Sand	<30	100	130	

*Sampling points are listed from north to south.

