

(News Release)  
The Results of Radioactive Material Monitoring of the Surface Water Bodies  
within Ibaraki Prefecture  
(July-September 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 Ibaraki Prefecture during the period of July 19-September 28, 2012 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

62 environmental reference points, etc. in the surface water bodies within Ibaraki Prefecture  
(Rivers: 47 locations, Lakes and headwaters: 12 locations, Coasts: 3 locations)

(2) Survey Method

- Measurement of concentrations of radioactive materials (radioactive cesium (Cs-134 and Cs-137), etc.) 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 (May-June))

(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 of both the rivers and lakes/headwaters measured were around 2,000Bq/kg or below for most of the locations (coasts: 100Bq/kg or below), and that they have generally remained constant or had a declining tendency.

(Rivers)

Cs-134+Cs-137: ND-4,500Bq/kg (dried mud) (\*ND-4,800Bq/kg (dried mud))

(Lakes and headwaters)

Cs-134+Cs-137: 97-1,170Bq/kg (dried mud) (\*106-1,090Bq/kg (dried mud))

(Coasts)

Cs-134+Cs-137: ND-69Bq/kg (dried mud) (\*ND-64Bq/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
Rivers	32 (32)	9 (9)	3 (2)	1 (2)	0 (1)	0 (0)	2 (1)
Lakes and headwaters	9 (8)	2 (3)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)

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

(Rivers)

Cs-134+Cs-137: 75-8,300Bq/kg (dry) (\*43-3,500Bq/kg (dry))

Spatial dose: 0.06-0.25µSv/h

(Lakes and headwaters)

Cs-134+Cs-137: ND-810Bq/kg (dry) (\*71-720Bq/kg (dry))

Spatial dose: 0.06-0.13µSv/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. (once in 3 months).

ORiver: Water Quality Monitoring Results

(Annex)

