

(Press Release)  
The Results of Radioactive Material Monitoring of the Surface Water Bodies  
within Ibaraki Prefecture

Friday, December 2, 2011  
Water Environment Division,  
Environment Management Bureau,  
Ministry of the Environment  
Direct line: 03-5521-8316  
Switchboard: 03-3581-3351  
Director: Nobuo Yoshida (ext. 6610)  
Deputy Director: Tetsuo Furuta (ext. 6614)  
Coordinator: Hiroaki Hase (ext. 6628)

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 August 30-October 8 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 Fukushima Prefecture (September 15-October 14 samples) have already been released on November 15.

## 1. Survey Overview

### (1) Survey Locations

128 environmental reference points, etc. in the surface water bodies within Ibaraki Prefecture  
(Rivers: 93 locations, Lakes and headwaters: 12 locations, Coasts and bathing areas: 23 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

### (1) Water Quality

Radioactive iodine (I-131) and radioactive cesium (Cs-134, Cs-137) were not detectable (ND) at any location (Lower detection limit: 1Bq/L).

\*“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))

- Radioactive cesium

(Rivers)

Cs-134: ND-2,600Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

Cs-137: ND-3,000Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

(Lakes and headwaters)

Cs-134: ND-850Bq/kg (dried mud) (Lower detection limit: 20Bq/kg (dried mud))  
Cs-137: 37-990Bq/kg (dried mud)

(Coasts and bathing areas)

Cs-134: ND-76Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))  
Cs-137: 11-97Bq/kg (dried mud) (Lower detection limit: 10Bq/kg (dried mud))

### (3) Surrounding Environment

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

- Radioactive cesium

(Rivers)

Cs-134: 53-4,800Bq/kg (dry)

Cs-137: 61-5,200Bq/kg (dry)

(Lakes and headwaters)

Cs-134: 22-1,400Bq/kg (dry)

Cs-137: 22-1,600Bq/kg (dry)

(Coasts and bathing areas)

Cs-134: ND-660Bq/kg (dry) (Lower detection limit: 10Bq/kg (dry))

Cs-137: 18-820Bq/kg (dry)

- Spatial dose

(Rivers) 0.04-0.48 $\mu$ Sv/h

(Lakes and headwaters) 0.07-0.22 $\mu$ Sv/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 the following prefectures: Fukushima, Miyagi, Yamagata (some parts), Ibaraki, Tochigi, Gunma, and Chiba (some parts).

# ○River (Ibaraki Pref.-1): Water Quality Monitoring Results

(Annex)

Sampling point			Sampling date	Weather	Air temperature ℃	Full depth m	General items					Surrounding environment (lake shore and beach)			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				
T a g a R i v e r S y s t e m	Satonegawa River	Yamagoyabashi Bridge	Kitabarakishi City	2011/9/8	Sunny	23.4	0.35	16.6	0.0	100 or more	13.1	3	1.2	<1	<1	<1		
		Murayamabashi Bridge	Kitabarakishi City	2011/9/8	Sunny	31.2	0.55	22.1	0.0	100 or more	19.8	4	1.9	<1	<1	<1		
	Edokamigawa River	Daiichikamiokabashi Bridge	Kitabarakishi City	2011/9/8	Sunny	30.0	0.25	24.8	0.0	78	175.9	16	8.1	<1	<1	<1		
	Hanazonogawa River	Kurabeishi	Kitabarakishi City	2011/9/9	Sunny	21.6	0.35	15.8	0.0	100 or more	5.5	3	1.5	<1	<1	<1		
		Isonarebashi Bridge	Kitabarakishi City	2011/9/9	Cloudy, then sunny	27.2	0.45	20.0	0.0	100 or more	20.2	3	2.3	<1	<1	<1		
	Okitagawa River	Sakaebashi Bridge	Takahagishi City	2011/9/9	Cloudy	29.9	0.60	16.7	0.0	100 or more	6.2	6	2.2	<1	<1	<1		
		Sakaibashi Bridge	Kitabarakishi City	2011/9/9	Sunny	28.9	0.50	20.2	0.0	100 or more	10.4	9	4.1	<1	<1	<1		
	Shiotagawa River	Shimbashi Bridge	Kitabarakishi City	2011/9/10	Clear	27.1	0.30	21.3	0.0	100 or more	38.4	5	3.1	<1	<1	<1		
	Sekinemaekawa River	Takinowakiseki Weir	Takahagishi City	2011/9/10	Clear	27.0	0.20	20.0	0.0	61	7.7	12	11	<1	<1	<1		
	Sekinegawa River	Hanedabashi Bridge	Takahagishi City	2011/9/10	Clear	30.5	0.40	20.2	0.0	100 or more	22.2	2	1.6	<1	<1	<1		
	Hananukigawa River	Torizonebashi Bridge	Takahagishi City	2011/9/10	Sunny	26.0	0.30	16.3	0.0	83	11.9	8	5.9	<1	<1	<1		
Shinhananukibashi Bridge		Takahagishi City	2011/9/10	Sunny	30.8	0.40	22.0	0.0	100 or more	14.1	4	2.0	<1	<1	<1			
Juogawa River	Kawajiriseki Weir	Hitachishi City	2011/9/10	Sunny	31.2	0.40	21.9	0.0	100 or more	15.3	4	2.7	<1	<1	<1			
Miyatagawa River	Miyatagawabashi Bridge	Hitachishi City	2011/9/11	Sunny	25.2	0.29	22.8	0.0	89	183.9	5	3.2	<1	<1	<1			
S R i j i g a w a S y s t e m	Yamizogawa River	Mannenbashi Bridge	Daigomachi Town	2011/9/11	Sunny	29.8	0.25	23.1	0.0	100 or more	8.8	5	2.6	<1	<1	<1		
	Oshigawa River	Oshigawabashi Bridge	Daigomachi Town	2011/9/11	Sunny	31.3	0.45	21.4	0.0	100 or more	10.3	3	2.3	<1	<1	<1		
	Takikawa River	Koisobashi Bridge	Daigomachi Town	2011/9/11	Sunny	32.6	0.45	27.7	0.0	100 or more	20.3	1	1.3	<1	<1	<1		
	Kujigawa River	Yamagata	Hitachiomiya City	2011/9/11	Sunny	26.9	0.65	25.5	0.0	100 or more	11.2	5	3.1	<1	<1	<1		
	Asakawa River	Asakawabashi Bridge	Hitachiotashi City	2011/9/10	Sunny	28.6	0.37	24.3	0.0	100	42.2	9	8.5	<1	<1	<1		
	Tamagawa River	Shimotamagawabashi Bridge	Hitachiomiya City/Nakashi City	2011/9/8	Sunny	27.7	0.66	25.9	0.0	90	21.4	8	4.6	<1	<1	<1		
	Yamadagawa River	Azumabashi Bridge	Hitachiomiya City	2011/9/10	Sunny	32.7	0.87	24.6	0.0	82	22.4	9	8.1	<1	<1	<1		
	Satogawa River	Shinochiabashi Bridge	Hitachiomiya City	2011/9/10	Clear	31.8	1.00	24.4	0.0	100 or more	13.6	13	8.0	<1	<1	<1		
	Kujigawa River	Sakakibashi Bridge	Hitachishi City/Tokaimura Village	2011/9/10	Sunny	31.8	0.80	25.3	0.0	87.5	13.7	8	6.3	<1	<1	<1		
	Momiyagawa River	Shimizubashi Bridge	Hitachishi City	2011/9/11	Sunny	25.9	1.89	28.2	0.0	24	1281.0	20	17	<1	<1	<1		
Shinkawa River System	Shinkawa River	Oebashi Bridge	Tokaimura Village	2011/9/11	Sunny	27.0	0.30	22.9	0.0	82	24.6	9	6.8	<1	<1	<1		
N a k a g a w a S y s t e m	R i v e r	Ogawa River	Ogawabashi Bridge	Hitachiomiya City	2011/9/8	Sunny	23.0	0.38	21.2	0.0	100 or more	13.9	2	1.2	<1	<1	<1	
		Nakagawa River	Noguchi	Hitachiomiya City/Shirosatomachi Town	2011/9/8	Sunny	29.1	0.71	21.1	0.0	100 or more	12.5	6	4.3	<1	<1	<1	
		Shiokogawa River	Isozakibashi Bridge	Shirosatomachi Town	2011/9/8	Sunny	29.4	0.28	20.4	0.0	100 or more	14.6	5	2.8	<1	<1	<1	
		Fujigawa River	Kamiaibashi Bridge	Mitoshi City	2011/9/12	Sunny	31.6	1.40	22.9	0.0	100 or more	15.1	5	3.5	<1	<1	<1	
		Nakagawa River	Shimokunii	Mitoshi City	2011/9/12	Sunny	32.7	1.30	24.9	0.0	88	15.2	9	6.6	<1	<1	<1	
		Hayatogawa River	Mutumabashi Bridge	Hitachinakashi City/Nakashi City	2011/9/11	Sunny	28.6	0.25	24.9	0.0	88	24.4	11	8.6	<1	<1	<1	
			Water purification plant, down	Hitachinakashi City	2011/9/11	Sunny	30.2	0.30	25.5	0.0	100 or more	34.8	9	5.5	<1	<1	<1	
		Sakuragawa River	Ekinankohashi Bridge	Mitoshi City	2011/9/12	Sunny	33.2	0.70	27.3	0.0	24	23.3	37	25	<1	<1	<1	
		Nakagawa River	Katsutabashi Bridge	Mitoshi City/Hitachinakashi City	2011/9/11	Sunny	29.0	6.05	24.9	0.0	93	16.4	7	8.0	<1	<1	<1	
		Nakamarugawa River	Yanagisawabashi Bridge	Hitachinakashi City	2011/10/3	Sunny	21.2	0.20	18.7	0.0	53	82.3	13	11	<1	<1	<1	
	H i n u m a g a w a R i v e r	Hinumamaekawa River	Nagaokabashi Bridge	Ibarakimachi Town	2011/10/4	Clear	23.2	0.10	17.0	0.0	100 or more	21.2	5	5.2	<1	<1	<1	
		Hinumagawa River	Takahashi	Ibarakimachi Town	2011/10/4	Clear	18.7	0.20	15.1	0.0	100 or more	21.9	5	3.9	<1	<1	<1	
		Kanseigawa River	Kanseibashi Bridge	Ibarakimachi Town	2011/10/4	Sunny	16.2	0.60	14.3	0.0	100 or more	25.5	6	3.4	<1	<1	<1	
Dayagawa River		Oyabashi Bridge	Hokotashi City/Oaraimachi Town	2011/10/4	Sunny	12.1	0.60	14.1	0.0	98	4.9	9	6.4	<1	<1	<1		
Ishikawagawa River		Inobashi Bridge	Mitoshi City	2011/9/12	Sunny	28.1	0.60	25.7	0.0	23	27.8	42	20	<1	<1	<1		
Hinumagawa River	Hinumabashi Bridge	Mitoshi City/Oaraimachi Town	2011/10/3	Sunny	21.4	0.60	19.1	0.0	100 or more	14.0	6	4.8	<1	<1	<1			
T o n e g a w a R i v e r S y s t e m	K i t a u r a L a k e	Hokotagawa River	Asahibashi Bridge	Hokotashi City	2011/9/10	Sunny	31.1	1.00	23.0	0.0	93	36.4	7	6.3	<1	<1	<1	
		Tomogawa River	Shintomogawabashi Bridge	Hokotashi City	2011/9/10	Clear	29.8	0.80	22.0	0.0	46	27.7	18	11	<1	<1	<1	
		Taiyogawa River	Tazukabashi Bridge	Hokotashi City	2011/9/10	Sunny	31.4	0.23	20.7	0.0	100 or more	26.7	12	6.4	<1	<1	<1	
		Takedagawa River	Uchijukuohashi Bridge	Namegatashi City	2011/10/3	Sunny	21.8	0.40	16.0	0.0	80	30.9	8	6.6	<1	<1	<1	
		Yamadagawa River	Nioroshbashi Bridge	Namegatashi City	2011/10/3	Sunny	22.0	0.55	17.3	0.0	16	30.7	43	37	<1	<1	<1	
		Kurakawa River	Kurakawabashi Bridge	Namegatashi City	2011/10/3	Sunny	22.1	0.88	17.7	0.0	50	31.6	13	11	<1	<1	<1	
		Gantsugawa River	JA Yokohashi	Namegatashi City	2011/10/3	Sunny	23.3	0.19	20.8	0.0	79	29.3	7	6.5	<1	<1	<1	
		Nagaregawa River	Suhoibashi Bridge	Kashimashi City	2011/10/4	Sunny	22.0	0.20	18.6	0.0	34	43.6	18	22	<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 (Ibaraki Pref.-1): Sediment Monitoring Results

