(News Release)

The Results of Radioactive Material Monitoring of the Surface Water Bodies within Tochigi Prefecture (February 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 Tochigi Prefecture during the period of February 4-22, 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

64 environmental reference points, etc. in the surface water bodies within Tochigi Prefecture (Rivers: 56 locations, Lakes: 8 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 (October-December 2012)
 - (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))

For rivers, levels were around 500Bq/kg or below at most locations, and have generally remained constant or had a declining tendency. For lakes and headwaters, levels were around 1,000Bq/kg or below at most locations, and have generally remained constant or had a declining tendency.

(Rivers)

Cs-134+Cs-137: ND-690Bq/kg (dried mud) (*ND-500Bq/kg (dried mud))

(Lakes and headwaters)

Cs-134+Cs-137: 320-4,000Bq/kg (dried mud) (*25-2,500Bq/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	54 (63)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	55 (63)
Lakes and headwaters	1 (6)	2 (1)	0 (0)	0 (0)	0(1)	0 (0)	1 (0)	4 (7)

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

(Rivers)

Cs-134+Cs-137: 38-13,300Bq/kg (dry) (*48-9,600Bq/kg (dry))

Spatial dose: 0.07-0.77µSv/h

(Lakes and headwaters)

Cs-134+Cs-137: 141-4,900Bq/kg (dry) (*69-3,600Bq/kg (dry))

Spatial dose: 0.09-0.48µSv/h

(Annex for details) (Map attached)

Future Plans

MOE intends to continue to measure radioactive materials in water, sediment, etc. in rivers, lakes, etc. in FY2013, 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.

ORiver: Water Quality Monitoring Results (Annex)