No.	Sampling point			Municipality	Sampling date	Weather	Full depth m	General items					Concentration of radioactive material Bq/L			Remarks		
	Water body	Point						Sampling depth m	Transparency cm	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137				
1	Taga River System	Satonegawa River	Yamagoyabashi Bridge	Kitaibarakishi City	2012/9/26	Sunny	1.0	0.0	>100	13	5	1	<1	<1	<1			
2			Munayamabashi Bridge		2012/9/26	Sunny	1.0	0.0	>100	21	3	1	<1	<1	<1			
3			Kunabeshi		2012/9/26	Sunny	1.0	0.0	>100	7	1	1	<1	<1	<1			
4		Hanazonogawa River	Isomarebashi Bridge		2012/9/24	Cloudy	0.2	0.0	>100	25	4	1	<1	<1	<1			
5			Sakacabashi Bridge		2012/9/26	Sunny	1.3	0.0	>100	7	1	1	<1	<1	<1			
6			Sakabashi Bridge		2012/9/24	Cloudy	1.5	0.0	90	12	3	1	<1	<1	<1			
7			Hanumakigawa River		Shinhanakibashi Bridge	2012/9/26	Sunny	1.2	0.0	95	11	7	2	<1	<1	<1		
8	Kujigawa River System	Kujigawa River	Yamagata	2012/9/27	Cloudy	1.5	0.0	85	13	7	1	<1	<1	<1				
9			Sakakibashi Bridge	2012/7/19	Sunny	0.5	0.0	35	1	45	11	<1	<1	<1				
				2012/8/20	Sunny	0.6	0.0	52	14	4	2	<1	<1	<1				
10	Nakagawa River System	Nakagawa River	Nozuchi	2012/9/11	Sunny	0.3	0.0	55	16	5	2	<1	<1	<1				
11			Shimokuni	2012/9/27	Sunny	2.0	0.0	>100	15	9	2	<1	<1	<1				
12			Katsutabashi Bridge	2012/9/27	Sunny	3.5	0.0	>100	15	2	11	<1	<1	<1				
13				2012/7/19	Cloudy	1.5	0.0	40	6	14	4	<1	<1	<1				
				2012/8/20	Sunny	7.0	0.0	72	18	2	1	<1	<1	<1				
				2012/9/11	Sunny	0.4	0.0	>100	103	2	1	<1	<1	<1				
				2012/9/28	Rain	1.2	0.0	50	124	8	3	<1	<1	<1				
14	Hinumagawa River	Hinumagawa River	Hinumabashi Bridge	Mitoshi City/Oaraimachi Town	2012/9/28	Rain	2.0	0.0	35	2	8	2	<1	<1	<1			
15			Hokotagawa River	Asahibashi Bridge	2012/9/26	Sunny	1.2	0.0	77	41	3	2	<1	<1	<1			
16	Kitaura Lake	Kitaura Lake	Tomoeogawa River	Shimotomoeawabashi Bridge	Hokotashi City	2012/9/26	Sunny	0.5	0.0	77	31	11	3	<1	<1	<1		
17			Taiyogawa River	Tazukabashi Bridge	2012/9/27	Sunny	0.5	0.0	>100	28	4	2	<1	<1	<1			
18			Takedagawa River	Uchijukuhashi Bridge	2012/9/26	Sunny	0.7	0.0	34	32	16	5	<1	<1	<1			
19			Yamadagawa River	Nioroshibashi Bridge	2012/9/27	Sunny	0.5	0.0	22	32	20	6	<1	<1	<1			
20				Kurakawa River	Kurakawabashi Bridge	Namegatashi City	2012/9/27	Sunny	0.4	0.0	38	32	15	4	<1	<1	<1	
21				Gantsugawa River	JA Yokohashi	2012/9/27	Cloudy	0.1	0.0	42	28	19	3	<1	<1	<1		
22				Nagaregawa River	Subobashi Bridge	Kashimashi City	2012/9/27	Sunny	0.1	0.0	>100	45	3	2	<1	<1	<1	
23				Sonobegawa River	Sonobeshibashi Bridge	Omitamashi City	2012/9/26	Sunny	1.3	0.0	79	29	7	3	<1	<1	<1	
24				Samogawa River	Tokorebashi Bridge	Ishikashi City/Omitamashi City	2012/9/26	Sunny	1.4	0.0	>100	89	2	2	<1	<1	<1	
25				Kosegawa River	Heiwabashi Bridge	Ishikashi City	2012/9/26	Sunny	0.1	0.0	75	17	27	5	<1	<1	<1	
26	Kasumigaura Lake	Kasumigaura Lake	Kajinashigawa River	Kamishukubashi Bridge	Namegatashi City	2012/9/26	Sunny	1.1	0.0	>100	39	4	2	<1	<1	<1		
27			Hshikigawa River	Hshikubashi Bridge	2012/9/25	Cloudy	0.3	0.0	98	26	5	1	<1	<1	<1			
28			Ichinosegawa River	Kawanakabashi Bridge	Kasumigaurashi City	2012/9/25	Cloudy	1.2	0.0	28	18	5	<1	<1	<1			
29			Sakajigawa River	Sakabashi Bridge/National Route 354	Tsuchiurashi City	2012/9/25	Cloudy	0.4	0.0	54	32	3	2	<1	<1	<1		
30			Shinkawa River	Shimtenbashi Bridge	2012/9/25	Cloudy	1.9	0.0	38	6	11	6	<1	<1	<1			
31			Sakuragawa River	Eiribashi Bridge	2012/9/25	Cloudy	0.5	0.0	25	4	20	4	<1	<1	<1			
32			Bizenogawa River	Bizenawabashi Bridge	2012/9/25	Cloudy	0.8	0.0	38	3	9	3	<1	<1	<1			
33			Hanamuraogawa River	Shinwabashi Bridge	2012/9/25	Cloudy	1.0	0.0	52	23	9	3	<1	<1	<1			
34			Seimeigawa River	Katsubashi Bridge	Amimachi Town	2012/9/24	Sunny	0.5	0.0	36	30	10	3	<1	<1	<1		
35			Onogawa River	Okuharaobashi Bridge	Ryugasakishi City/Inashikishi City	2012/9/24	Sunny	0.2	0.0	33	38	11	4	<1	<1	<1		
36	Tsumetonegawa River	Tsumetonegawa River	Shimtonobashi Bridge	Inashikishi City	2012/9/24	Cloudy	1.2	0.0	35	53	10	7	<1	<1	<1			
37			Yorokoshigawa River	Horinouchibashi Bridge	Itakoshi City	2012/9/13	Sunny	0.5	0.0	32	32	14	5	<1	<1	<1		
38			Maekawa River	Ayamabashi Bridge	Itakoshi City	2012/9/13	Sunny	2.0	0.0	26	33	15	7	<1	<1	<1		
39	Kinugawa River	Kinugawa River	Kawashimabashi Bridge	Chikuseishi City	2012/9/12	Sunny	0.7	0.0	90	17	6	1	<1	<1	<1			
40			Takishitabashi Bridge	2012/7/20	Cloudy	1.5	0.0	44	9	6	<1	<1	<1					
41				2012/8/24	Sunny	3.0	0.0	27	1	5	3	<1	<1	<1				
42				2012/9/13	Sunny	0.2	0.0	62	18	7	2	<1	<1	<1				
43	Kokaiigawa River	Kokaiigawa River	Tagawabashi Bridge	Yukishi City	2012/9/12	Sunny	0.2	0.0	91	24	5	1	<1	<1	<1			
44			Kurakobashi Bridge	2012/9/12	Sunny	0.6	0.0	32	26	8	3	<1	<1	<1				
45			Fumimabashi Bridge	2012/9/13	Sunny	0.7	0.0	49	20	10	2	<1	<1	<1				
46	Tonegawa River	Tonegawa River	Inarigawa River	Ogukibashi Bridge	Tsukubashi City	2012/9/12	Sunny	0.6	0.0	>100	28	1	1	<1	<1	<1		
				2012/7/20	Cloudy	0.3	0.0	43	2	5	3	<1	<1	<1				
				2012/8/24	Sunny	0.2	0.0	43	3	2	3	<1	<1	<1				
				2012/9/12	Sunny	0.3	0.0	39	21	14	4	<1	<1	<1				
				Fukawa	2012/9/13	Sunny	0.2	0.0	41	23	24	8	<1	<1	<1			
47	Tonegawa River	Tonegawa River		2012/7/19	Sunny	0.3	0.0	30	2	9	6	<1	<1	<1				
				2012/8/20	Sunny	0.4	0.0	22	32	11	4	<1	<1	<1				
				2012/9/14	Sunny	0.2	0.0	37	31	6	2	<1	<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

