(News Release)
The Results of Radioactive Material Monitoring of the Surface Water Bodies within Iwate Prefecture (July-August 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 July 19-August 29, 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

20 environmental reference points, etc. in the surface water bodies within Iwate Prefecture
(Rivers: 18 locations, Coasts: 2 locations)

(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 (* and ** denote the results of the previous surveys (*May-June 2013, **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 had a declining tendency at

almost all locations.

(Rivers)

Cs-134＋Cs-137: ND-101Bq/kg (dried mud) (*ND-340Bq/kg (dried mud))

(Coasts)

Cs-134＋Cs-137: ND-46Bq/kg (dried mud) (** ND-39Bq/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	18 (22)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	18 (22)
Coasts	2 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (2)

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

(Rivers)

Cs-134＋Cs-137: 115-2,670Bq/kg (dry) (*88-4,100Bq/kg (dry))

Spatial dose: 0.06-0.18μSv/h

(Annex for details)
(Map attached)

Future Plans

MOE intends to continue to measure radioactive materials in water, sediment, etc. 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

（Annex）

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	Okawa River		Prefectural border with Miyagi	Ichinosekishi City	2013/8/28	Sunny	0.5	0.0	>100	19	5	2	<1	<1	
2	Kitakamigawa System River	Isawagawa River	Oagobashi Bridge	Oshushi City	2013/8/27	Light rain	0.5	0.0	>100	8	4	3	<1	<1	
3			Saijinbashi Bridge		2013/8/27	Light rain	0.3	0.0	80	9	4	2	<1	<1	
4		Kitakamigawa River	Fujibashi Bridge		2013/8/27	Sunny	0.2	0.0	>100	13	5	2	<1	<1	
5		Shiratorigawa River	Shiratoribashi Bridge		2013/8/27	Sunny	0.2	0.0	70	10	15	3	<1	<1	
6		Koromogawa River	Koromogawabashi Bridge	Hiraizumicho Town	2013/8/27	Sunny	0.2	0.0	43	9	14	8	<1	<1	
7		Otagawa River	Hitosujibashi Bridge		2013/8/28	Sunny	0.4	0.0	72	18	8	5	<1	<1	
8		Iwaigawa River Middle Reaches	Kaminohashi Bridge	Ichinosekishi City	2013/8/26	Sunny	0.3	0.0	>100	18	2	1	<1	<1	
9		Iwaigawa River Lower Reaches	Kozenjibashi Bridge		2013/8/26	Sunny	0.1	0.0	>100	21	3	2	<1	<1	
10		Kitakamigawa River	Chitosebashi Bridge (Kozenji)		2013/8/26	Sunny	0.2	0.0	>100	21	3	2	<1	<1	
11		Sokeigawa River	Unadabashi Bridge		2013/8/28	Sunny	0.5	0.0	96	16	3	2	<1	<1	
12		Sarusawagawa River	Kannonbashi Bridge		2013/8/29	Cloudy	0.6	0.0	>100	26	<1	1	<1	<1	
13		Satetsugawa River	Oidebashi Bridge		2013/8/28	Sunny	0.6	0.0	>100	16	3	1	<1	<1	
14			Kanzakibashi Bridge		2013/8/29	Cloudy	0.8	0.0	>100	19	3	1	<1	<1	
15		Senmayagawa River Upper Reaches	Miyatabashi Bridge		2013/8/28	Sunny	0.5	0.0	51	18	8	3	<1	<1	
16		Kitakamigawa River	Kitakamigawabashi Bridge		2013/8/26	Sunny	0.2	0.0	>100	13	5	2	<1	<1	
17		Kinomigawa River	Higuchibashi Bridge		2013/8/28	Sunny	0.3	0.0	30	17	18	10	<1	<1	
18		Kinryugawa River	Tenjinbashi Bridge		2013/8/28	Sunny	0.5	0.0	70	15	7	5	<1	<1	

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

・Radioactive materials concentrations contain some measurement errors but are not noted here.