Water body		Sampling point		Sampling date	Weather	Air temperature ℃	Full depth m	General items				Concentration of radioactive material Bq/kg (dried mu			Remarks	
								Mud temperature ℃	Mud sampling depth cm	Mud content %	Property	Radioactive iodine		Radioactive cesium		
												I-131	Cs-134	Cs-137		
T a g a S y s t e m R i v e r	Satonegawa River	Yamagoyabashi Bridge	Kitabarakishi City	2011/9/8	Sunny	23.4	0.35	17.2	10	77.5	Sand	<30	900	1,100		
		Murayamabashi Bridge	Kitabarakishi City	2011/9/8	Sunny	31.2	0.55	22.5	10	75.2	Sand with gravel	<30	320	390		
	Edokamigawa River	Daichikamioabashi Bridge	Kitabarakishi City	2011/9/8	Sunny	30.0	0.25	18.8	7	71.8	Sand with gravel	<30	270	290		
		Kurabeishi	Kitabarakishi City	2011/9/9	Sunny	21.6	0.35	15.8	7	82.0	Sand with gravel	<30	110	140		
	Hanazonogawa River	Isonarebashi Bridge	Kitabarakishi City	2011/9/9	Cloudy, then sunny	27.2	0.45	20.1	5	80.8	Sand	<30	140	160		
		Sakaebashi Bridge	Takahagishi City	2011/9/9	Cloudy	29.9	0.60	16.8	5	54.7	Sand with silt	<30	1,400	1,700		
	Okitagawa River	Sakaibashi Bridge	Kitabarakishi City	2011/9/9	Sunny	28.9	0.50	20.3	5	60.0	Silt with sand	<30	1,000	1,200		
		Shinbashi Bridge	Kitabarakishi City	2011/9/10	Clear	27.1	0.30	21.5	5	77.8	Sand	<30	180	200		
	Sekinemaekawa River	Takinowakiseki Weir	Takahagishi City	2011/9/10	Clear	27.0	0.20	20.2	5	77.2	Sand	<30	260	310		
	Sekinegawa River	Hanedabashi Bridge	Takahagishi City	2011/9/10	Clear	30.5	0.40	20.5	5	78.1	Sand	<30	320	370		
	Hananukigawa River	Torizonebashi Bridge	Takahagishi City	2011/9/10	Sunny	26.0	0.30	17.0	10	80.9	Sand	<30	51	61		
		Shinhananukibashi Bridge	Takahagishi City	2011/9/10	Sunny	30.8	0.40	22.3	10	79.2	Sand	<30	300	350		
	Juogawa River	Kawajiriseki Weir	Hitachishi City	2011/9/10	Sunny	31.2	0.40	24.9	10	78.3	Sand with gravel	<30	73	80		
Miyatagawa River	Miyatagawabashi Bridge	Hitachishi City	2011/9/11	Sunny	25.2	0.29	23.6	5	90.4	Sand with gravel	<30	64	79			
S r j i v e r S y s t e m	Yamizogawa River	Mannenbashi Bridge	Daigomachi Town	2011/9/11	Sunny	29.8	0.25	21.9	8	76.9	Gravel/sand with silt	<30	78	98		
		Oshigawa River	Oshigawabashi Bridge	Daigomachi Town	2011/9/11	Sunny	31.3	0.45	22.2	10	85.3	Sand with gravel	<30	12	19	
	Takikawa River	Koisobashi Bridge	Daigomachi Town	2011/9/11	Sunny	32.6	0.45	27.0	10	80.4	Sand	<30	43	62		
	Kujigawa River	Yamagata	Hitachiomiyashi City	2011/9/11	Sunny	26.9	0.65	25.4	10	65.9	Silt with sand	<30	470	570		
	Asakawa River	Asakawabashi Bridge	Hitachiotashi City	2011/9/10	Sunny	28.6	0.37	24.3	5	72.0	Sand with gravel	<30	63	87		
	Tamagawa River	Shimotamagawabashi Bridge	Hitachiomiyashi City/Nakashi City	2011/9/8	Sunny	27.7	0.66	25.4	5	81.1	Gravel with sand	<30	81	91		
	Yamadagawa River	Azumabashi Bridge	Hitachiomiyashi City	2011/9/10	Sunny	32.7	0.87	24.5	10	81.8	Sand with gravel	<30	11	10		
	Satogawa River	Shinochiaibashi Bridge	Hitachiomiyashi City	2011/9/10	Clear	31.8	1.00	24.4	10	81.3	Sand	<30	23	37		
	Kujigawa River	Sakakibashi Bridge	Hitachishi City/Tokaimura Village	2011/9/10	Sunny	31.8	0.80	25.2	5	66.8	Sand with silt	<30	120	170		
	Momiyagawa River	Shimizubashi Bridge	Hitachishi City	2011/9/11	Sunny	25.9	1.89	28.6	10	51.9	Silt with sand	<30	480	560		
Shinkawa River System	Oebashi River	Oebashi Bridge	Tokaimura Village	2011/9/11	Sunny	27.0	0.30	23.0	4	73.6	Sand	<30	580	670		
N a k a g a S y s t e m R i v e r	N a k a g a R i v e r	Ogawa River	Ogawabashi Bridge	Hitachiomiyashi City	2011/9/8	Sunny	23.0	0.38	21.6	10	81.9	Sand with gravel	<30	36	41	
		Nakagawa River	Noguchi	Hitachiomiyashi City/Shirosatomachi Town	2011/9/8	Sunny	29.1	0.71	22.8	5	79.8	Sand with gravel	<30	75	94	
		Shiokogawa River	Isozakibashi Bridge	Shirosatomachi Town	2011/9/8	Sunny	29.4	0.28	20.4	5	81.3	Sand with gravel	<30	38	58	
		Fujigawa River	Kamiabashi Bridge	Mitoshi City	2011/9/12	Sunny	31.6	1.40	22.9	5	91.0	Gravel	<30	50	57	
		Nakagawa River	Shimokunii	Mitoshi City	2011/9/12	Sunny	32.7	1.30	22.0	10	36.7	Silt with sand	<30	2,500	3,000	
		Hayatogawa River	Mutsumibashi Bridge	Hitachinakashi City/Nakashi City	2011/9/11	Sunny	28.6	0.25	24.7	10	71.8	Sand with gravel	<30	150	160	
			Water purification plant, down	Hitachinakashi City	2011/9/11	Sunny	30.2	0.30	25.3	5	79.1	Sand with gravel	<30	150	200	
		Sakuragawa River	Ekinankohashi Bridge	Mitoshi City	2011/9/12	Sunny	33.2	0.70	27.9	10	63.2	Silt	<30	38	71	
	H i n u m a g a w a R i v e r	Nakagawa River	Katsutabashi Bridge	Mitoshi City/Hitachinakashi City	2011/9/11	Sunny	29.0	6.05	22.8	10	39.2	Silt with sand	<30	2,000	2,400	
		Nakamarugawa River	Yanagisawabashi Bridge	Hitachinakashi City	2011/10/3	Sunny	21.2	0.20	19.5	10	35.0	Sand with silt	<30	2,000	2,400	
		Hinumamaekawa River	Nagaokabashi Bridge	Ibarakimachi Town	2011/10/4	Clear	23.2	0.10	16.9	10	77.7	Sand with gravel	<30	220	240	
		Hinumagawa River	Takahashi	Ibarakimachi Town	2011/10/4	Clear	18.7	0.20	16.2	10	87.8	Sand with gravel	<30	37	47	
		Kanseigawa River	Kanseibashi Bridge	Ibarakimachi Town	2011/10/4	Sunny	16.2	0.60	14.5	10	87.1	Sand with gravel	<30	76	91	
		Daiyagawa River	Oyabashi Bridge	Hokotashi City/Oaraimachi Town	2011/10/4	Sunny	12.1	0.60	14.8	10	82.7	Sand with gravel	<30	140	180	
T o n e g a w a R i v e r S y s t e m	K i t a u r a L a k e	Ishikawagawa River	Inobashi Bridge	Mitoshi City	2011/9/12	Sunny	28.1	0.60	25.6	10	77.5	Sand with silt	<30	74	81	
		Hinumagawa River	Hinumabashi Bridge	Mitoshi City/Oaraimachi Town	2011/10/3	Sunny	21.4	0.60	19.2	10	75.4	Sand with gravel	<30	270	360	
		Hokotagawa River	Asahibashi Bridge	Hokotashi City	2011/9/10	Sunny	31.1	1.00	25.3	5	76.1	Sand	<30	170	220	
		Tomoeogawa River	Shintomeogawabashi Bridge	Hokotashi City	2011/9/10	Clear	29.8	0.80	24.2	5	81.1	Sand with gravel	<30	130	150	
		Taiyogawa River	Tazukabashi Bridge	Hokotashi City	2011/9/10	Sunny	31.4	0.23	24.0	5	70.3	Sand	<30	330	390	
		Takedagawa River	Uchijukuhashi Bridge	Namegataashi City	2011/10/3	Sunny	21.8	0.40	16.3	10	79.0	Sand	<30	200	260	
		Yamadagawa River	Nioroshibashi Bridge	Namegataashi City	2011/10/3	Sunny	22.0	0.55	17.4	5	70.8	Sand with gravel	<30	270	330	
		Kurakawa River	Kurakawabashi Bridge	Namegataashi City	2011/10/3	Sunny	22.1	0.88	18.1	10	62.8	Sand with silt	<30	460	560	
Gantsugawa River	JA Yokohashi	Namegataashi City	2011/10/3	Sunny	23.3	0.19	20.0	3	84.5	Sand with gravel	<30	150	170			
Nagaregawa River	Suhoibashi Bridge	Kashimashi City	2011/10/4	Sunny	22.0	0.20	19.6	2	72.8	Gravel/sand with silt	<30	580	680			