No.	Sampling point			Sampling date	Weather	Full depth m	General items			Concentration of radioactive material Bq/kg (dried mud)				Remarks	
	Water body	Point	Municipality				Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Cs-134	Radioactive cesium Cs-137	Total		
1	Taga River System	Satonegawa River	Yamagoyabashi Bridge	2012/9/26	Sunny	1.0	3	93	Sand	<30	44	77	121		
2			Murayamabashi Bridge	2012/9/26	Sunny	1.0	3	79	Sand	<30	200	340	540		
3			Kurabeshi	Kitabarakishi City	2012/9/26	Sunny	1.0	3	94	Sand	<30	19	23	42	
4			Isonarobashi Bridge		2012/9/24	Cloudy	0.2	5	89	Sand	<30	26	50	76	
5			Okitagawa River	Takahagishi City	2012/9/26	Sunny	1.3	5	88	Sand	<30	17	33	50	
6			Sakabashi Bridge	Kitabarakishi City	2012/9/24	Cloudy	1.5	3	94	Sand	<30	39	64	103	
7			Hananukigawa River	Takahagishi City	2012/9/26	Sunny	1.2	5	93	Sand	<30	29	53	82	
8	Kujigawa River System		Yamagata	2012/9/27	Cloudy	1.5	3	93	Sand	<30	<10	<10	-		
9		Kujigawa River	Hitachiomiya City	2012/7/19	Sunny	0.5	3	58	Sand	<30	<10	<10	-		
		Sakakibashi Bridge	Hitachishi City · Tokaimura Village	2012/8/20	Sunny	0.6	10	96	Sand	<30	<10	<10	-		
				2012/9/11	Sunny	0.3	3	85	Sand	<30	61	100	161		
10	Nakagawa River System		Noguchi	2012/9/27	Sunny	2.0	5	79	Sand	<30	63	100	163		
11			Shimokami	Mitoshi City	2012/9/27	Sunny	3.5	5	83	Sand	<30	43	80	123	
12		Nakagawa River	Katsubashi Bridge	Mitoshi City/Hitachinashi City	2012/7/19	Cloudy	1.5	5	70	Silt	<30	120	210	330	
					2012/8/20	Sunny	7.0	10	79	Sand	<30	66	110	176	
					2012/9/11	Sunny	0.4	3	84	Sand	<30	44	70	114	
13		Nakamarugawa River	Yanagisawabashi Bridge	2012/9/28	Rain	1.2	7	64	Silt	<30	460	740	1,200		
14		Himugagawa River	Himubashi Bridge	2012/9/28	Rain	2.0	3	91	Sand	<30	13	23	36		
15	Kitaura Lake	Hokotagawa River	Asahibashi Bridge	2012/9/26	Sunny	1.2	5	71	Silt	<30	160	260	420		
16			Shimozogawabashi Bridge	Hokotashi City	2012/9/26	Sunny	0.5	3	77	Silt	<30	140	230	370	
17			Taivogawa River	Tazukabashi Bridge	2012/9/27	Sunny	0.5	3	87	Sand	<30	120	210	330	
18			Takedagawa River	Uchijukubashi Bridge	2012/9/26	Sunny	0.7	3	66	Silt	<30	250	380	630	
19			Yamadagawa River	Norobishashi Bridge	2012/9/27	Sunny	0.5	3	90	Sand	<30	64	110	174	
20			Kurakawa River	Kurawabashi Bridge	2012/9/27	Sunny	0.4	3	89	Sand	<30	77	110	187	
21			Gantsugawa River	JA Yokobashi	2012/9/27	Cloudy	0.1	3	93	Sand	<30	83	140	223	
22			Nagaregawa River	Suhobashi Bridge	2012/9/27	Sunny	0.1	3	90	Sand	<30	190	300	490	
33			Sonobegawa River	Sonobeshinbashi Bridge	2012/9/26	Sunny	1.3	3	50	Silt	<30	490	880	1,370	
23		Kasumigaura Lake	Samogawa River	Tokorobashi Bridge	2012/9/26	Sunny	1.4	2	94	Sand	<30	340	560	900	
34			Kosegawa River	Heiwabashi Bridge	2012/9/26	Sunny	0.1	2	62	Silt	<30	260	420	680	
35			Kajinagawa River	Kamshukubashi Bridge	2012/9/26	Sunny	1.1	3	83	Sand	<30	77	120	197	
24			Hishikigawa River	Hishikibashi Bridge	2012/9/25	Cloudy	0.3	3	86	Sand	<30	260	400	660	
25			Ichinosegawa River	Kawanakabashi Bridge	2012/9/25	Cloudy	1.2	3	86	Sand	<30	190	340	530	
26			Sakaigawa River	Sakabashi Bridge/National Route 354	2012/9/25	Cloudy	0.4	3	93	Sand	<30	260	420	680	
27			Shinkawa River	Shimabashi Bridge	2012/9/25	Cloudy	1.9	5	40	Silt	<30	1,500	2,500	4,000	
28			Sakunagawa River	Enbashi Bridge	2012/9/25	Cloudy	0.5	3	49	Silt	<30	110	160	270	
29			Bizenagawa River	Bizenawabashi Bridge	2012/9/25	Cloudy	0.8	2	66	Silt	<30	1,700	2,800	4,500	
30			Hanamurogawa River	Shinwabashi Bridge	2012/9/25	Cloudy	1.0	3	92	Sand	<30	370	630	1,000	
31	Riviera	Seimeigawa River	Katsubashi Bridge	2012/9/24	Sunny	0.5	2	83	Sand	<30	690	1,100	1,790		
32			Onogawa River	Okuharabashi Bridge	2012/9/24	Sunny	0.2	3	83	Sand	<30	210	360	570	
36			Shimogawa River	Shimobashi Bridge	2012/9/24	Cloudy	1.2	3	76	Sand	<30	100	170	270	
37			Yorokoshigawa River	Horinouchibashi Bridge	2012/9/13	Sunny	0.5	3	76	Sand	<30	120	170	290	
38			Mackawa River	Ayamebashi Bridge	2012/9/13	Sunny	2.0	10	67	Mud	<30	180	290	470	
39				Kawashimabashi Bridge	2012/9/12	Sunny	0.7	5	90	Sand	<30	<10	<10	-	
40			Kinugawa River	Takishitabashi Bridge	2012/7/20	Cloudy	1.5	3	77	Sand	<30	41	78	119	
					2012/8/24	Sunny	3.0	3	92	Sand	<30	<10	11	11	
					2012/9/13	Sunny	0.2	3	74	Sand	<30	76	120	196	
41			Tagawa River	Tagawabashi Bridge	2012/9/12	Sunny	0.2	5	83	Sand	<30	52	94	146	
42	Kokaigawa River		Kurokobashi Bridge	2012/9/12	Sunny	0.6	5	84	Sand	<30	99	170	269		
43			Fummakibashi Bridge	Ryugasaki City/Torideshi City	2012/9/13	Sunny	0.7	3	59	Silt	<30	130	220	350	
44			Inargawa River	Okagibashi Bridge	2012/9/12	Sunny	0.6	10	83	Sand	<30	570	900	1,470	
45	Tonegawa River		Okagibashi Bridge	2012/7/20	Cloudy	0.3	5	87	Sand	<30	16	26	42		
			Kurihishi Bridge	Kogashi City	2012/8/24	Sunny	0.2	5	92	Sand	<30	<10	18	18	
					2012/9/12	Sunny	0.3	3	86	Sand	<30	44	79	123	
46			Fukawa	Tonemachi Town	2012/9/13	Sunny	0.2	3	85	Sand	<30	33	62	95	
					2012/7/19	Sunny	0.3	2	84	Sand	<30	71	110	181	
47		Sawara	Inashikishi City	2012/8/20	Sunny	0.4	5	91	Sand/gravel	<30	12	27	39		
				2012/9/14	Sunny	0.2	3	93	Sand	<30	50	90	140		

