March 7, 2014

(Announcement)
The Results of Radioactive Material Monitoring of the Surface Water Bodies within Iwate Prefecture
(February Samples)

1. Survey Overview

(1) Survey Period
February 3-7, 2014

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

(3) 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 surveys (*November 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 or remained constant at almost all locations.

(Rivers)
Cs-134＋Cs-137: ND-177Bq/kg (dried mud) (*ND-326Bq/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)

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

(Rivers)

Cs-134＋Cs-137: 82-1,790Bq/kg (dry) (*13-2,460Bq/kg (dry))
Spatial dose: 0.05-0.16μSv/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.

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○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	2014/2/4	Cloudy	0.3	0.0	67	12	3	4	<1	<1	
2	Kitakamigawa River System	Isawagawa River	Oagobashi Bridge	Oshushi City	2014/2/6	Cloudy	0.3	0.0	>100	8	2	1	<1	<1	
3			Saijinbashi Bridge		2014/2/6	Cloudy	0.2	0.0	>100	10	3	1	<1	<1	
4		Kitakamigawa River	Fujibashi Bridge		2014/2/6	Light snow	0.2	0.0	>100	13	2	2	<1	<1	
5		Shiratorigawa River	Shiratoribashi Bridge		2014/2/6	Light snow	0.2	0.0	>100	13	2	1	<1	<1	
6		Koromogawa River	Koromogawabashi Bridge	Hiraizumicho Town	2014/2/7	Light snow	0.3	0.0	>100	9	2	1	<1	<1	
7		Otagawa River	Hitosujibashi Bridge		2014/2/7	Light snow	0.2	0.0	>100	19	3	2	<1	<1	
8		Iwaigawa River Middle Reaches	Kaminohashi Bridge	Ichinosekishi City	2014/2/4	Cloudy	0.5	0.0	49	13	8	6	<1	<1	
9		Iwaigawa River Lower Reaches	Kozenjibashi Bridge		2014/2/5	Light snow	0.2	0.0	93	14	4	2	<1	<1	
10		Kitakamigawa River	Chitosebashi Bridge (Kozenji)		2014/2/3	Cloudy	0.5	0.0	73	18	9	4	<1	<1	
11		Sokeigawa River	Unadabashi Bridge		2014/2/5	Light snow	0.2	0.0	>100	16	3	1	<1	<1	
12		Sarusawagawa River	Kannonbashi Bridge		2014/2/5	Light snow	0.4	0.0	>100	14	<1	1	<1	<1	
13		Satetsugawa River	Oidebashi Bridge		2014/2/5	Light snow	0.3	0.0	>100	16	2	1	<1	<1	
14			Kanzakibashi Bridge		2014/2/4	Cloudy	0.5	0.0	51	14	9	4	<1	<1	
15		Senmayagawa River Upper Reaches	Miyatabashi Bridge		2014/2/4	Cloudy	0.3	0.0	78	15	3	3	<1	<1	
16		Kitakamigawa River	Kitakamigawabashi Bridge		2014/2/3	Sunny	0.3	0.0	>100	14	2	1	<1	<1	
17		Kinomigawa River	Higuchibashi Bridge		2014/2/3	Sunny	0.3	0.0	>100	19	1	1	<1	<1	
18		Kinryugawa River	Tenjinbashi Bridge		2014/2/3	Sunny	0.3	0.0	86	16	3	3	<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