				Sample	ing point							General items			Concentr	ration of radioactive mate	erial Bq/L	
No.			Water body		Point	Municipality	Sampling date	Weather	Full depth m	Sampling depth	Transparency	Electrical conductivity	SS	Turbidity	Radioactive iodine	Radioact	tive cesium	Remarks
110.			water today		1 OILL	y				m	cm	mS/m	mg/L		I-131	Cs-134	Cs-137	
1		N		Nakagawa River	Ikuyobashishita	Nasushiobarashi City	2013/2/13	Sunny	0.4	0.0	>100	18	<1	0	<1	<1	<1	
2	1	a			Komeibashi Bridge	Nasushiobarashi City/Nasumachi Town	2013/2/13	Sunny	0.4	0.0	>100	18	<1	0	<1	<1	<1	
3		k	1	Takaomatagawa River	Takaomatabashi Bridge	Nasumachi Town	2013/2/14	Sunny	0.3	0.0	>100	19	1	1	<1	<1	<1	
4		a		Yukawa River	Yukawabashi Bridge	ivasumaciii Town	2013/2/14	Sunny	0.4	0.0	90	36	2	1	<1	<1	<1	
5		a		Nakagawa River	Kamikuroiso	Nasushiobarashi City/Nasumachi Town	2013/2/14	Sunny	0.4	0.0	98	24	<1	0	<1	<1	<1	
6			Ī	Yosasagawa River	Yosasabashi Bridge	N. LUT	2013/2/13	Sunny	0.2	0.0	>100	13	<1	0	<1	<1	<1	
7		a	The state of the s	Kurokawa River	Shindenbashi Bridge	Nasumachi Town	2013/2/13	Sunny	0.5	0.0	>100	7	<1	1	<1	<1	<1	
8	i	a		Yosasagawa River	Kawadabashi Bridge	Otawarashi City/Nasumachi Town	2013/2/13	Sunny	0.5	0.0	>100	10	4	1	<1	<1	<1	
9			The state of the s	Nakagawa River	Kurobane		2013/2/13	Sunny	0.4	0.0	>100	12	1	1	<1	<1	<1	
10				Matsubagawa River	Tributary	a. 11 a.	2013/2/13	Sunny	0.3	0.0	>100			1	<1	<1	<1	
- 11		R	f	Sahigawa River	Udagawabashi Bridge	Otawarashi City	2013/2/13	Sunny	0.2	0.0	>100	11	<1	1	<1	<1	<1	
12		i	The state of the s	Momuragawa River	Momuranakabashi Bridge	1	2013/2/13	Sunny	0.4	0.0	>100	16	<1	0	<1	<1	<1	
13		v	The state of the s		Yunohara		2013/2/12	Sunny	0.5	0.0	>100	19	<1	1	<1	<1	<1	
14	1	e	l	Habiaaaa Biaaa	Sekibabashi Bridge	Nasushiobarashi City	2013/2/12	Clundy, then sunny	0.7	0.0	>100	18	<1	0	<1	<1	<1	
15	1	r	ŀ	Hokigawa River	Iwaibashi Bridge	Otensenti Cita	2013/2/14	Cloudy	0.6	0.0	>100	15		1	<1	<1	<1	
16	1		l		Hokigawabashi Bridge	Otawarashi City	2013/2/14	Sunny	0.4	0.0	>100	13	<1	1	<1	<1	<1	
17	1		The state of the s	Nakagawa River	Shinnakabashi Bridge		2013/2/14	Cloudy	0.2	0.0	>100			i	<1	<1	<1	
18	1	S		Mumogawa River	Koseibashi Bridge	Nakagawamachi Town	2013/2/14	Sunny	0.4	0.0	>100		<1	i	<1	<1	<1	
19	1	v	ŀ		Saikachibashi Bridge	Shioyamachi Town	2013/2/12	Sunny	0.2	0.0	>100		i i	<u>-</u>	<1	<1	<1	
20		ś	ŀ	Arakawa River	Reniobashi Bridge	Sakurashi City	2013/2/14	Cloudy	0.3	0.0	>100			· ·	<1	-1	<1	
21			ŀ		Tanakabashi Bridge	Yaitashi City	2013/2/12	Cloudy	0.3	0.0	- 100		2	4	-1	<1		
22				Uchikawa River	Asahibashi Bridge	Sakurashi City	2013/2/14	Cloudy	0.3	0.0	>100		1	- 1	<1	<1	<1	
23		e	ŀ	Arakawa River	Mukadabashi Bridge		2013/2/15	Rain	1.1	0.0	>100	15			<1	<1	<1	
2.0		m	ŀ	Egawa River	Tributary	Nasukarasuyamashi City	2013/2/15	Cloudy	0.3	0.0	>100	13	2	-		<1	- 1	
25					Kawaji Daiichi Power Station, front		2013/2/13	Sunny	0.6	0.0	>100		- 1	-		<1	<1	
26			ŀ		Macsawabashi Bridge	1	2013/2/20	Sunny	0.5	0.0	>100	0	<1	i	<1	<1	<1	
27			K	Ojikagawa River	Tributary	1	2013/2/20	Sunny	0.5	0.0	>100			i	<1	<1	<1	
28	T			Kinugawa River	Kosagoe		2013/2/20	Sunny	0.5	0.0	>100			i	<1	<1	<1	
29	0		n	Itaanagawa River	Tributary	Nikkoshi City	2013/2/19	Sunny		-		· .						Unable to collect samples due to construction
30	n		u	Yukawa River	Tributary		2013/2/20	Snow	0.7	0.0	>100	16		1	<1	<1	<1	
31	e		g		Shinkyo Bridge	1	2013/2/20	Sunny	0.2	0.0	>100			0	<1	<1	<1	
32	g		a	Shidobuchigawa River	Suiichigaibashi Bridge		2013/2/21	Sunny	0.1	0.0	>100	13	<1	0	<1	<1	<1	
33			a w	Daiyagawa River	Kaishinbashi Bridge (Harigai)		2013/2/19	Cloudy	0.6	0.0	>100	11	2	1	<1	<1	<1	
34		c		Kinugawa River	Sanuki	Shioyamachi Town	2013/2/19	Cloudy	0.3	0.0	>100	12	2	1	<1	<1	<1	
35		S	a		Nishikinugawabashi Bridge	Utsunomiyashi City	2013/2/21	Sunny	0.6	0.0	>100	15	<1	i	<1	<1	<1	
36	a	У	The state of the s		Kinugawabashi Bridge (Hoshakuji Temple)		2013/2/21	Sunny	0.2	0.0	>100	17		1	<1	<1	<1	
37		s		Kinugawa River	Daidoizumibashi Bridge	Mookashi City	2013/2/5	Sunny	1.0	0.0	>100	23	<1	1	<1	<1	<1	
38		t	R	Egawa River	Tributary	Shimotsukeshi City	2013/2/5	Sunny	0.3	0.0	67	27			<1	<1	<1	
39	1	e		,	Nikko City Hall, front	,	2013/2/21	Sunny	0.3	0.0	>100			0	<1	<1	<1	
40	R	m		Akaborigawa River	Kiwadaiima	Nikkoshi City	2013/2/21	Sunny	0.5	0.0	>100	19		1	<1	<1	<1	
41	i	l	· .	Tagawa River	Ozobashi Bridge		2013/2/22	Sunny	0.2	0.0	>100	15	2		- 21	21	- 1	
41	v	l	e	Kamagawa River	Tsukushibashi Bridge	Utsunomiyashi City	2013/2/22	Sunny	0.2	0.0	2100	26	3	2	×1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	×1	
43			г		Meijibashi Bridge	Kaminokawamachi Town	2013/2/21	Sunny	0.1	0.0	>100			3	<1	<1	<1	
43		l	ľ	Tagawa River	Yanabashi Bridge	Ovamashi City	2013/2/5	Sunny	0.6	0.0	>100			3	×1	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	<1	
45	1	W		V Di	Kaijimabashi Bridge	Kanumashi City	2013/2/3	Sunny	0.2	0.0	>100	11	2	1	<1	<1	<1	
46	1	a a		Kurokawa River	Onaribashi Bridge	Mibumachi Town	2013/2/5	Sunny	0.3	0.0	>100	24	6	2	<1	<1	<1	
47	1	t On	noigawa River	Oashigawa River	Akaishibashi Bridge	Kanumashi City	2013/2/4	Cloudy	0.3	0.0	>100	8	<1	1	<1	<1	<1	
48	S	a	- "	Koyabugawa River	Koyabubashi Bridge	Kanumasiii City	2013/2/4	Rain	0.2	0.0	>100	15	4	4	<1	<1	<1	
49	y	r	j	Omoigawa River	Tamotsubashi Bridge	Tochigishi City	2013/2/6	Snow	0.2	0.0	>100	15	1	1	<1	<1	<1	
50	s	R a	ľ	Omorgawa Kivu	Otomeohashi Bridge	Oyamashi City	2013/2/5	Sunny	0.2	0.0	>100	24	3	2	<1	<1	<1	
51	1 ,	i s Uzi	umagawa River	Uzumagawa River	Uzumabashi Bridge	Tochigishi City	2013/2/6	Snow	0.5	0.0	76	31	5	2	<1	<1	<1	
52	,	v e			Watarasegawa River intake weir at Sori Power Station	Nikkoshi City	2013/2/5	Sunny	0.2	0.0	>100	25	<1	- 0	<1	<1	<1	
53	c		l		Hajikabashi Bridge	Ashikagashi City/Otashi City	2013/2/7	Sunny	0.4	0.0	94	14	<1	1	<1	<1	<1	
54	m	r g Wat	tarasegawa Rive	Watarasegawa River	Nakabashi Bridge	Ashikagashi City	2013/2/7	Sunny	1.3	0.0	83	16	2	2	<1	<1	<1	
55	1	r a	-		Wataraseohashi Bridge	Tatebayashishi City	2013/2/6	Rain	0.5	0.0	71	22	1	1	<1	<1	<1	
56	1	w	l		Shinkaibashi Bridge	Tochigishi City	2013/2/6	Rain	0.3	0.0	63			3	<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