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

ORiver: Surrounding Environment Monitoring Results

		Sampling point			Sampling date	Weather	Property	Left bank				Air dose μSv/h	Property	Right bank				Remarks		
No.	Water body	Point	Municipality	Concentration of radioactive material (Bq/kg (dry))				Concentration of radioactive material (Bq/kg (dry))												
				Radioactive iodine I-131				Cs-134	Cs-137	Radioactive cesium Total	Radioactive iodine I-131			Cs-134	Cs-137	Radioactive cesium Total	Air dose μSv/h			
1-7	Taga River System	Satonogawa River	Yamagoyabashi Bridge	Kitaharakushi City	2012/9/26	Sunny	Loamy	<30	770	1,200	1,970	0.25	Sandy	<30	440	750	1,190	0.25		
			Murayamabashi Bridge		2012/9/26	Sunny	Loamy	<30	210	360	570	0.15	Loamy	<30	2,000	3,200	5,200	0.15		
			Karabetschi		2012/9/26	Sunny	Loamy	<30	150	240	390	0.14	Loamy	<30	1,900	3,100	5,000	0.16		
			Iomarebashi Bridge		2012/9/24	Cloudy	Loamy	<30	860	1,300	2,160	0.20	Loamy	<30	750	1,200	1,950	0.22		
			Sakabashi Bridge		2012/9/26	Sunny	Sandy	<30	38	60	98	0.11	Loamy	<30	210	330	540	0.08		
			Sakabashi Bridge		2012/9/24	Cloudy	Loamy	<30	426	720	1,140	0.17	Loamy	<30	810	1,300	2,110	0.17		
			Shimomemakubashi Bridge		2012/9/24	Sunny	Loamy	<30	380	600	970	0.13	Loamy	<30	860	1,400	2,260	0.15		
8-9	Kujigawa River	Kujigawa River	Yamagata	Hitachiomiyashi City	2012/9/27	Cloudy	Loamy	<30	130	200	330	0.13	Loamy	<30	89	140	229	0.12		
					2012/7/19	Sunny	Sandy	<30	230	340	570	0.10	Sandy	<30	230	340	570	0.12		
					2012/8/20	Sunny	Loamy	<30	90	140	230	0.12	Loamy	<30	420	660	1,080	0.13		
					2012/9/11	Sunny	Loamy	<30	120	190	310	0.10	Loamy	<30	230	370	600	0.12		
					2012/9/27	Sunny	Sandy	<30	47	77	124	0.09	Sandy	<30	41	73	114	0.10		
10-11	Nakagawa River System	Nakagawa River	Nozuchi	Hitachiomiyashi City/Shimosatomachi Town	2012/9/27	Sunny	Loamy	<30	340	560	900	0.11	Loamy	<30	150	270	420	0.11		
					2012/7/19	Cloudy	Loamy	<30	220	300	520	0.12	Loamy	<30	350	580	930	0.12		
					2012/8/20	Sunny	Loamy	<30	300	480	780	0.11	Loamy	<30	490	800	1,290	0.11		
					2012/9/11	Sunny	Loamy	<30	3,200	5,100	8,300	0.16	Loamy	<30	210	360	570	0.12		
12-13	Nakagawa River System	Nakagawa River	Katsutabashi Bridge	Mitoshi City/Hitachimachi City	2012/9/28	Rain	Loamy	<30	260	420	680	0.11	Loamy	<30	350	540	890	0.12		
					2012/9/28	Rain	Loamy	<30	140	240	380	0.11	Loamy	<30	190	310	500	0.11		
14-24	Tama River System	Kitaura Lake	Nakamagawa River	Yamagisawabashi Bridge	Hitachimachi City	2012/9/28	Rain	Loamy	<30	260	420	0.11	Loamy	<30	350	540	890	0.12		
				Himuragawa River		Himuragawa Bridge	2012/9/28	Rain	Loamy	<30	140	240	380	0.11	Loamy	<30	190	310	500	0.11
				Hakotagawa River		Asahibashi Bridge	2012/9/26	Sunny	-	-	-	0.09	-	-	-	-	-	0.08	Unable to collect samples due to asphalt.	
				Tomogawa River		Shimomogawabashi Bridge	2012/9/26	Sunny	Loamy	<30	260	440	700	0.11	Loamy	<30	220	350	570	0.11
				Tarogawa River		Tanzakubashi Bridge	2012/9/27	Sunny	Loamy	<30	280	490	770	0.11	Loamy	<30	160	260	420	0.11
				Takedagawa River		Uchijukubashi Bridge	2012/9/26	Sunny	Loamy	<30	270	420	690	0.13	Loamy	<30	160	270	430	0.12
				Yamadagawa River		Noronohibashi Bridge	2012/9/27	Sunny	Loamy	<30	220	380	600	0.10	Loamy	<30	290	480	770	0.12