○River: Sediment Monitoring Results

No.	Sampling point: Water body		Point	Municipality	Sampling date	Weather	Full depth (m)	General items: Mud sampling depth (cm)	Mud content %	Property	Concentration of radioactive material［Bq/kg (dried mud)］: Radioactive cesium Cs-134	Cs-137	Total	Remarks
1	Okawa River		Prefectural border with Miyagi	Ichinosekishi City	2013/8/28	Sunny	0.5	6	75	Sand	25	76	101	
2	Kitakamigawa System River	Isawagawa River	Oagobashi Bridge	Oshushi City	2013/8/27	Light rain	0.5	10	91	Gravel/sand	<10	<10	-	
3			Saijinbashi Bridge		2013/8/27	Light rain	0.3	10	87	Gravel/sand	<10	<10	-	
4		Kitakamigawa River	Fujibashi Bridge		2013/8/27	Sunny	0.2	10	87	Gravel/sand	<10	12	12	
5		Shiratorigawa River	Shiratoribashi Bridge		2013/8/27	Sunny	0.2	10	81	Sand/gravel	20	41	61	
6		Koromogawa River	Koromogawabashi Bridge	Hiraizumicho Town	2013/8/27	Sunny	0.2	10	80	Sand	25	54	79	
7		Otagawa River	Hitosujibashi Bridge		2013/8/28	Sunny	0.4	10	79	Sand/gravel	21	55	76	
8		Iwaigawa River Middle Reaches	Kaminohashi Bridge	Ichinosekishi City	2013/8/26	Sunny	0.3	10	78	Sand/gravel	23	44	67	
9		Iwaigawa River Lower Reaches	Kozenjibashi Bridge		2013/8/26	Sunny	0.1	10	85	Sand	24	56	80	
10		Kitakamigawa River	Chitosebashi Bridge (Kozenji)		2013/8/26	Sunny	0.2	10	82	Gravel/sand	<10	29	29	
11		Sokeigawa River	Unadabashi Bridge		2013/8/28	Sunny	0.5	6	80	Sand	<10	32	32	
12		Sarusawagawa River	Kannonbashi Bridge		2013/8/29	Cloudy	0.6	6	79	Sand/gravel	14	34	48	
13		Satetsugawa River	Oidebashi Bridge		2013/8/28	Sunny	0.6	6	84	Sand/gravel	<10	19	19	
14			Kanzakibashi Bridge		2013/8/29	Cloudy	0.8	6	81	Sand/gravel	<10	<10	-	
15		Senmayagawa River Upper Reaches	Miyatabashi Bridge		2013/8/28	Sunny	0.5	6	78	Sand	15	42	57	
16		Kitakamigawa River	Kitakamigawabashi Bridge		2013/8/26	Sunny	0.2	10	88	Sand/gravel	<10	13	13	
17		Kinomigawa River	Higuchibashi Bridge		2013/8/28	Sunny	0.3	10	85	Gravel	<10	23	23	
18		Kinryugawa River	Tenjinbashi Bridge		2013/8/28	Sunny	0.5	10	82	Gravel	27	45	72	

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

・Radioactive materials concentrations contain some measurement errors but are not noted here.