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

○River (Ibaraki Pref.-1): Surrounding Environment (River Terrace) Monitoring Results

Sampling point				Sampling date	Weather	Air temperature ℃	Left bank					Right bank					Remarks	
							Soil			Air dose μSv/h	Soil			Air dose μSv/h				
							Property	concentration of radioactive material Bq/kg(dr)			Property	concentration of radioactive material Bq/kg(dr)						
Water body	Point	Municipality	Radioactive iodine I-131	Radioactive cesium Cs-134	Cs-137	Radioactive iodine I-131	Radioactive cesium Cs-134	Cs-137										
T a g a s t R i v e r	Satonegawa River	Yamagoyabashi Bridge	Kitaibarakishi City	2011/9/8	Sunny	23.4	Clay-loamy	<30	190	230	0.48	Loamy	<30	570	700	0.35		
		Murayamabashi Bridge	Kitaibarakishi City	2011/9/8	Sunny	31.2	Sandy	<30	890	1,000	0.22	Loamy	<30	320	410	0.20		
	Edokamigawa River	Daichikamiokabashi Bridge	Kitaibarakishi City	2011/9/8	Sunny	30.0	Loamy	<30	1,200	1,500	0.20	Clay-loamy	<30	1,400	1,700	0.19		
	Hanazonogawa River	Kurabeishi	Kitaibarakishi City	2011/9/9	Sunny	21.6	Sandy	<30	310	370	0.22	Sandy	<30	250	300	0.21		
		Isonarebashi Bridge	Kitaibarakishi City	2011/9/9	Cloudy, then sunny	27.2	Loamy	<30	1,000	1,100	0.23	Loamy	<30	1,200	1,300	0.26		
	Okitagawa River	Sakaebashi Bridge	Takahagishi City	2011/9/9	Cloudy	29.9	Sandy	<30	120	160	0.15	Sandy	<30	290	350	0.14		
		Sakaibashi Bridge	Kitaibarakishi City	2011/9/9	Sunny	28.9	Loamy	<30	520	620	0.22	Loamy	<30	910	1,000	0.21		
	Shiotagawa River	Shinbashi Bridge	Kitaibarakishi City	2011/9/10	Clear	27.1	Loamy	<30	280	330	0.18	Loamy	<30	270	310	0.20		
	Sekinemaekawa River	Takinowakiseki Weir	Takahagishi City	2011/9/10	Clear	27.0	Sandy	<30	350	450	0.26	Sandy	<30	500	580	0.28		
	Sekinegawa River	Hanedabashi Bridge	Takahagishi City	2011/9/10	Clear	30.5	Sandy	<30	380	460	0.22	Sandy	<30	660	780	0.25		
		Torizonebashi Bridge	Takahagishi City	2011/9/10	Sunny	26.0	Sandy	<30	360	430	0.17	Sandy	<30	430	500	0.20		
		Shinhanukibashi Bridge	Takahagishi City	2011/9/10	Sunny	30.8	Sandy	<30	1,600	1,800	0.17	Sandy	<30	660	850	0.18		
		Kawajiriseki Weir	Hitachishi City	2011/9/10	Sunny	31.2	Clay-loamy	<30	1,300	1,500	0.12	Sandy	<30	120	160	0.10		
	Miyatagawa River	Miyatagawabashi Bridge	Hitachishi City	2011/9/11	Sunny	25.2	Sandy	<30	240	270	0.20	Loamy	<30	160	190	0.14		
S y s t e m	K u j i g a w a	Yamizogawa River	Mannenbashi Bridge	Daigomachi Town	2011/9/11	Sunny	29.8	Loamy	<30	140	170	0.21	Loamy	<30	230	280	0.20	*1
		Oshigawa River	Oshigawabashi Bridge	Daigomachi Town	2011/9/11	Sunny	31.3	Loamy	<30	160	170	0.17	Loamy	<30	100	120	0.21	*1
		Takikawa River	Koisoabashi Bridge	Daigomachi Town	2011/9/11	Sunny	32.6	Sandy	<30	170	220	0.14	Loamy	<30	92	110	0.15	*1
		Kujigawa River	Yamagata	Hitachiomiyashi City	2011/9/11	Sunny	26.9	Loamy	<30	140	150	0.21	Sandy	<30	73	85	0.21	*1
		Asakawa River	Asakawabashi Bridge	Hitachiotashi City	2011/9/10	Sunny	28.6	Clay-loamy	<30	260	340	0.17	Clay-loamy	<30	290	310	0.17	*1
		Tamagawa River	Shinotamagawabashi Bridge	Hitachiomiyashi City/Nakashi City	2011/9/8	Sunny	27.7	Clay-loamy	<30	240	280	0.13	Clay-loamy	<30	270	290	0.12	
		Yamadagawa River	Azumabashi Bridge	Hitachiomiyashi City	2011/9/10	Sunny	32.7	Clay-loamy	<30	180	190	0.17	Clay-loamy	<30	340	410	0.21	*1
		Satogawa River	Shinochiaibashi Bridge	Hitachiomiyashi City	2011/9/10	Clear	31.8	Clay-loamy	<30	620	730	0.21	Clay-loamy	<30	530	640	0.21	*1
		Kujigawa River	Sakakibashi Bridge	Hitachishi City/Tokaimura Village	2011/9/10	Sunny	31.8	Clay-loamy	<30	270	300	0.24	Loamy	<30	310	340	0.22	*1
		Momiyagawa River	Shimizubashi Bridge	Hitachishi City	2011/9/11	Sunny	25.9	Sandy	<30	110	110	0.13	Loamy	<30	240	300	0.14	
Shinkawa River System		Oebashi Bridge	Tokaimura Village	2011/9/11	Sunny	27.0	Loamy	<30	340	450	0.14	Loamy	<30	590	730	0.15		
N a k a g a w a R i v e r	N a k a g a w a	Ogawa River	Ogawabashi Bridge	Hitachiomiyashi City	2011/9/8	Sunny	23.0	Clay-loamy	<30	220	260	0.12	Clay-loamy	<30	420	530	0.13	
		Nakagawa River	Noguchi	Hitachiomiyashi City/Shirosatomachi Town	2011/9/8	Sunny	29.1	Loamy	<30	370	410	0.13	Loamy	<30	800	980	0.10	
		Shiokogawa River	Isozakibashi Bridge	Shirosatomachi Town	2011/9/8	Sunny	29.4	Loamy	<30	180	220	0.13	—	—	—	—	0.12	
		Fujigawa River	Kamiabashi Bridge	Mitoshi City	2011/9/12	Sunny	31.6	Loamy	<30	250	290	0.09	Loamy	<30	470	550	0.09	
		Nakagawa River	Shimokunii	Mitoshi City	2011/9/12	Sunny	32.7	Loamy	<30	420	530	0.10	Clay-loamy	<30	700	760	0.10	
		Hayatogawa River	Mutsumibashi Bridge	Hitachinakashi City/Nakashi City	2011/9/11	Sunny	28.6	Loamy	<30	330	420	0.13	Loamy	<30	500	550	0.15	
			Water purification plant, down	Hitachinakashi City	2011/9/11	Sunny	30.2	Sandy	<30	130	140	0.12	Loamy	<30	190	200	0.12	
		Sakuragawa River	Ekinankohashi Bridge	Mitoshi City	2011/9/12	Sunny	33.2	Sandy	<30	970	1,100	0.09	Loamy	<30	520	620	0.08	
		Nakagawa River	Katsutabashi Bridge	Mitoshi City/Hitachinakashi City	2011/9/11	Sunny	29.0	Loamy	<30	370	390	0.12	Sandy	<30	390	440	0.14	
		Nakamarugawa River	Yanagisawabashi Bridge	Hitachinakashi City	2011/10/3	Sunny	21.2	Loamy	<30	370	450	0.15	Loamy	<30	200	240	0.15	
		Hinumamaekawa River	Nagaokabashi Bridge	Ibarakimachi Town	2011/10/4	Clear	23.2	Loamy	<30	170	200	0.14	Loamy	<30	180	220	0.16	
		Hinumagawa River	Takahashi	Ibarakimachi Town	2011/10/4	Clear	18.7	Loamy	<30	310	360	0.15	Loamy	<30	290	360	0.14	
		Kanseigawa River	Kanseibashi Bridge	Ibarakimachi Town	2011/10/4	Sunny	16.2	Loamy	<30	190	230	0.16	Loamy	<30	870	1,000	0.18	
		Daiyagawa River	Oyabashi Bridge	Hokotashi City/Oaraimachi Town	2011/10/4	Sunny	12.1	Loamy	<30	700	840	0.13	—	—	—	—	—	
		Ishikawagawa River	Inobashi Bridge	Mitoshi City	2011/9/12	Sunny	28.1	Loamy	<30	1,300	1,400	0.13	Loamy	<30	870	1,000	0.12	
		Hinumagawa River	Hinumabashi Bridge	Mitoshi City/Oaraimachi Town	2011/10/3	Sunny	21.4	Loamy	<30	410	460	0.25	Loamy	<30	850	990	0.18	
		T o n e g a w a R i v e r S y s t e m	K i t a u r a L a k e	Hokotagawa River	Asahibashi Bridge	Hokotashi City	2011/9/10	Sunny	31.1	—	—	—	0.17	—	—	—	—	0.24
Tomoegawa River	Shintomoegawabashi Bridge			Hokotashi City	2011/9/10	Clear	29.8	Clay-loamy	<30	420	500	0.34	Clay-loamy	<30	450	540	0.34	*1
Taiyogawa River	Tazukabashi Bridge			Hokotashi City	2011/9/10	Sunny	31.4	Clay-loamy	<30	450	550	0.29	Clay-loamy	<30	420	500	0.31	*1
Takedagawa River	Uchijukuohashi Bridge			Namegatashi City	2011/10/3	Sunny	21.8	Sandy	<30	220	260	0.19	Sandy	<30	320	410	0.18	
Yamadagawa River	Nioroshibashi Bridge			Namegatashi City	2011/10/3	Sunny	22.0	Loamy	<30	860	1,100	0.16	Loamy	<30	250	300	0.16	
Kurakawa River	Kurakawabashi Bridge			Namegatashi City	2011/10/3	Sunny	22.1	Loamy	<30	600	750	0.15	Loamy	<30	730	800	0.16	
Gantsugawa River	JA Yokohashi			Namegatashi City	2011/10/3	Sunny	23.3	Loamy	<30	730	910	0.16	Loamy	<30	410	510	0.16	
Nagaregawa River	Suhoibashi Bridge			Kashimashi City	2011/10/4	Sunny	22.0	—	—	—	—	0.10	—	—	—	—	0.08	(Soil not exposed)

\* Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd. For points with \*1 in the Remarks column, a survey meter, Model 3 of Ludlum Measurement Inc., and for those with \*2, a Model 5000 of Health Physics Instruments was used. Figures measured with either a Model 3 or a Model 5000 had a tendency to be a little higher than those measured with a TCS-172 or TCS-161 (about 1.6 times higher).

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

○River (Ibaraki Pref.-2): Water Quality Monitoring Results

Sampling point			Sampling date	Weather	Air temperature ℃	Full depth m	General items						Surrounding environment (lake shore and beach)			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					
			Tonegawa River	Kasumi-gaura	Sonobegawa River	Sonobeshinbashi Bridge	Omitamashi City	2011/9/10	Clear	28.5	1.75	22.2	0.0	55	26.7	5	7.9	<1	<1
Sannogawa River	Tokorobashi Bridge	Ishiohashi City/Omitamashi City			2011/9/9	Sunny	31.6	0.58	25.9	0.0	94	62.7	3	3.0	<1	<1	<1		
Koiesegawa River	Heiwabashi Bridge	Ishiohashi City			2011/9/9	Sunny	30.8	0.95	23.7	0.0	44	21.1	7	6.7	<1	<1	<1		
Kajinashigawa River	Kamishukubashi Bridge	Namegatahara City			2011/9/10	Clear	29.9	0.58	22.5	0.0	70	38.8	8	5.2	<1	<1	<1		
Hishikigawa River	Hishikibashi Bridge	Kasumigaurashi City			2011/9/10	Sunny	30.6	0.32	25.1	0.0	100 or more	29.2	10	5.8	<1	<1	<1		
Ichinosegawa River	Kawanakabashi Bridge	Kasumigaurashi City			2011/9/10	Sunny	31.3	1.52	26.0	0.0	67	27.1	7	5.5	<1	<1	<1		
Sakaigawa River	Sakaibashi Bridge/National Route 354	Tsuchiurashi City			2011/9/10	Sunny	30.5	0.68	29.0	0.0	40	42.2	19	19	<1	<1	<1		
Shinkawa River	Shintenbashi Bridge	Tsuchiurashi City			2011/10/3	Sunny	18.4	1.80	20.2	0.0	49.5	27.1	10	11	<1	<1	<1		
Sakuragawa River	Eiribashi Bridge	Tsuchiurashi City/Tsukubashi City			2011/9/9	Sunny	26.8	0.95	24.0	0.0	44	23.1	17	14	<1	<1	<1		
Bizengawa River	Bizengawabashi Bridge	Tsuchiurashi City			2011/10/3	Clear	20.4	0.70	19.3	0.0	42	29.1	13	16	<1	<1	<1		
Lake	Hanamurogawa River	Shinwabashi Bridge		Tsuchiurashi City	2011/10/3	Sunny	21.8	0.30	20.6	0.0	87	32.2	5	5.7	<1	<1	<1		
	Seimeigawa River	Katsuhashi Bridge		Amimachi Town	2011/10/3	Clear	22.6	0.50	22.0	0.0	49	27.7	12	8.9	<1	<1	<1		
	Onogawa River	Okuharaohashi Bridge		Ryugasakishi City/Inashikishi City	2011/9/12	Sunny	28.9	1.35	24.6	0.0	11	5.4	44	32	<1	<1	<1		
	Shintonegawa River	Shintonebashi Bridge		Inashikishi City	2011/9/12	Cloudy	31.4	3.35	30.6	0.0	12	5.0	12	16	<1	<1	<1		
Machitonegawa River	Yorokoshigawa River	Horinouchibashi Bridge		Itakoshi City	2011/10/4	Clear	19.4	0.40	16.0	0.0	27	31.2	29	36	<1	<1	<1		
	Maekawa River	Ayamebashi Bridge		Itakoshi City	2011/10/4	Sunny	20.0	2.10	20.0	0.0	33	28.8	18	13	<1	<1	<1		
Kinugawa River	Kinugawa River	Kawashimabashi Bridge		Chikuseishi City	2011/10/8	Sunny	20.8	0.60	17.2	0.0	100 or more	12.8	12	6.2	<1	<1	<1		
		Takishitabashi Bridge		Moriyoshi City	2011/10/7	Clear	22.6	0.30	19.1	0.0	23	13.7	36	23	<1	<1	<1		
	Tagawa River	Tagawabashi Bridge		Chikuseishi City	2011/10/8	Sunny	20.0	0.89	17.2	0.0	100 or more	20.6	7	3.3	<1	<1	<1		
Rivegawa	Kokiviegawa	Hachikenborigawa River		Ishiarabashi Bridge	Jososhi City	2011/10/7	Sunny	21.2	0.80	19.0	0.0	21	22.3	44	25	<1	<1	<1	
		Gogyogawa River	Shimookahashi Bridge	Chikuseishi City	2011/8/30	Clear	26.6	0.96	23.5	0.0	100 or more	19.5	3	1.9	<1	<1	<1		
		Daiyagawa River	Nishihokaminohashi Bridge	Chikuseishi City	2011/8/30	Sunny	29.8	1.06	24.6	0.0	78.5	19.4	11	3.7	<1	<1	<1		
		Kokaigawa River	Kurokobashi Bridge	Chikuseishi City	2011/8/30	Sunny	30.5	1.85	26.1	0.0	86	18.4	7	3.3	<1	<1	<1		
		Itokurigawa River	Jukyubashi Bridge	Shimotsu City	2011/8/30	Sunny	30.0	0.98	26.8	0.0	35	27.5	22	13	<1	<1	<1		
		Nakadorigawa River	Itamishinbashi Bridge	Tsukubamiraishi City	2011/10/6	Sunny	22.8	1.75	20.0	0.0	22	15.6	25	28	<1	<1	<1		
		Kokaigawa River	Fumimakibashi Bridge	Ryugasakishi City/Torideshi City	2011/10/6	Sunny	23.6	0.60	19.0	0.0	17.5	18.8	120	57	<1	<1	<1		
		Yatagawa River	Maruyamabashi Bridge	Tsukubashi City	2011/10/6	Sunny	22.0	3.30	19.4	0.0	24	17.9	23	19	<1	<1	<1		
		Nishiyatagawa River	Sakaimatsuhashi Bridge	Tsukubashi City	2011/10/6	Cloudy	18.8	1.30	19.2	0.0	17	19.6	96	39	<1	<1	<1		
		Inarigawa River	Ogukibashi Bridge	Tsukubashi City	2011/10/6	Sunny	22.8	1.18	19.6	0.0	40	16.5	16	12	<1	<1	<1		
		Yatagawa River	Ushikunuma Lake exit	Ryugasakishi City	2011/10/6	Sunny	23.6	2.25	20.0	0.0	17	18.8	28	24	<1	<1	<1		
		Tonegawa River	Rivegawa	Mukaiborigawa River	Isagoibashi Bridge	Kogashi City	2011/9/11	Sunny	29.0	0.40	27.2	0.0	31	33.9	14	22	<1	<1	<1
				Isokawa River	Mizuumibashi Bridge	Kogashi City	2011/10/6	Cloudy	20.3	1.05	20.1	0.0	88	26.4	6	4.0	<1	<1	<1
Shimoonosuiro Channel	Kusakabebashi Bridge			Kogashi City	2011/9/11	Sunny	31.2	0.50	27.6	0.0	100 or more	38.7	5	3.0	<1	<1	<1		
Miyatogawa River	Miyatogawabashi Bridge			Sakaimachi Town	2011/10/6	Sunny	23.8	1.53	18.6	0.0	28	18.0	33	16	<1	<1	<1		
Okawa River	Owadabashi Bridge			Kogashi City	2011/10/8	Sunny	17.8	0.08	19.2	0.0	90	37.2	10	10	<1	<1	<1		
Kuguidogawa River	Katashibebashi Bridge			Bandoshi City	2011/10/6	Sunny	23.5	1.18	20.8	0.0	23	28.9	38	23	<1	<1	<1		
Nishiniregawa River	Ozakibashi Bridge			Kogashi City	2011/10/8	Sunny	20.2	0.38	17.8	0.0	69	39.1	19	6.6	<1	<1	<1		
Inumagawa River	Umaarabashi Bridge			Bandoshi City	2011/10/6	Clear	24.6	2.86	19.3	0.0	14	19.0	34	21	<1	<1	<1		
	Center of Sugaonuma Lake			Jososhi City/Bandoshi City	2011/10/7	Clear	24.2	1.90	20.2	0.0	20	30.3	69	26	<1	<1	<1		
Higashiniregawa River	Toyokamibashi Bridge			Jososhi City/Bandoshi City	2011/10/7	Clear	21.8	0.70	19.5	0.0	23	27.7	76	32	<1	<1	<1		
Watarasegawa River	Mikunibashi Bridge			Kogashi City	2011/9/11	Sunny	29.2	1.00	22.6	0.0	55	28.6	26	15	<1	<1	<1		
	Kurihashi Bridge			Kogashi City	2011/9/11	Sunny	29.5	1.00	22.8	0.0	31	19.2	41	29	<1	<1	<1		
	Tonegawa River			Fukawa	Tonemachi Town	2011/9/12	Sunny	24.2	1.00	24.1	0.0	24	5.1	23	18	<1	<1	<1	
				Sawara	Inashikishi City	2011/9/12	Sunny	31.4	1.20	26.2	0.0	5.5	2.2	76	76	<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 (Ibaraki Pref.-2): Sediment Monitoring Results