				Karakawa River		Karakwabashi Bridge	2012/9/27	Sunny	Loamy	<30	290	510	800	0.11	Loamy	<30	260	400	660	0.12
				Ganagawa River		OA Yokobashi	2012/9/27	Cloudy	Loamy	<30	190	300	490	0.11	Loamy	<30	330	520	850	0.12
				Naganogawa River		Sakubashi Bridge	2012/9/27	Sunny	Loamy	<30	7	7	7	0.07	-	-	-	-	0.08	Unable to collect samples due to asphalt.
				Sonogawa River		Sonobeshinbashi Bridge	2012/9/26	Sunny	Loamy	<30	360	560	920	0.10	Clayish	<30	240	420	660	0.11
				Samogawa River		Tokorobashi Bridge	2012/9/26	Sunny	Loamy	<30	390	590	980	0.11	Loamy	<30	380	610	990	0.14
				Kosogawa River		Herwabashi Bridge	2012/9/26	Sunny	Loamy	<30	470	760	1,230	0.16	Loamy	<30	260	420	680	0.15
				Kainasagawa River		Kamishukubashi Bridge	2012/9/26	Sunny	Sandy	<30	92	140	232	0.09	Sandy	<30	100	160	260	0.10
25-34	Kasumigaura Lake	Kasumigaura Lake	Hohikubashi Bridge	Kasumigaurashi City	2012/9/25	Cloudy	Sandy/loamy	<30	170	280	450	0.11	Loamy	<30	340	530	870	0.12		
					2012/9/25	Cloudy	Loamy	<30	160	250	410	0.10	Loamy	<30	200	340	540	0.10		
					2012/9/25	Cloudy	Loamy	<30	390	640	1,030	0.16	Clayish	<30	840	1,500	2,340	0.12		
					2012/9/25	Cloudy	Sandy/sandy	<30	380	620	1,000	0.11	Sandy	<30	310	500	810	0.12		
					2012/9/25	Cloudy	Clayish	<30	220	370	590	0.10	Loamy	<30	130	190	320	0.09		
					2012/9/25	Cloudy	Loamy	<30	250	430	680	0.13	Loamy	<30	470	800	1,270	0.13		
					2012/9/25	Cloudy	Loamy	<30	690	1,100	1,790	0.17	Loamy	<30	400	660	1,060	0.20		
					2012/9/24	Sunny	Loamy/sandy	<30	360	600	960	0.18	Loamy	<30	430	720	1,150	0.19		
					2012/9/24	Sunny	Loamy	<30	880	1,590	2,380	0.21	Loamy	<30	540	910	1,450	0.17		
					2012/9/24	Cloudy	Loamy	<30	250	410	660	0.12	Loamy	<30	210	340	550	0.09		
35-44	Tone River System	Kogai River	Yomokubashi Bridge	Iwakoshi City	2012/9/13	Sunny	Loamy	<30	130	210	340	0.08	Loamy	<30	130	240	370	0.10		
					2012/9/13	Sunny	Loamy	<30	41	64	105	0.07	Loamy	<30	99	150	249	0.06		
					2012/9/12	Sunny	Sandy	<30	78	130	208	0.09	Loamy	<30	71	110	181	0.08		
					2012/7/20	Cloudy	Loamy	<30	420	640	1,060	0.20	Loamy	<30	250	370	620	0.19		
					2012/8/24	Sunny	Loamy	<30	290	460	750	0.14	Loamy/sandy	<30	32	43	75	0.13		
					2012/9/12	Sunny	Loamy	<30	620	990	1,610	0.18	Sandy	<30	53	89	142	0.11		
					2012/9/12	Sunny	Loamy	<30	78	140	218	0.08	Loamy	<30	69	130	199	0.08		
					2012/9/12	Sunny	Loamy	<30	79	140	219	0.09	Loamy	<30	140	220	360	0.08		
					2012/9/13	Sunny	Loamy	<30	330	550	880	0.14	Loamy	<30	610	1,010	1,620	0.15		
					2012/9/12	Sunny	Loamy	<30	1,500	2,300	3,800	0.15	Loamy	<30	590	980	1,570	0.19		
45-47	Tonogawa River	Tonogawa River	Karibashi Bridge	Kogashi City	2012/7/20	Cloudy	Loamy	<30	180	280	460	0.10	Sandy	<30	140	240	380	0.08		
					2012/8/24	Sunny	Loamy	<30	36	54	90	0.10	Loamy	<30	150	250	400	0.10		
					2012/9/12	Sunny	Loamy	<30	120	200	320	0.08	Loamy	<30	190	320	510	0.08		
					2012/9/13	Sunny	Loamy	<30	510	850	1,360	0.22	Loamy	<30	600	1,000	1,600	0.16		
			Fukawa	Tonemachi Town	2012/7/19	Sunny	Loamy	<30	210	340	550	0.09	Sandy	<30	450	700	1,150	0.12		
			2012/8/20		Sunny	Loamy	<30	180	330	510	0.08	Loamy	<30	340	490	830	0.12			
			Sawara	Inashikishi City	2012/9/14	Sunny	Loamy	<30	300	490	790	0.08	Loamy	<30	450	730	1,180	0.11		