○River: Surrounding Environment (River Terrace) Monitoring Results

Sampling point				Sampling date	Weather	Left bank					Right bank					Remarks
						Property	Concentration of radioactive material［Bq/kg (dry)］				Property	Concentration of radioactive material［Bq/kg (dry)］				
							Radioactive cesium			Air dose		Radioactive cesium			Air dose	
No.	Water body	Point	Municipality				Cs-134	Cs-137	Total	(μSv/h)		Cs-134	Cs-137	Total	(μSv/h)	
1	Okawa River	Prefectural border with Miyagi	Ichinosekishi City	2013/8/28	Sunny	-	-	-	-	-	Sandy	48	88	136	0.11	(Left bank) Soil not exposed
2	Kitakami System Isawagawa River	Oagobashi Bridge	Oshushi City	2013/8/27	Light rain	Loamy	35	80	115	0.06	Loamy	59	110	169	0.07	
3		Saijinbashi Bridge		2013/8/27	Light rain	Loamy	200	450	650	0.09	Clay-loamy	180	380	560	0.08	
4	Kitakamigawa River	Fujibashi Bridge		2013/8/27	Sunny	Loamy	93	190	283	0.09	Clay-loamy	130	290	420	0.14	
5	Shiratorigawa River	Shiratoribashi Bridge		2013/8/27	Sunny	Loamy	340	790	1,130	0.16	Loamy	280	630	910	0.15	
6	Koromogawa River	Koromogawabashi Bridge	Hiraizumicho Town	2013/8/27	Sunny	Clay-loamy	250	550	800	0.13	Clay-loamy	170	410	580	0.13	
7	Otagawa River	Hitosujibashi Bridge		2013/8/28	Sunny	Clay-loamy	380	940	1,320	0.12	Clay-loamy	470	1,100	1,570	0.13	
8	Iwaigawa River Middle Reaches	Kaminohashi Bridge	Ichinosekishi City	2013/8/26	Sunny	Loamy	870	1,800	2,670	0.17	Loamy	230	470	700	0.13	
9	Iwaigawa River Lower Reaches	Kozenjibashi Bridge		2013/8/26	Sunny	Clay-loamy	190	410	600	0.10	Clay-loamy	330	680	1,010	0.10	
10	Kitakamigawa River	Chitosebashi Bridge (Kozenji)		2013/8/26	Sunny	Loamy	170	390	560	0.08	Loamy	310	690	1,000	0.10	
11	Sokeigawa River	Unadabashi Bridge		2013/8/28	Sunny	Loamy	200	440	640	0.09	Loamy	84	200	284	0.09	
12	Sarusawagawa River	Kannonbashi Bridge		2013/8/29	Cloudy	Loamy	240	590	830	0.12	Loamy	190	420	610	0.11	
13	Satetsugawa River	Oidebashi Bridge		2013/8/28	Sunny	Loamy	110	260	370	0.09	Loamy	130	280	410	0.09	
14		Kanzakibashi Bridge		2013/8/29	Cloudy	Loamy	660	1,500	2,160	0.17	Loamy	300	700	1,000	0.15	
15	Senmayagawa River Upper Reaches	Miyatabashi Bridge		2013/8/28	Sunny	Loamy	420	920	1,340	0.15	Loamy	430	970	1,400	0.17	
16	Kitakamigawa River	Kitakamigawabashi Bridge		2013/8/26	Sunny	Loamy	130	290	420	0.13	Loamy	390	920	1,310	0.17	
17	Kinomigawa River	Higuchibashi Bridge		2013/8/28	Sunny	Clay-loamy	170	330	500	0.08	Loamy	65	150	215	0.06	
18	Kinryugawa River	Tenjinbashi Bridge		2013/8/28	Sunny	Loamy	360	850	1,210	0.18	Loamy	360	750	1,110	0.18	

・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.

・Radioactive materials concentrations contain some measurement errors but are not noted here.

○Coast: Water Quality Monitoring Results

Sampling point				Sampling date	Weather	Full depth (m)	General items					Radioactive material concentrations (Bq/L		Remarks
No.	Water body						Sampling depth (m)	Secchi disk depth (m)	Salinity (‰)	SS (mg/L)	Turbidity	Radioactive cesium		
												Cs-134	Cs-137	
1	Ofunatowan Bay (A)	S-31	Surface layer	2013/7/19	Cloudy	16.3	0.5	3.1	17	3	2	<1	<1	
			Lower layer				15.3		29	2	1	<1	<1	
2	Hirotawan Bay	S-34	Surface layer	2013/7/19	Cloudy	11.2	0.5	1.8	17	6	4	<1	<1	
			Lower layer				10.2		29	2	1	<1	<1	