		Sampling point			Sampling date	Weather	Air temperature ℃	Full depth m	General items				Concentration of radioactive material Bq/kg (dried mud)			Remarks		
		Water body	Point	Municipality					Mud temperature ℃	Mud sampling depth cm	Mud content %	Property	Radioactive iodine				Radioactive cesium	
													I-131				Cs-134	Cs-137
T o n e g a w a	K a s u m i g a u r a	Sonobegawa River	Sonobeshinbashi Bridge	Omitamashi City	2011/9/10	Clear	28.5	1.75	23.0	10	81.3	Sand with silt	<30	120	160			
		Sannogawa River	Tokorobashi Bridge	Ishiokashi City/Omitamashi City	2011/9/9	Sunny	31.6	0.58	25.4	12	82.2	Sand with silt	<30	920	1,000			
		Koiseigawa River	Heiwabashi Bridge	Ishiokashi City	2011/9/9	Sunny	30.8	0.95	23.3	10	81.1	Sand with gravel	<30	84	110			
		Kajinashigawa River	Kamishukubashi Bridge	Namegatashi City	2011/9/10	Clear	29.9	0.58	22.3	10	79.0	Sand with gravel	<30	120	150			
		Hishikigawa River	Hishikibashi Bridge	Kasumigaurashi City	2011/9/10	Sunny	30.6	0.32	24.4	10	71.1	Sand with gravel	<30	600	720			
		Ichinosegawa River	Kawanakabashi Bridge	Kasumigaurashi City	2011/9/10	Sunny	31.3	1.52	25.0	5	60.1	Sand with silt	<30	870	1,000			
		Sakaigawa River	<small>Sakabashi Bridge/National Route 354</small>	Tsuchiurashi City	2011/9/10	Sunny	30.5	0.68	25.5	5	80.7	Sand with gravel	<30	1,100	1,200			
		Shinkawa River	Shintenbashi Bridge	Tsuchiurashi City	2011/10/3	Sunny	18.4	1.80	20.6	6	30.0	Silt with sand	<30	2,600	2,900			
		Sakuragawa River	Eiribashi Bridge	Tsuchiurashi City/Tsukubashi City	2011/9/9	Sunny	26.8	0.95	24.8	5	82.6	Sand with gravel	<30	29	29			
		Bizengawa River	Bizengawabashi Bridge	Tsuchiurashi City	2011/10/3	Clear	20.4	0.70	19.2	7	78.1	Sand with gravel	<30	1,200	1,400			
			Hanamurogawa River	Shinwabashi Bridge	Tsuchiurashi City	2011/10/3	Sunny	21.8	0.30	21.7	5	82.6	Sand with gravel	<30	610	780		
			Seimeigawa River	Katsuhashi Bridge	Amimachi Town	2011/10/3	Clear	22.6	0.50	21.4	7	79.7	Sand	<30	640	780		
	Onogawa River	Okuharaohashi Bridge	Ryugasakishi City/Inashikishi City	2011/9/12	Sunny	28.9	1.35	26.4	10	77.5	Sand	<30	100	160				
	Shintonegawa River	Shintonebashi Bridge	Inashikishi City	2011/9/12	Cloudy	31.4	3.35	28.4	10	42.1	Silt with sand	<30	100	120				
R i v e r	M a c h i n e g a w a	Yorokoshigawa River	Horinouchibashi Bridge	Itakoshi City	2011/10/4	Clear	19.4	0.40	16.8	5	36.7	Gravel/silt with sand	<30	110	180			
		Maekawa River	Ayamebashi Bridge	Itakoshi City	2011/10/4	Sunny	20.0	2.10	20.7	8	64.4	Silt with sand	<30	230	280			
S y s t e m	K i n u g a w a	Kinugawa River	Kawashimabashi Bridge	Chikuseishi City	2011/10/8	Sunny	20.8	0.60	17.8	5	79.7	Sand with gravel	<30	<10	<10			
			Takishitabashi Bridge	Moriyashi City	2011/10/7	Clear	22.6	0.30	18.8	5	77.2	Sand	<30	56	74			
			Tagawabashi Bridge	Chikuseishi City	2011/10/8	Sunny	20.0	0.89	17.0	5	35.5	Sand with silt	<30	490	590			
		Hachikenborigawa River	Ishiarabashi Bridge	Jososhi City	2011/10/7	Sunny	21.2	0.80	19.3	8	55.7	Silt	<30	27	44			
		Gogyogawa River	Shimookahashi Bridge	Chikuseishi City	2011/8/30	Clear	26.6	0.96	23.2	5	60.9	Silt with sand	<30	200	210			
		Daiyagawa River	Nishihokaminohashi Bridge	Chikuseishi City	2011/8/30	Sunny	29.8	1.06	24.6	5	70.7	Sand	<30	130	170			
		Kokaigawa River	Kurokobashi Bridge	Chikuseishi City	2011/8/30	Sunny	30.5	1.85	26.1	5	55.3	Silt with sand	<30	280	340			
		Itokurigawa River	Jukyubashi Bridge	Shimotsumashi City	2011/8/30	Sunny	30.0	0.98	24.9	10	53.9	Silt with sand	<30	220	340			
		Nakadorigawa River	Itamishinbashi Bridge	Tsukubamirashi City	2011/10/6	Sunny	22.8	1.75	19.2	10	43.7	Silt with sand	<30	280	370			
		Kokaigawa River	Fumimakibashi Bridge	Ryugasakishi City/Torideshi City	2011/10/6	Sunny	23.6	0.60	19.7	7	56.0	Gravel/silt with sand	<30	220	280			
		Yatagawa River	Maruyamabashi Bridge	Tsukubashi City	2011/10/6	Sunny	22.0	3.30	19.8	10	65.4	Sand with silt	<30	290	370			
		Nishiyatagawa River	Sakaimatsuhashi Bridge	Tsukubashi City	2011/10/6	Cloudy	18.8	1.30	19.0	10	79.1	Sand with gravel	<30	220	280			
	Inarigawa River	Ogukibashi Bridge	Tsukubashi City	2011/10/6	Sunny	22.8	1.18	17.8	10	78.7	Sand with gravel	<30	900	1,000				
	Yatagawa River	Ushikunuma Lake exit	Ryugasakishi City	2011/10/6	Sunny	23.6	2.25	20.2	8	72.8	Sand	<30	160	210				
R i v e r	T o n e g a w a	Mukaiborigawa River	Isagoibashi Bridge	Kogashi City	2011/9/11	Sunny	29.0	0.40	26.8	4	51.6	Sand with silt	<30	170	260			
		Isokawa River	Mizuumibashi Bridge	Kogashi City	2011/10/6	Cloudy	20.3	1.05	20.1	3	79.9	Sand	<30	56	76			
		Shimoonosuiro Channel	Kusakabebashi Bridge	Kogashi City	2011/9/11	Sunny	31.2	0.50	28.4	10	77.3	Sand with gravel	<30	180	190			
		Miyatogawa River	Miyatogawabashi Bridge	Sakaimachi Town	2011/10/6	Sunny	23.8	1.53	18.6	3	51.9	Sand with silt	<30	78	100			
		Okawa River	Owadabashi Bridge	Kogashi City	2011/10/8	Sunny	17.8	0.08	20.6	1	70.8	Sand with gravel	<30	85	120			
		Kuguidogawa River	Katashibebashi Bridge	Bandoshi City	2011/10/6	Sunny	23.5	1.18	20.2	5	54.1	Gravel/sand with silt	<30	240	320			
		Nishiniregawa River	Ozakibashi Bridge	Kogashi City	2011/10/8	Sunny	20.2	0.38	19.4	3	78.8	Sand with gravel	<30	36	67			
		Inumagawa River	Umaarabashi Bridge	Bandoshi City	2011/10/6	Clear	24.6	2.86	20.0	2	55.0	Sand with silt	<30	300	380			
			Center of Sugaonuma Lake	Jososhi City/Bandoshi City	2011/10/7	Clear	24.2	1.90	20.3	5	55.2	Sand with silt	<30	<10	<10			
			Toyokambashi Bridge	Jososhi City/Bandoshi City	2011/10/7	Clear	21.8	0.70	19.5	10	58.7	Sand with silt	<30	110	150			
			Watarasegawa River	Mikumibashi Bridge	Kogashi City	2011/9/11	Sunny	29.2	1.00	23.0	10	50.5	Silt with sand	<30	350	390		
			Tonegawa River	Kurihashi Bridge	Kogashi City	2011/9/11	Sunny	29.5	1.00	22.5	10	41.9	Silt with sand	<30	650	790		
		Fukawa	Tonemachi Town	2011/9/12	Sunny	24.2	1.00	23.1	5	46.7	Silt with sand	<30	350	470				
		Sawara	Inashikishi City	2011/9/12	Sunny	31.4	1.20	28.4	2	61.2	Sand	<30	560	660				

