

(News Release)
The Results of Radioactive Material Monitoring of the Surface Water Bodies
within Iwate Prefecture
(May-June Samples)

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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 Iwate Prefecture during the period of May 20-June 4, 2013 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

22 environmental reference points, etc. in the surface water bodies within Iwate Prefecture
(Rivers: 22 locations)

Note: Starting with this survey, there are four new locations (rivers) surveyed.

(2) Survey Method

- Measurement of concentrations of radioactive materials (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 (*February-March 2013))

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

Cs-134 + Cs-137: Not detectable (ND) at any location (* ND at any location)

<Reference>

Specification and Standards for Food, Food Additives, etc. in accordance with the Food Sanitation Act (Drinking Water) (Ministry of Health, Labour and Welfare Public Notice No.130, March 15, 2012)
Radioactive cesium (total for Cs-134+Cs-137): 10Bq/kg

Target value for radioactive materials in tap water (management target for water supply facilities) (March 5, 2012; 0305 Notice No.1 from the Director of the Water Supply Division, Health Service Bureau, Ministry of Health, Labour and Welfare)

Radioactive cesium (total for Cs-134+Cs-137): 10Bq/kg

(2) Sediment (Lower detection limit: 10Bq/kg (dried mud))

Overall, the levels were around 500Bq/kg or below at all locations, and have declined or generally remained constant.

(Rivers)

Cs-134 + Cs-137: ND-340Bq/kg (dried mud) (*19-530Bq/kg (dried mud))

<Reference> Number of locations by radioactive cesium concentration (500Bq/kg)
Numbers in () denote results measured on the previous occasion.

	500 or below	501 -1,000	1,001 -1,500	1,501 -2,000	2,001 -2,500	2,501 -3,000	3,001 or more	Total
Rivers	22 (13)	0 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	22 (14)

(3) Surrounding Environment (Lower detection limit: 10Bq/kg (dry))

(Rivers)

Cs-134 + Cs-137: 88-4,100Bq/kg (dry) (*219-1,980Bq/kg (dry))

Spatial dose: 0.04-0.21µSv/h

(Annex for details)
(Map attached)

Future Plans

MOE intends to continue to measure radioactive materials in water and sediment in rivers, lakes, etc. since concentrations of radioactive materials seem to show fluctuations, depending on locations, due to minor differences in sampling points or properties of samples of each survey.

○River: Water Quality Monitoring Results

Sampling point				Sampling date	Weather	Full depth (m)	General items					Radioactive material concentrations (Bq/L)		Remarks	
No.	Water body	Point	Municipality				Sampling depth (m)	Transparency (cm)	Electrical conductivity (mS/m)	SS (mg/L)	Turbidity	Radioactive cesium			
												Cs-134	Cs-137		
1	Sakarigawa River Lower Reaches	Sanobashi Bridge	Ofunatoshi City	2013/5/21	Sunny	0.60	0.0	>100	480	<1	1.5	<1	<1		
2	Kesengawa River	Anehabashi Bridge	Rikuzentakadashi City	2013/5/21	Sunny	0.50	0.0	>100	1,640	2	1.0	<1	<1		
3	Okawa River	Miyagi Prefecture Border	Ichinosekishi City	2013/5/20	Cloudy	0.30	0.0	53	13	10	7.8	<1	<1		
4	Tsuyagawa River	Chiyogaharabashi Bridge	Ichinosekishi City	2013/5/22	Sunny	0.40	0.0	>100	18	2	1.3	<1	<1		
5	K i t a k a S m y i g a w a R i v e r	Kurosawagawa River	Kawaradabashi Bridge	Kanegasakimachi Town	2013/5/31	Sunny	0.40	0.0	>100	11	3	1.8	<1	<1	
6		Isawagawa River	Oagobashi Bridge	Oshushi City	2013/5/31	Sunny	0.60	0.0	>100	6	3	4.1	<1	<1	New sampling point
7			Saijinbashi Bridge		2013/5/31	Sunny	0.60	0.0	>100	6	4	3.5	<1	<1	New sampling point
8		Kitakamigawa River	Fujibashi Bridge		2013/6/4	Sunny	0.60	0.0	>100	11	3	2.9	<1	<1	
9		Shiratorigawa River	Shiratoribashi Bridge		2013/6/3	Sunny	0.50	0.0	52	10	7	6.0	<1	<1	
10		Koromogawa River	Koromogawabashi Bridge		Hiraizumicho Town	2013/5/29	Cloudy	0.15	0.0	>100	13	1	1.6	<1	<1
11		Otagawa River	Hitosujibashi Bridge	2013/5/29		Cloudy	0.50	0.0	>100	23	3	2.0	<1	<1	
12		Iwaigawa River Middle Reaches	Kaminohashi Bridge	Ichinosekishi City	2013/5/27	Sunny	0.65	0.0	>100	19	2	1.2	<1	<1	
13		Iwaigawa River Lower Reaches	Kozenjibashi Bridge		2013/5/30	Cloudy	0.40	0.0	>100	19	5	2.0	<1	<1	New sampling point
14		Kitakamigawa River	Chitosebashi Bridge (Kozenji)		2013/5/29	Light rain	0.50	0.0	>100	20	5	2.1	<1	<1	
15		Sokeigawa River	Unadabashi Bridge		2013/6/3	Sunny	0.30	0.0	>100	18	2	1.9	<1	<1	
16		Sarusawagawa River	Kannonbashi Bridge		2013/5/30	Cloudy	0.30	0.0	74	21	14	6.1	<1	<1	
17		Satetsugawa River	Oidebashi Bridge		2013/6/3	Sunny	0.55	0.0	>100	15	2	2.0	<1	<1	New sampling point
18			Kanzakibashi Bridge		2013/5/28	Sunny	0.30	0.0	>100	18	3	2.0	<1	<1	
19		Senmayagawa River Upper Reaches	Miyatabashi Bridge		2013/5/28	Sunny	0.50	0.0	>100	19	5	3.5	<1	<1	
20		Kitakamigawa River	Kitakamigawabashi Bridge		2013/5/28	Sunny	0.30	0.0	>100	10	3	2.8	<1	<1	
21		Kinomigawa River	Higuchibashi Bridge		2013/5/28	Sunny	0.15	0.0	>100	23	4	2.6	<1	<1	
22		Kinryugawa River	Tenjinbashi Bridge	2013/5/27	Sunny	0.30	0.0	65	23	16	9.6	<1	<1		