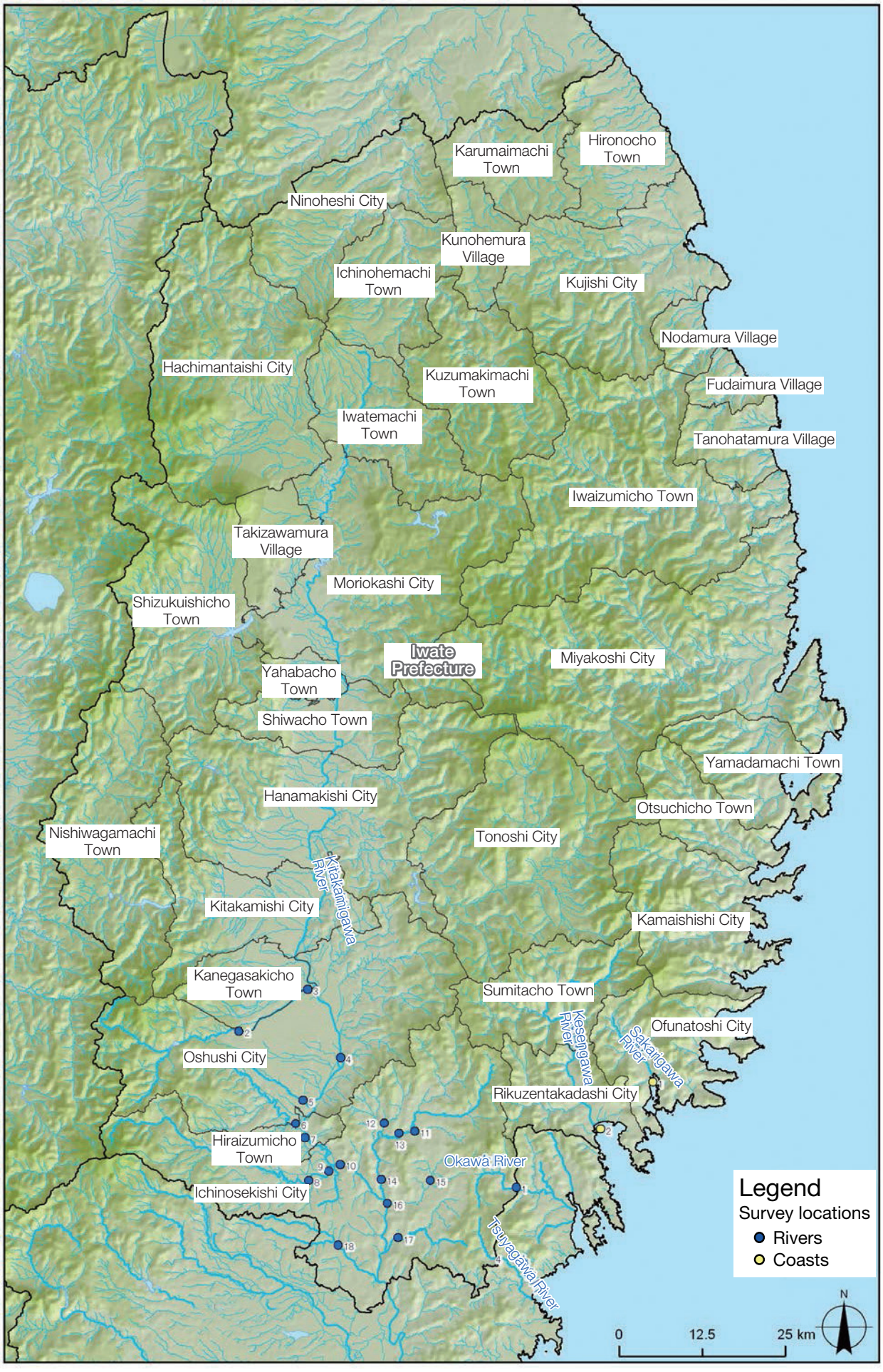
・Sampling points are listed from north to south.

○Coast: 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					Mud content %	Property	Radioactive cesium			
								Cs-134	Cs-137	Total	
1	Ofunatowan Bay (A)	S-31	2013/7/19	Cloudy	16.3	42	Silt	15	31	46	
2	Hirotawan Bay	S-34	2013/7/19	Cloudy	11.2	75	Sand/silt	<10	<10	-	

・Sampling points are listed from north to south.

・Radioactive materials concentrations contain some measurement errors but are not noted here.


Karumaimachi Town
Hironocho Town
Ninoheshi City
Kunohemura Village
Ichinohemachi Town
Kujishi City
Nodamura Village
Hachimantaishi City
Kuzumakimachi Town
Fudaimura Village
Iwatemachi Town
Tanohatamura Village
Iwaizumicho Town
Takizawamura Village
Moriokashi City
Shizukuishicho Town
Iwate Prefecture
Miyakoshi City
Yahabacho Town
Shiwacho Town
Yamadamachi Town
Hanamakishi City
Otsuchicho Town
Nishiwagamachi Town
Tonoshi City
Kitakamigawa River
Kitakamishi City
Kamaishishi City
Kanegasakicho Town
Sumitacho Town
Kesengawa River
Sakarigawa River
Ofunatoshi City
Oshushi City
Rikuzentakadashi City
Hiraizumicho Town
Okawa River
Ichinosekishi City
Tsuyagawa River
Legend
Survey locations
Rivers
Coasts
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