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

○River (Ibaraki Pref.-2): Surrounding Environment (River Terrace) Monitoring Results

Sampling point			Sampling date	Weather	Air temperature ℃	Left bank				Right bank				Remarks						
						Soil			Air dose μSv/h	Soil			Air dose μSv/h							
Water body	Point	Municipality	Property	concentration of radioactive material Bq/kg(dry)			Property	concentration of radioactive material Bq/kg(dry)												
				Radioactive iodine I-131	Radioactive cesium Cs-134	Radioactive cesium Cs-137		Radioactive iodine I-131	Radioactive cesium Cs-134	Radioactive cesium Cs-137										
Tonegawa River	Kasumiura	Sonobegawa River	Sonobeshinbashi Bridge	Omitamashi City	2011/9/10	Clear	28.5	Loamy	<30	300	380	0.12	Loamy	<30	360	430	0.14			
		Sannogawa River	Tokorobashi Bridge	Ishiokashi City/Omitamashi City	2011/9/9	Sunny	31.6	Loamy	<30	530	600	0.16	Loamy	<30	500	610	0.16			
		Koisegawa River	Heiwabashi Bridge	Ishiokashi City	2011/9/9	Sunny	30.8	Loamy	<30	440	550	0.20	Loamy	<30	73	82	0.20			
		Kajinashigawa River	Kamishukubashi Bridge	Namegatashi City	2011/9/10	Clear	29.9	Loamy	<30	3,100	3,800	0.14	Loamy	<30	280	340	0.15			
		Hishikigawa River	Hishikibashi Bridge	Kasumigaurashi City	2011/9/10	Sunny	30.6	Loamy	<30	4,800	5,200	0.16	Loamy	<30	3,200	3,700	0.18			
		Ichnosegawa River	Kawanakabashi Bridge	Kasumigaurashi City	2011/9/10	Sunny	31.3	Loamy	<30	280	330	0.13	Loamy	<30	460	550	0.13			
		Sakaigawa River	Sakaibashi Bridge/National Route 354	Tsuchiurashi City	2011/9/10	Sunny	30.5	Loamy	<30	750	840	0.24	Loamy	<30	290	360	0.22			
		Shinkawa River	Shintenbashi Bridge	Tsuchiurashi City	2011/10/3	Sunny	18.4	Sandy	<30	1,200	1,700	0.18	Sandy	<30	150	180	0.20			
		Sakuragawa River	Eiribashi Bridge	Tsuchiurashi City/Tsukubashi City	2011/9/9	Sunny	26.8	Loamy	<30	250	310	0.12	Loamy	<30	120	140	0.11			
		Bizengawa River	Bizengawabashi Bridge	Tsuchiurashi City	2011/10/3	Clear	20.4	Loamy	<30	1,100	1,500	0.16	Loamy	<30	500	640	0.18			
		Hanamurogawa River	Shinwabashi Bridge	Tsuchiurashi City	2011/10/3	Sunny	21.8	Loamy	<30	860	1,000	0.25	Loamy	<30	280	350	0.25			
		Seimeigawa River	Katsuhashi Bridge	Amimachi Town	2011/10/3	Clear	22.6	Loamy	<30	440	550	0.31	Loamy	<30	370	490	0.30			
		Onogawa River	Okuharohashi Bridge	Ryugasakishi City/Inashikishi City	2011/9/12	Sunny	28.9	Loamy	<30	310	370	0.22	Loamy	<30	560	700	0.23			
		Shintonegawa River	Shintonebashi Bridge	Inashikishi City	2011/9/12	Cloudy	31.4	Loamy	<30	1,100	1,200	0.17	Loamy	<30	250	320	0.14			
		Tonegawa River	Maackawa River	Yorokoshigawa River	Horinouchibashi Bridge	Itakoshi City	2011/10/4	Clear	19.4	Loamy	<30	260	300	0.11	Loamy	<30	150	170	0.12	
				Ayamebashi Bridge	Itakoshi City	2011/10/4	Sunny	20.0	—	—	—	—	0.09	—	—	—	—	0.10	(Soil not exposed)	
		Kinugawa River	Kinugawa River	Kawashimabashi Bridge	Chikuseishi City	2011/10/8	Sunny	20.8	Loamy	<30	72	84	0.18	Loamy	<30	90	110	0.16	*2	
				Takishitabashi Bridge	Moriyashi City	2011/10/7	Clear	22.6	Loamy	<30	630	800	0.22	Sandy	<30	890	1,000	0.17		
		Koriyama River	Koriyama River	Tagawabashi Bridge	Chikuseishi City	2011/10/8	Sunny	20.0	Loamy	<30	69	65	0.16	Loamy	<30	110	150	0.15	*2	
Hachikaborigawa River	Ishiarabashi Bridge			Jososhi City	2011/10/7	Sunny	21.2	Loamy	<30	360	430	0.14	Loamy	<30	480	570	0.12			
Gogyogawa River	Shimookahashi Bridge			Chikuseishi City	2011/8/30	Clear	26.6	Loamy	<30	95	140	0.05	Clay-loamy	<30	88	120	0.05			
Daiyagawa River	Nishihokaminohashi Bridge			Chikuseishi City	2011/8/30	Sunny	29.8	Loamy	<30	91	97	0.04	Loamy	<30	300	330	0.05			
Kokaigawa River	Kurokobashi Bridge			Chikuseishi City	2011/8/30	Sunny	30.5	Loamy	<30	240	270	0.05	Loamy	<30	180	220	0.06			
Itokurigawa River	Jukyubashi Bridge			Shimotsumashi City	2011/8/30	Sunny	30.0	Loamy	<30	53	61	0.05	Loamy	<30	94	110	0.05			
Nakadorigawa River	Itamishinbashi Bridge			Tsukubamirashi City	2011/10/6	Sunny	22.8	Clay-loamy	<30	770	890	0.17	Clay-loamy	<30	630	630	0.18			
Kokaigawa River	Fumimakibashi Bridge			Ryugasakishi City/Torideshi City	2011/10/6	Sunny	23.6	Loamy	<30	860	1,000	0.16	Clay-loamy	<30	650	780	0.18			
Yatagawa River	Maruyamabashi Bridge			Tsukubashi City	2011/10/6	Sunny	22.0	Loamy	<30	1,600	1,900	0.17	Clay-loamy	<30	1,100	1,300	0.18			
Nishiyatagawa River	Sakaimatsubashi Bridge			Tsukubashi City	2011/10/6	Cloudy	18.8	Clay-loamy	<30	450	570	0.19	Clay-loamy	<30	1,100	1,200	0.17			
Inarigawa River	Ogukibashi Bridge			Tsukubashi City	2011/10/6	Sunny	22.8	Clay-loamy	<30	1,200	1,500	0.19	Clay-loamy	<30	2,000	2,300	0.23			
Yatagawa River	Ushikunuma Lake exit			Ryugasakishi City	2011/10/6	Sunny	23.6	Clay-loamy	<30	700	900	0.14	Loamy	<30	180	240	0.12			
Tonegawa River	Tonegawa River			Mukaiborigawa River	Isagoibashi Bridge	Kogashi City	2011/9/11	Sunny	29.0	Clay-loamy	<30	140	180	0.05	Clay-loamy	<30	87	130	0.05	
		Isokawa River	Mizuumbashi Bridge	Kogashi City	2011/10/6	Cloudy	20.3	Loamy	<30	120	160	0.09	Loamy	<30	56	64	0.08			
		Shimoonosuiro Channel	Kusakabebashi Bridge	Kogashi City	2011/9/11	Sunny	31.2	Clay-loamy	<30	340	390	0.05	Clay-loamy	<30	230	340	0.05			
		Miyatogawa River	Miyatogawabashi Bridge	Sakaimachi Town	2011/10/6	Sunny	23.8	Loamy	<30	62	88	0.08	Loamy	<30	120	140	0.08			
		Okawa River	Owadabashi Bridge	Kogashi City	2011/10/8	Sunny	17.8	Clay-loamy	<30	420	500	0.15	Clay-loamy	<30	200	260	0.17	*2		
		Kuguidogawa River	Katashibebashi Bridge	Bandoshi City	2011/10/6	Sunny	23.5	Loamy	<30	110	120	0.09	Loamy	<30	98	110	0.09			
		Nishiniregawa River	Ozakibashi Bridge	Kogashi City	2011/10/8	Sunny	20.2	Loamy	<30	100	110	0.14	Loamy	<30	100	130	0.14	*2		
		Inumagawa River	Umaaraibashi Bridge	Bandoshi City	2011/10/6	Clear	24.6	Loamy	<30	63	97	0.08	Loamy	<30	160	180	0.08			
		Center of Sugaonuma Lake	Jososhi City/Bandoshi City	Jososhi City/Bandoshi City	2011/10/7	Clear	24.2	Loamy	<30	130	140	0.15	Loamy	<30	100	100	0.10			
		Higashiniregawa River	Toyokamibashi Bridge	Jososhi City/Bandoshi City	2011/10/7	Clear	21.8	Loamy	<30	92	100	0.10	Loamy	<30	150	170	0.11			
		Watarasegawa River	Mikumibashi Bridge	Kogashi City	2011/9/11	Sunny	29.2	Clay-loamy	<30	180	210	0.07	Clay-loamy	<30	98	110	0.06			
		Tonegawa River	Tonegawa River	Kurihashi Bridge	Kogashi City	2011/9/11	Sunny	29.5	Clay-loamy	<30	110	130	0.07	Clay-loamy	<30	120	140	0.07		
				Fukawa	Tonemachi Town	2011/9/12	Sunny	24.2	Loamy	<30	660	780	0.25	Clay-loamy	<30	250	280	0.26		
		Sawara	Inashikishi City	2011/9/12	Sunny	31.4	Loamy	<30	110	140	0.09	Loamy	<30	510	520	0.14				

\* Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd. For points with \*1 in the Remarks column, a survey meter, Model 3 of Ludlum Measurement Inc., and for those with \*2, a Model 5000 of Health Physics Instruments was used. Figures measured with either a Model 3 or a Model 5000 had a tendency to be a little higher than those measured with a TCS-172 or TCS-161 (about 1.6 times higher).

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



# OLake and Headwater, and Coast and Bathing Area: Water Quality Monitoring Results

Water body		Sampling point		Sampling date	Weather	Air temperature ℃	Full depth m	General items					Concentration of radioactive material Bq/L			Remarks		
		Point	Municipality					Water temperature ℃	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			
Hinuma Lake	Hiroura			2011/9/13	Sunny	27.8	2.8	27.6	0.5	0.5	136.1	19	16	<1	<1	<1		
		1 m from the bottom		—	—	—	—	27.2	1.8	—	134.9	28	24	<1	<1	<1		
	Miyamae			2011/9/13	Sunny	25.8	3.4	28.1	0.5	0.5	120.2	9	6.7	<1	<1	<1		
		1 m from the bottom		—	—	—	—	27.9	2.4	—	120.9	8	6.8	<1	<1	<1		
Kasumigaura Lake	Offshore of Tamatsukuri			2011/9/12	Clear	28.3	6.7	29.2	0.5	0.8	27.1	8	12	<1	<1	<1		
		1 m from the bottom		—	—	—	—	27.2	5.7	—	24.9	23	23	<1	<1	<1		
	Offshore of Kakeuma			2011/9/12	Sunny	30.0	2.0	28.6	0.5	0.7	27.1	20	17	<1	<1	<1		
		1 m from the bottom		—	—	—	—	27.8	1.0	—	26.7	20	17	<1	<1	<1		
Kitaura Lake	Center of the lake			2011/9/12	Clear	29.2	6.2	28.8	0.5	0.9	29.0	9	9.8	<1	<1	<1		
		1 m from the bottom		—	—	—	—	27.5	5.2	—	28.5	14	13	<1	<1	<1		
	Offshore of Aso			2011/9/12	Sunny	30.6	2.3	29.0	0.5	0.9	30.4	11	10	<1	<1	<1		
		1 m from the bottom		—	—	—	—	28.6	1.3	—	29.8	14	10	<1	<1	<1		
Hitachitongawa River	Offshore of Kamaya			2011/9/13	Clear	27.8	6.7	27.9	0.5	1.2	32.2	11	10	<1	<1	<1		
		1 m from the bottom		—	—	—	—	27.6	5.7	—	31.7	17	13	<1	<1	<1		
	Jingubashi Bridge			2011/9/13	Clear	28.6	2.5	28.4	0.5	0.6	38.4	26	24	<1	<1	<1		
		1 m from the bottom		—	—	—	—	28.0	1.5	—	38.9	32	24	<1	<1	<1		
Ushikunuma Lake	Sotonasakaura Lake			2011/9/13	Sunny	29.4	2.6	28.6	0.5	1.0	42.0	17	14	<1	<1	<1		
		1 m from the bottom		—	—	—	—	28.3	1.6	—	40.5	21	16	<1	<1	<1		
	Ikisu			2011/9/13	Clear	30.2	4.9	28.6	0.5	1.0	42.7	11	10	<1	<1	<1		
		1 m from the bottom		—	—	—	—	28.1	3.9	—	42.8	15	18	<1	<1	<1		
Center of Ushikunuma Lake			2011/10/5	Cloudy	17.6	1.8	19.2	0.5	0.4	19.4	30	27	<1	<1	<1			
	1 m from the bottom		—	—	—	—	18.9	0.8	—	19.0	27	23	<1	<1	<1			
Sea	Offshore of Satonegawa River Estuary			2011/10/3	Clear	14.2	13.7	20.0	0.5	4.1	32.4	1	1.4	<1	<1	<1		
		1 m from the bottom		—	—	—	—	19.8	12.7	—	33.1	4	3.2	<1	<1	<1		
	Offshore of Okitagawa River Estuary			2011/10/3	Clear	15.6	13.0	20.0	0.5	8.2	30.1	<1	0.7	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.2	12.0	—	32.5	<1	1.3	<1	<1	<1		
	Near Tanko mine outlet/Neighboring sea area of Joban, Offshore of Shiotagawa River			2011/10/3	Clear	15.8	8.5	20.0	0.5	8.5	31.6	<1	0.3	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.3	7.5	—	32.0	<1	0.6	<1	<1	<1		
	Offshore of Sekinegawa River Estuary			2011/10/3	Clear	16.8	15.3	19.9	0.5	7.8	31.9	<1	0.7	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.1	14.3	—	32.4	<1	0.3	<1	<1	<1		
	Near Hananukagawa River estuary/Neighboring sea area of Joban, Offshore of Hananukigawa River			2011/10/3	Clear	19.4	12.7	19.9	0.5	7.6	31.4	1	1.1	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.1	11.7	—	32.3	2	1.1	<1	<1	<1		
	Neighboring sea area of Joban, Offshore of Kawajiri Port			2011/10/3	Sunny	17.0	11.7	19.8	0.5	5.3	31.6	1	1.1	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.3	10.7	—	32.6	3	2.9	<1	<1	<1		
	Offshore of Miyatagawa River Estuary			2011/10/3	Sunny	17.3	10.7	20.1	0.5	5.8	31.8	1	1.2	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.2	9.7	—	32.1	4	2.4	<1	<1	<1		
		Near Izumigawa River estuary/Neighboring sea area of Joban, Offshore of Izumikawa			2011/10/3	Sunny	17.7	4.0	20.4	0.5	4.0	31.9	2	1.6	<1	<1	<1	
			1 m from the bottom		—	—	—	—	20.5	3.0	—	31.9	3	2.2	<1	<1	<1	
	Offshore of Momiyagawa River/Kujigawa River Estuaries			2011/10/4	Clear	13.5	10.7	19.5	0.5	4.4	31.0	2	1.7	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.0	9.7	—	32.4	1	1.6	<1	<1	<1		
	Neighboring sea area of Ken-o, Offshore of Tokai			2011/10/3	Clear	17.6	12.8	21.1	0.5	5.0	32.1	1	1.9	<1	<1	<1		
		1 m from the bottom		—	—	—	—	20.3	11.8	—	32.3	1	1.3	<1	<1	<1		
Neighboring sea area of Ken-o, Offshore of Nakagawa River			2011/10/4	Clear	16.9	4.8	17.6	0.5	2.8	22.3	4	6.2	<1	<1	<1			
	1 m from the bottom		—	—	—	—	19.7	3.8	—	32.1	6	3.0	<1	<1	<1			
Offshore of Tonegawa River Estuary			2011/10/6	Cloudy	16.6	8.3	19.6	0.5	1.0	3.7	15	16	<1	<1	<1			
	1 m from the bottom		—	—	—	—	20.2	7.3	—	33.2	42	38	<1	<1	<1			
Coast and Bathing Area	Neighboring sea area of Joban	Isoharafutatsushima	Kitabarakishi City	2011/9/8	Sunny	24.2	0.8	23.0	0.0	—	—	7	3.4	<1	<1	<1		
		Takahagi	Takahagishi City	2011/9/9	Sunny	25.5	0.6	23.2	0.0	—	—	5	2.8	<1	<1	<1		
		Kawajiri	Hitachishi City	2011/9/10	Clear	32.6	0.3	24.0	0.0	—	—	7	2.6	<1	<1	<1		
		Ouse	Hitachishi City	2011/9/11	Sunny	26.4	1.2	24.2	0.0	—	—	21	15	<1	<1	<1		
		Kujihama Beach	Hitachishi City	2011/9/11	Sunny	25.4	1.1	24.4	0.0	—	—	13	6.8	<1	<1	<1		
	Neighboring water body of Ken-o	Ajigaura	Hitachinakashi City	2011/10/3	Sunny	20.8	1.0	21.3	0.0	—	—	5	2.8	<1	<1	<1		
		Ubanofutokoro Marine Pool	Hitachinakashi City	2011/10/3	Sunny	20.8	0.8	22.2	0.0	—	—	7	5.4	<1	<1	<1		
		Oarai	Oaraimachi Town	2011/10/3	Sunny	20.0	0.6	20.8	0.0	—	—	3	2.7	<1	<1	<1		
		Otakekaiganhokota	Hokotashi City	2011/9/10	Sunny	28.9	1.1	25.3	0.0	—	—	4	3.6	<1	<1	<1		
		Hirai	Kashimashi City	2011/10/4	Sunny	21.6	1.0	21.0	0.0	—	—	4	2.4	<1	<1	<1		
Kashimanada	Hazaki	Kamisushi City	2011/10/4	Sunny	17.6	1.0	20.6	0.0	—	—	11	6.9	<1	<1	<1			