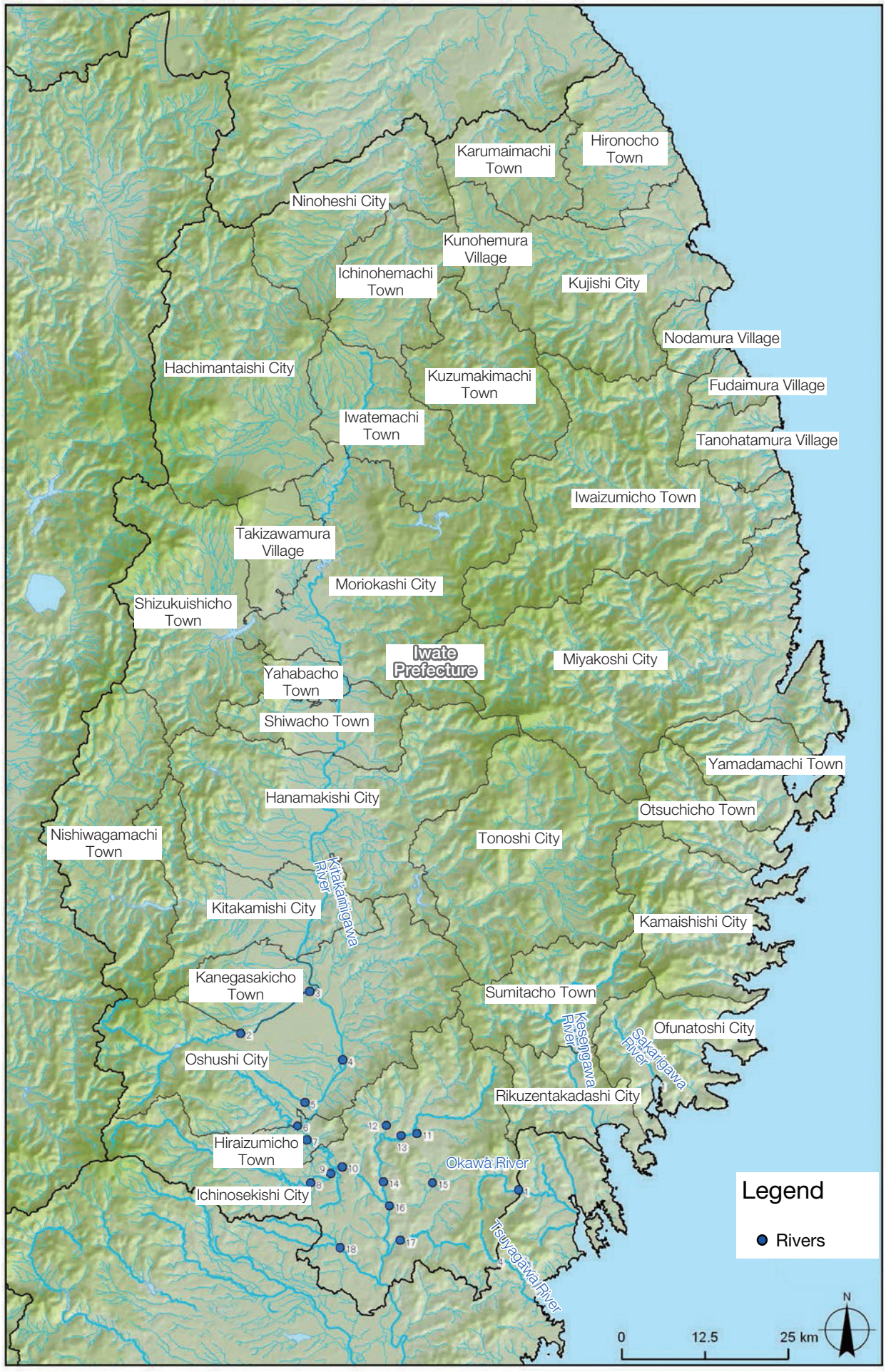
Sampling point				Sampling date	Weather	Full depth (m)	General items			Concentration of radioactive material［Bq/kg (dried mud)］			Remarks
No.	Water body	Point	Municipality				Mud sampling depth (cm)	Mud content %	Property	Radioactive cesium			
										Cs-134	Cs-137	Total	
1	Okawa River	Prefectural border with Miya	Ichinosekishi City	2014/2/4	Cloudy	0.3	10	76	Sand	33	84	117	
2	Kitakamigawa River System	Isawagawa River	Oagobashi Bridge	2014/2/6	Cloudy	0.3	10	74	Sand	<10	<10	-	
3			Saijinbashi Bridge	2014/2/6	Cloudy	0.2	10	80	Gravel/sand	<10	<10	-	
4		Kitakamigawa River	Fujibashi Bridge	2014/2/6	Light snow	0.2	10	77	Gravel/sand	<10	13	13	
5		Shiratorigawa River	Shiratoribashi Bridge	2014/2/6	Light snow	0.2	10	78	Gravel/sand	16	50	66	
6		Koromogawa River	Koromogawabashi Bridge	2014/2/7	Light snow	0.3	10	80	Sand	18	39	57	
7		Otagawa River	Hitosujibashi Bridge	2014/2/7	Light snow	0.2	10	74	Sand	32	75	107	
8		Iwaigawa River Middle Reaches	Kaminohashi Bridge	2014/2/4	Cloudy	0.5	10	79	Sand	15	40	55	
9		Iwaigawa River Lower Reaches	Kozenjibashi Bridge	2014/2/5	Light snow	0.2	10	78	Gravel/sand	34	88	122	
10		Kitakamigawa River	Chitosebashi Bridge (Kozenj	2014/2/3	Cloudy	0.5	10	61	Sand/silt	47	130	177	
11		Sokeigawa River	Unadabashi Bridge	2014/2/5	Light snow	0.2	1	74	Sand	16	36	52	
12		Sarusawagawa River	Kannonbashi Bridge	2014/2/5	Light snow	0.4	10	80	Gravel/sand	18	30	48	
13		Satetsugawa River	Oidebashi Bridge	2014/2/5	Light snow	0.3	10	73	Sand	14	31	45	
14			Kanzakibashi Bridge	2014/2/4	Cloudy	0.5	10	83	Sand	<10	10	10	
15		Senmayagawa River Upper Reaches	Miyatabashi Bridge	2014/2/4	Cloudy	0.3	10	76	Sand	41	88	129	
16		Kitakamigawa River	Kitakamigawabashi Bridge	2014/2/3	Sunny	0.3	10	87	Gravel/sand	<10	12	12	
17		Kinomigawa River	Higuchibashi Bridge	2014/2/3	Sunny	0.3	1	86	Gravel/sand	<10	16	16	
18		Kinryugawa River	Tenjinbashi Bridge	2014/2/3	Sunny	0.3	10	85	Gravel/sand	27	67	94	