\*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-171 or TCS-172 of Hitachi-Aloka Medical, Ltd.

OLake and Headwater: Water Quality Monitoring Results

Sampling point				Sampling date	Weather	Full depth m	General items					Concentration of radioactive material Bq/L			Remarks
No.	Point		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	Hinuma Lake	Hiroura	Surface layer	2012/9/12	Sunny	2.5	0.5	1.2	1	1	1	<1	<1	<1	
			Bottom layer				1.9	1	1	1	<1	<1	<1		
2	Hinuma Lake	Miyamae	Surface layer	2012/9/12	Sunny	2.9	0.5	1.1	1	2	2	<1	<1	<1	
			Bottom layer				1.9	2	1	1	<1	<1	<1		
3	Hinuma Lake	Oyazawa	Surface layer	2012/9/12	Sunny	1.9	0.5	0.8	1	3	2	<1	<1	<1	
			Bottom layer				0.9	1	5	2	<1	<1	<1		
4	Kasumigaura Lake	Offshore of Tamatsukuri	Surface layer	2012/9/12	Sunny	6.8	0.5	0.5	3	9	5	<1	<1	<1	
			Bottom layer				5.8	3	19	7	<1	<1	<1		
5	Kasumigaura Lake	Offshore of Kakecuma	Surface layer	2012/9/12	Sunny	1.9	0.5	0.5	4	15	5	<1	<1	<1	
			Bottom layer				1.4	3	14	5	<1	<1	<1		
6	Kasumigaura Lake	Center of the lake	Surface layer	2012/9/12	Sunny	6.2	0.5	0.8	4	8	4	<1	<1	<1	
			Bottom layer				5.2	3	13	5	<1	<1	<1		
7	Kasumigaura Lake	Offshore of Aso	Surface layer	2012/9/12	Sunny	1.7	0.5	0.6	4	15	5	<1	<1	<1	
			Bottom layer				1.2	4	14	4	<1	<1	<1		
8	Kitaura Lake	Offshore of Kamaya	Surface layer	2012/9/12	Sunny	6.6	0.5	0.5	6	9	4	<1	<1	<1	
			Bottom layer				5.6	4	34	8	<1	<1	<1		
9	Kitaura Lake	Jingubashi Bridge	Surface layer	2012/9/12	Sunny	2.3	0.5	0.2	5	19	8	<1	<1	<1	
			Bottom layer				1.8	5	26	8	<1	<1	<1		
10	Hitachitongawa River	Sotomaskaura Lake	Surface layer	2012/9/12	Sunny	1.7	0.5	0.6	6	5	4	<1	<1	<1	
			Bottom layer				1.2	6	15	5	<1	<1	<1		
11	Hitachitongawa River	Ikisu	Surface layer	2012/9/12	Sunny	5.2	0.5	0.7	13	4	2	<1	<1	<1	
			Bottom layer				4.2	24	4	2	<1	<1	<1		
12	Ushikumuna Lake	Center of Ushikumuna Lake	Surface layer	2012/9/13	Sunny	1.3	0.5	0.3	28	29	9	<1	<1	<1	. Collected only from the surface layer due to shallow water
			Bottom layer				-	-	-	-	-	-	-	-	