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

ORiver: Sediment Monitoring Results

Sampling point				Sampling date	Weather	Full depth (m)	General items			Concentration of radioactive material [Bq/kg (dried mud)]			Remarks	
No.	Water body	Point	Municipality				Mud sampling depth (cm)	Mud content %	Property	SS				
										Cs-134	Cs-137	Total		
1	Sakarigawa River Lower Reaches	Sanobashi Bridge	Ofunatoshi City	2013/5/21	Sunny	0.60	10	68	Sand	16	35	51		
2	Kesengawa River	Anehabashi Bridge	Rikuzentakadashi City	2013/5/21	Sunny	0.50	10	84	Sand	<10	11	11		
3	Okawa River	Miyagi Prefecture Border	Ichinosekishi City	2013/5/20	Cloudy	0.30	10	77	Sand	110	230	340		
4	Tsuyagawa River	Chiyogaharabashi Bridge	Ichinosekishi City	2013/5/22	Sunny	0.40	10	80	Sand	36	86	122		
5	K i t a k a S m y i s g t a e w m a R i v e r	Kurosawagawa River	Kawaradabashi Bridge	Kanegasakimachi Town	2013/5/31	Sunny	0.40	10	83	Gravel/sand	18	36	54	
6		Isawagawa River	Oagobashi Bridge	Oshushi City	2013/5/31	Sunny	0.60	10	72	Sand/silt	<10	11	11	New sampling point
7			Sajinbashi Bridge		2013/5/31	Sunny	0.60	10	81	Sand	<10	<10	-	New sampling point
8		Kitakamigawa River	Fujibashi Bridge		2013/6/4	Sunny	0.60	3	83	Sand/gravel	<10	18	18	
9		Shiratorigawa River	Shiratoribashi Bridge		2013/6/3	Sunny	0.50	3	85	Sand	34	64	98	
10		Koromogawa River	Koromogawabashi Bridge	Hiraizumicho Town	2013/5/29	Cloudy	0.15	10	84	Sand	44	73	117	
11		Otagawa River	Hitosujibashi Bridge		2013/5/29	Cloudy	0.50	10	81	Gravel/sand	59	120	179	
12		Iwaigawa River Middle Reaches	Kaminohashi Bridge	Ichinosekishi City	2013/5/27	Sunny	0.65	3	78	Sand	25	50	75	
13		Iwaigawa River Lower Reaches	Kozenjibashi Bridge		2013/5/30	Cloudy	0.40	3	87	Gravel/sand	33	63	96	New sampling point
14		Kitakamigawa River	Chitosebashi Bridge (Kozenji)		2013/5/29	Light rain	0.50	10	72	Sand	32	69	101	
15		Sokeigawa River	Unadabashi Bridge		2013/6/3	Sunny	0.30	3	81	Sand	46	120	166	
16		Sarusawagawa River	Kannonbashi Bridge		2013/5/30	Cloudy	0.30	3	96	Gravel/sand	50	110	160	
17		Satetsugawa River	Oidebashi Bridge		2013/6/3	Sunny	0.55	3	80	Sand	49	100	149	New sampling point
18			Kanzakibashi Bridge		2013/5/28	Sunny	0.30	10	79	Sand	20	48	68	
19	Senmayagawa River Upper Reaches	Miyatabashi Bridge	2013/5/28		Sunny	0.50	10	79	Sand	52	120	172		
20	Kitakamigawa River	Kitakamigawabashi Bridge	2013/5/28		Sunny	0.30	10	84	Sand	12	18	30		
21	Kinomigawa River	Higuchibashi Bridge	2013/5/28		Sunny	0.15	10	82	Sand	18	46	64		
22	Kinryugawa River	Tenjimbashi Bridge	2013/5/27	Sunny	0.30	3	83	Sand	77	160	237			