・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)］					Concentration of radioactive material［Bq/kg (dry)］				
							Radioactive cesium			Air dose	Property	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 Miya	Ichinosekishi City	2014/2/4	Cloudy	-	-	-	-	-	Loamy	94	240	334	0.10	(Left bank) Soil not exposed
2	Kitakamigawa River System	Isawagawa River	Oagobashi Bridge	2014/2/6	Cloudy	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
3			Saijinbashi Bridge	2014/2/6	Cloudy	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
4		Kitakamigawa River	Fujibashi Bridge	2014/2/6	Light snow	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
5		Shiratorigawa River	Shiratoribashi Bridge	2014/2/6	Light snow	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
6		Koromogawa River	Koromogawabashi Bridge	2014/2/7	Light snow	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
7		Otagawa River	Hitosujibashi Bridge	2014/2/7	Light snow	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
8		Iwaigawa River Middle Reaches	Kaminohashi Bridge	2014/2/4	Cloudy	Loamy	190	410	600	0.12	Loamy	85	240	325	0.11	
9		Iwaigawa River Lower Reaches	Kozenjibashi Bridge	2014/2/5	Light snow	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
10		Kitakamigawa River	Chitosebashi Bridge (Kozenj	2014/2/3	Cloudy	Loamy	140	330	470	0.08	Loamy	240	590	830	0.09	
11		Sokeigawa River	Unadabashi Bridge	2014/2/5	Light snow	-	-	-	-	-	-	-	-	-	-	積Snowの為，Soil採取不可
12		Sarusawagawa River	Kannonbashi Bridge	2014/2/5	Light snow	-	-	-	-	-	-	-	-	-	-	Unable to collect soil due to snow on the grou
13		Satetsugawa River	Oidebashi Bridge	2014/2/5	Light snow	-	-	-	-	-	-	-	-	-	-	Unable to collect soil due to snow on the grou
14			Kanzakibashi Bridge	2014/2/4	Cloudy	Loamy	400	970	1,370	0.15	Loamy	390	1,000	1,390	0.12	
15		Senmayagawa River Upper Reaches	Miyatabashi Bridge	2014/2/4	Cloudy	Loamy	280	680	960	0.15	Loamy	46	120	166	0.14	
16		Kitakamigawa River	Kitakamigawabashi Bridge	2014/2/3	Sunny	Loamy	160	430	590	0.11	Loamy	210	530	740	0.16	
17		Kinomigawa River	Higuchibashi Bridge	2014/2/3	Sunny	Loamy	21	61	82	0.05	Loamy	58	130	188	0.06	
18		Kinryugawa River	Tenjinbashi Bridge	2014/2/3	Sunny	Loamy	490	1,300	1,790	0.12	Loamy	180	490	670	0.16	

・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.


Karumaimachi Town
Hironocho Town
Ninoheshi City
Kunohemura Village
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Fudaimura Village
Iwatemachi Town
Tanohatamura Village
Iwaizumicho Town
Takizawamura Village
Moriokashi City
Shizukuishicho Town
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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
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