OLake and Headwater: Sediment and Surrounding Environment (Lake Shore) Monitoring Results

Sampling point				Sampling date	Weather	Full depth m	Sediment					Surrounding environment (lake shore)					Remarks			
No.	Point		Mud sampling depth cm				Mud content %	Property	Concentration of radioactive material Bq/kg (dried mud)				Property	Concentration of radioactive material Bq/kg (dry)				Air dose μSv/h		
						Radioactive iodine I-131	Cs-134	Radioactive cesium Cs-137		Total	Radioactive iodine I-131	Cs-134		Radioactive cesium Cs-137		Total				
1	Hinuma Lake	Hiroura	2012/9/12	Sunny	2.5	13	44	Silt	<30		39	83	122	Loamy	<30		53	82	135	0.11
			2012/9/12	Sunny	2.9	5	41	Silt	<30		31	67	98	Loamy	<30		25	36	61	0.02
3	Hinuma Lake	Oyazawa	2012/9/12	Sunny	1.9	3	45	Silt	<30		310	500	810	-	-	-	-	-	-	Soil not exposed
			2012/9/12	Sunny	6.8	10	33	Silt	<30		71	150	201	Sandy	<30		10	13	23	0.07
5	Kasumigaura Lake	Offshore of Kakecuma	2012/9/12	Sunny	1.9	10	81	Sand	<30		160	270	430	Loamy	<30		<10	<10	-	0.10
			2012/9/12	Sunny	6.2	10	29	Silt	<30		53	98	151	-	-	-	-	-	-	Soil not exposed
7	Kasumigaura Lake	Offshore of Aso	2012/9/12	Sunny	1.7	10	84	Sand	<30		72	130	202	Sandy	<30		46	81	127	0.13
			2012/9/12	Sunny	6.6	10	26	Silt	<30		200	320	520	Sandy	<30		310	500	810	0.11
9	Kitaura Lake	Jingubashi Bridge	2012/9/12	Sunny	2.3	10	75	Sand	<30		39	64	103	Sandy	<30		17	32	49	0.06
			2012/9/12	Sunny	1.7	10	85	Sand	<30		40	57	97	Loamy	<30		150	250	400	0.09
11	Hitachitongawa River	Ikisu	2012/9/12	Sunny	5.2	10	83	Sand	<30		60	92	152	Loamy	<30		140	230	370	0.09
			2012/9/13	Sunny	1.3	10	38	Mud	<30		450	720	1,170	Loamy	<30		130	190	320	0.12

\*Sampling points are listed from north to south.

\*Air dose was measured with a survey meter, TCS-171 or TCS-172 of Hitachi-Aloka Medical, Ltd.