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

○River: Surrounding Environment (River Terrace) Monitoring Results

Sampling point				Sampling date	Weather	Left bank				Right bank				Remarks			
No.	Water body	Point	Municipality			Property	Concentration of radioactive material [Bq/kg (dry)]				Property	Concentration of radioactive material [Bq/kg (dry)]			Air dose (μSv/h)		
							Radioactive cesium			Air dose (μSv/h)		Radioactive cesium					
							Cs-134	Cs-137	Total			Cs-134	Cs-137			New sampling point	
1	Sakarigawa River Lower Reaches	Sanobashi Bridge	Ofunatoshi City	2013/5/21	Sunny	Sandy	68	150	218	0.08	Loamy	130	290	420	0.07		
2	Kesengawa River	Anehabashi Bridge	Rikuzentakadashi City	2013/5/21	Sunny	Loamy	26	65	91	0.06	Loamy	26	62	88	0.04		
3	Okawa River	Miyagi Prefecture Border	Ichinosekishi City	2013/5/20	Cloudy	-	-	-	-	-	Loamy	190	370	560	0.14	(Left bank) Soil not exposed	
4	Tsuyagawa River	Chiyogaharabashi Bridge	Ichinosekishi City	2013/5/22	Sunny	Sandy	140	290	430	0.11	Loamy	120	220	340	0.11		
5	K i t a k a m i y a g a w a R i v e r	Kurosawagawa River	Kawaradabashi Bridge	Kanegasakimachi Town	2013/5/31	Sunny	Loamy	170	400	570	0.08	Loamy	100	210	310	0.07	
6		Isawagawa River	Oagobashi Bridge	Oshushi City	2013/5/31	Sunny	Loamy	80	180	260	0.06	Loamy	37	58	95	0.07	New sampling point
7		Sajinbashi Bridge	2013/5/31		Sunny	Loamy	98	200	298	0.08	Loamy	470	930	1,400	0.09	New sampling point	
8		Kitakamigawa River	Fujibashi Bridge		2013/6/4	Sunny	Loamy	120	220	340	0.09	Sandy	200	430	630	0.12	
9		Shiratorigawa River	Shiratoribashi Bridge		2013/6/3	Sunny	Loamy	550	1,100	1,650	0.15	Loamy	400	830	1,230	0.16	
10		Koromogawa River	Koromogawabashi Bridge	Hiraizumicho Town	2013/5/29	Cloudy	Loamy	210	430	640	0.14	Loamy	210	470	680	0.15	
11		Otagawa River	Hitosujibashi Bridge		2013/5/29	Cloudy	Loamy	460	890	1,350	0.14	Loamy	610	1,200	1,810	0.15	
12		Iwaigawa River Middle Reaches	Kaminohashi Bridge	Ichinosekishi City	2013/5/27	Sunny	Loamy	320	650	970	0.14	Loamy	440	870	1,310	0.12	
13		Iwaigawa River Lower Reaches	Kozenjibashi Bridge		2013/5/30	Cloudy	Loamy	210	480	690	0.12	Loamy	290	660	950	0.08	New sampling point
14		Kitakamigawa River	Chitosebashi Bridge (Kozenji)		2013/5/29	Light rain	Loamy	210	420	630	0.09	Loamy	460	940	1,400	0.12	
15	Sokeigawa River	Unadabashi Bridge	2013/6/3		Sunny	Loamy	160	350	510	0.12	Loamy	98	240	338	0.11		
16	Sarusawagawa River	Kannonbashi Bridge	2013/5/30		Cloudy	Loamy	180	360	540	0.12	Loamy	490	1,000	1,490	0.11		
17	Satetsugawa River	Oidebashi Bridge	2013/6/3		Sunny	Sandy	310	620	930	0.08	Loamy	400	890	1,290	0.09	New sampling point	
18	Senmayagawa River Upper Reaches	Kanzakibashi Bridge	2013/5/28		Sunny	Loamy	550	1,100	1,650	0.15	Loamy	530	1,100	1,630	0.17		
19	Kitakamigawa River	Miyatabashi Bridge	2013/5/28		Sunny	Loamy	360	720	1,080	0.18	Loamy	160	320	480	0.14		
20	Kitakamigawa River	Kitakamigawabashi Bridge	2013/5/28		Sunny	Loamy	340	730	1,070	0.13	Loamy	210	430	640	0.16		
21	Kinomigawa River	Higuchibashi Bridge	2013/5/28		Sunny	Loamy	260	570	830	0.08	Loamy	110	220	330	0.06		
22	Kinryugawa River	Tenjinbashi Bridge	2013/5/27	Sunny	Loamy	1,400	2,700	4,100	0.16	Loamy	320	680	1,000	0.21			

• Samples for surrounding environment (soil) were generally collected from 5 points in 3m square in the river terrace, etc., and mixed. Depending on the site situation, factors, such as the area of sampling may be much smaller, may cause figures to vary significantly.

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

• Air dose was measured with a survey meter, TCS-172B of Hitachi-Aloka Medical, Ltd.