\* Sampling points are listed from north to south. For sea areas, figures in the electrical conductivity column denote "salinity".

○Lake and Headwater, and Coast and Bathing Area: Sediment and Surrounding Environment (Lake Shore and Beach) Monitoring Results

Sampling point			Sampling date	Weather	Air temperature ℃	Full depth m	Sediment							Surrounding environment (lake shore and beach)						Remarks			
							General items				Concentration of radioactive material Bq/kg (dried mud)			Soil			Air dose μSv/h						
							Mud temperature ℃	Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Radioactive cesium Cs-134 Cs-137		Property	Concentration of radioactive material Bq/kg (dr Radioactive iodine I-131			Radioactive cesium Cs-134 Cs-137					
Water body	Point	Municipality	Water body	Point	Municipality	Water body	Point	Municipality	Water body	Point	Municipality	Water body	Point	Municipality	Water body	Point	Municipality	Water body	Point	Municipality	Water body	Point	Municipality
Hinuma Lake	Hiroura		2011/9/13	Sunny	27.8	2.8	26.9	10	36.3	Silt	<30	130	190	Sandy	<30	630	770	0.15					
	Miyamae		2011/9/13	Sunny	25.8	3.4	26.7	10	23.5	Silt	<30	<20	37	Sandy	<30	480	590	0.08					
	Oyazawa		2011/9/13	Sunny	27.4	2.4	25.2	10	29.2	Silt	<30	280	390	—	—	—	—	—					
Kasumigaura Lake	Offshore of Tamatsukuri		2011/9/12	Clear	28.3	6.7	26.4	12	18.3	Silt	<30	130	200	Sandy	<30	22	22	0.12					
	Offshore of Kakeuma		2011/9/12	Sunny	30.0	2.0	27.4	2	79.3	Sand	<30	160	180	Sandy	<30	110	140	0.15					
	Center of the lake		2011/9/12	Clear	29.2	6.2	24.8	12	16.6	Silt	<30	81	140	—	—	—	—	—					
	Offshore of Aso		2011/9/12	Sunny	30.6	2.3	28.2	3	76.7	Sand	<30	150	180	Sandy	<30	76	83	0.14					
Kitaura Lake	Offshore of Kamaya		2011/9/13	Clear	27.8	6.7	25.8	10	15.6	Silt	<30	<40	90	Sandy	<30	140	160	0.13					
	Jingubashi Bridge		2011/9/13	Clear	28.6	2.5	28.2	2	70.2	Sand with silt	<30	100	120	Sandy	<30	240	300	0.07					
Hitachitongawa River	Sotonasakaura Lake		2011/9/13	Sunny	29.4	2.6	28.4	2	74.0	Sand with silt	<30	89	95	Loamy	<30	130	150	0.10					
	Ikisu		2011/9/13	Clear	30.2	4.9	28.3	3	73.7	Sand	<30	140	150	Loamy	<30	130	150	0.09					
Ushikunuma Lake	Center of Ushikunuma Lake		2011/10/5	Cloudy	17.6	1.8	20.8	10	19.9	Silt	<30	850	990	Clay-loamy	<30	1,400	1,600	0.22					
S e a r e a s	Offshore of Satonegawa River Estuary		2011/10/3	Clear	14.2	13.7	19.6	5	78.2	Sand	<30	32	48	—	—	—	—	—					
	Offshore of Okitagawa River Estuary		2011/10/3	Clear	15.6	13.0	19.6	5	84.5	Sand	<30	76	97	—	—	—	—	—					
	Near Tanko mine outlet/Neighboring sea area of Joban, Offshore of Shiotagawa River		2011/10/3	Clear	15.8	8.5	19.8	8	84.1	Sand	<30	<10	16	—	—	—	—	—					
	Offshore of Sekinegawa River Estuary		2011/10/3	Clear	16.8	15.3	19.8	5	80.8	Sand	<30	23	38	—	—	—	—	—					
	Near Hananukagawa River estuary/Neighboring sea area of Joban, Offshore of Hananukigawa River		2011/10/3	Clear	19.4	12.7	19.9	5	80.3	Sand	<30	22	34	—	—	—	—	—					
	Neighboring sea area of Joban, Offshore of Kawajiri Port		2011/10/3	Sunny	17.0	11.7	19.9	8	83.4	Sand	<30	21	35	—	—	—	—	—					
	Offshore of Miyatagawa River Estuary		2011/10/3	Sunny	17.3	10.7	19.9	3	77.4	Sand	<30	31	38	—	—	—	—	—					
	Near Izumigawa River estuary/Neighboring sea area of Joban, Offshore of Izumikawa		2011/10/3	Sunny	17.7	4.0	20.0	3	80.5	Sand	<30	15	29	—	—	—	—	—					
	Offshore of Momiyagawa River/Kujigawa River Estuaries		2011/10/4	Clear	13.5	10.7	19.9	8	75.4	Sand with silt	<30	75	80	—	—	—	—	—					
	Neighboring sea area of Ken-o, Offshore of Tokai		2011/10/3	Clear	17.6	12.8	20.3	3	80.6	Sand	<30	18	27	—	—	—	—	—					
Neighboring sea area of Ken-o, Offshore of Nakagawa River		2011/10/4	Clear	16.9	4.8	19.6	8	88.0	Sand	<30	<10	10	—	—	—	—	—						
Offshore of Tonegawa River Estuary		2011/10/6	Cloudy	16.6	8.3	19.6	1	81.5	Sand	<30	<10	21	—	—	—	—	—						
B a t h i n g  a r e a s	Neighboring sea area of Joban	IsoharaFutatsushima	Kitabarakishi City	2011/9/8	Sunny	24.2	0.8	23.2	10	87.7	Sand with gravel	<30	26	39	Sandy	<30	21	39	0.09				
		Takahagi	Takahagishi City	2011/9/9	Sunny	25.5	0.6	23.5	5	83.3	Sand	<30	12	16	Sandy	<30	660	820	0.32				
		Kawajiri	Hitachishi City	2011/9/10	Clear	32.6	0.3	25.0	10	81.7	Sand	<30	25	34	Sandy	<30	26	33	0.06				
		Ouse	Hitachishi City	2011/9/11	Sunny	26.4	1.2	26.9	3	91.9	Sand	<30	<10	11	Sandy	<30	130	170	0.09				
		Kujihama Beach	Hitachishi City	2011/9/11	Sunny	25.4	1.1	25.6	5	85.5	Sand	<30	<10	15	Sandy	<30	25	27	0.08				
	Neighboring water body of Ken-o	Ajigaura	Hitachinakashi City	2011/10/3	Sunny	20.8	1.0	20.9	5	90.6	Sand	<30	<10	<10	Sandy	<30	19	22	0.07				
		Ubanofutokoro Marine Pool	Hitachinakashi City	2011/10/3	Sunny	20.8	0.8	20.7	10	91.0	Sand	<30	10	12	Sandy	<30	<10	12	0.07				
		Oarai	Oaraimachi Town	2011/10/3	Sunny	20.0	0.6	20.1	10	92.4	Sand with gravel	<30	<10	21	Sandy	<30	38	57	0.10				
	Kashimanada	Otakekaiganhokota	Hokotashi City	2011/9/10	Sunny	28.9	1.1	25.6	10	80.9	Sand	<30	15	18	Sandy	<30	12	28	0.18	*			
		Hirai	Kashimashi City	2011/10/4	Sunny	21.6	1.0	21.8	8	80.6	Sand	<30	22	34	Sandy	<30	11	25	0.07				
	Hazaki	Kamisushi City	2011/10/4	Sunny	17.6	1.0	20.1	8	84.4	Sand	<30	24	20	Sandy	<30	10	22	0.06					

\* Air dose was measured with a survey meter, TCS-172 or TCS-161 of Hitachi-Aloka Medical, Ltd. For points with \* in the Remarks column, a survey meter, Model 3 of Ludlum Measurement Inc., was used. Figures measured with the Model 3 had a tendency to be a little higher than those measured with a TCS-172 or TCS-161 (about 1.6 times higher).

• Sampling points are listed from north to south.