### ○Coast: Water Quality Monitoring Results

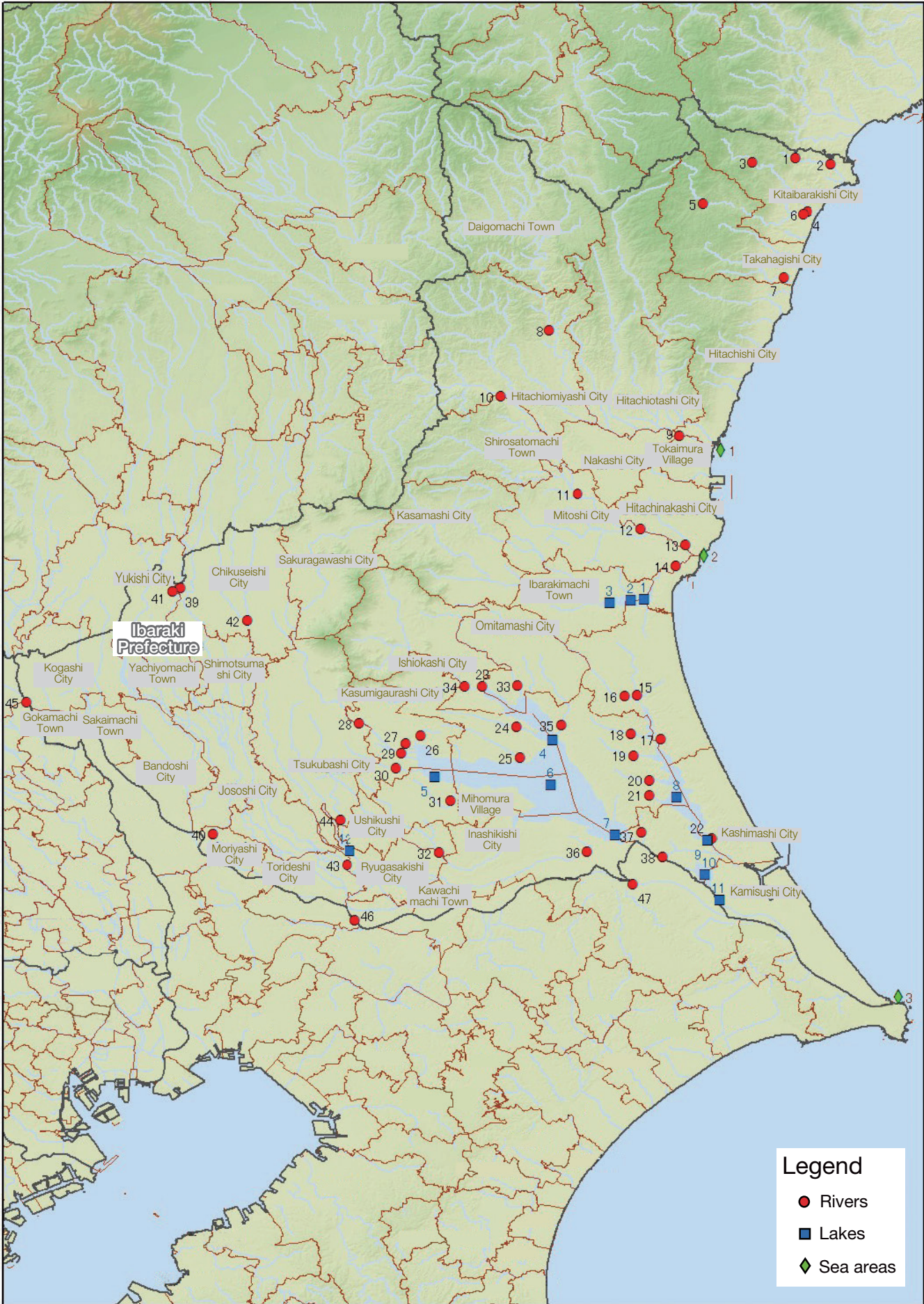
Sampling point		Sampling date	Weather	Full depth	General items					Concentration of radioactive material Bq/L			Remarks	
No.	Water body				Sampling depth m	Secchi disk depth m	Salinity ‰	S S mg/L	Turbidity	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137			
1	Offshore of Momiya-gawa River/Kujigawa River Estuaries	Surface layer	2012/7/24	Cloudy	10.0	0.5	3.5	28	3	3	<1	<1	<1	
		Bottom layer				9.0		31	2	3	<1	<1	<1	
		Surface layer	2012/8/20	Sunny	9.0	0.5	2.5	25	3	1	<1	<1	<1	
		Bottom layer				8.0	31	4	1	<1	<1	<1		
2	Neighboring water body of Ken-o Offshore of Nakagawa River	Surface layer	2012/7/24	Sunny	5.3	0.5	2.0	9	3	2	<1	<1	<1	
		Bottom layer				4.3		28	9	4	<1	<1	<1	
		Surface layer	2012/8/20	Sunny	5.7	0.5	1.5	18	5	3	<1	<1	<1	
		Bottom layer				4.7	27	5	3	<1	<1	<1		
3	Offshore of Tonegawa River Estuary	Surface layer	2012/7/31	Sunny	8.0	0.5	2.0	25	11	3	<1	<1	<1	
		Bottom layer				7.0		31	35	10	<1	<1	<1	
		Surface layer	2012/8/21	Sunny	7.9	0.5	1.0	12	5	3	<1	<1	<1	
		Bottom layer				6.9	29	7	2	<1	<1	<1		

### ○Coast: Sediment Monitoring Results

Sampling point		Sampling date	Weather	Full depth	General items			Concentration of radioactive material Bq/kg (dried mud)				Remarks
No.	Water body				Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Cs-134	Radioactive cesium Cs-137 Total		
1	Offshore of Momiya-gawa River/Kujigawa River Estuaries	2012/7/24	Cloudy	10.0	3	78	Sand	<30	24	36	60	
		2012/8/20	Sunny	9.0	5	78	Sand	<30	28	41	69	
2	Neighboring water body of Ken-o Offshore of Nakagawa River	2012/7/24	Sunny	5.3	3	94	Sand	<30	<10	<10	-	
		2012/8/20	Sunny	5.7	5	93	Sand	<30	<10	<10	-	
3	Offshore of Tonegawa River Estuary	2012/7/31	Sunny	8.0	15	79	Sand	<30	13	12	25	
		2012/8/21	Sunny	7.9	5	84	Sand	<30	<10	<10	-	

\*Sampling points are listed from north to south.





**Ibaraki Prefecture**

**Legend**

- Rivers
- Lakes
- ◆ Sea areas