			Sampling poin	nt				Full depth		General items		Cor	ncentration of radioactive	material Bq/kg (dried m	ud)	
No.		Water body		Point	Municipality	Sampling date	Weather	m m	Mud sampling depth cm	Mud content	Property	Radioactive iodine I-131	Cs-134	Radioactive cesium Cs-137	Total	Remarks
1			l	Ikuvobashishita	Nasushiobarashi City	2013/2/13	Sunny	0.4	cm 4	76	Gravel/sand	<30	<10	CS-13/	rotai 15	
		N	Nakagawa River	Komeibashi Bridge	Nasushiobarashi City/Nasumachi Town	2013/2/13	Sunny	0.4	8	90	Sand	<30	22	42	64	
3		a	Takaomatagawa River	Takaomatabashi Bridge		2013/2/14	Sunny	0.4	6	81	Sand	<30	67	130	197	
4		k	Yukawa River	Yukawabashi Bridge	Nasumachi Town	2013/2/14	Sunny	0.4	6	86	Sand	<30	28		73	
5		a	Nakagawa River	Kamikuroiso	Nasushiobarashi City/Nasumachi Town	2013/2/14	Sunny	0.4	6	94	Gravel/sand	<30	<10	16	16	
6		g	Yosasagawa River	Yosasabashi Bridge	N. Lim	2013/2/13	Sunny	0.2	2	83	Sand	<30	31	48	79	
7		a W	Kurokawa River	Shindenbashi Bridge	Nasumachi Town	2013/2/13	Sunny	0.5	2	89	Sand	<30	38	90	128	
8		a	Yosasagawa River	Kawadabashi Bridge	Otawarashi City/Nasumachi Town	2013/2/13	Sunny	0.5	2	89	Sand	<30	47	83	130	
9			Nakagawa River	Kurobane	4	2013/2/13	Sunny	0.4	2	85	Sand	<30	19	39	58	
10		R	Matsubagawa River	Tributary	Otawarashi City	2013/2/13	Sunny	0.3	3	91	Sand	<30	26	43	69	
11		i	Sabigawa River	Udagawabashi Bridge		2013/2/13	Sunny	0.2	1	84	Sand	<30	63	120	183	
12		v	Momuragawa River	Momuranakabashi Bridge		2013/2/13	Sunny	0.4	1	92	Gravel/sand	<30	35		105	
13		e		Yunohara	Nasushiobarashi City	2013/2/12	Sunny	0.5	2	80	Sand	<30	11		36	
14		r	Hokigawa River	Sekibabashi Bridge		2013/2/12	Clundy, then sunny	0.7	2	88	Sand	<30	63		193	
15				Iwaibashi Bridge	Otawarashi City	2013/2/14	Cloudy	0.6	2	77	Sand	<30	27	66	93	
16				Hokigawabashi Bridge		2013/2/14	Sunny	0.4	3	81	Sand	<30	15		53	
17		S	Nakagawa River	Shinnakabashi Bridge	Nakagawamachi Town	2013/2/14	Cloudy	0.2	1	92	Gravel/sand	<30	<10		16	<u> </u>
18		y	Mumogawa River	Koseibashi Bridge		2013/2/14	Sunny	0.4	4	86	Sand	<30	10		30	
19		S	Arakawa River	Saikachibashi Bridge Renjobashi Bridge	Shioyamachi Town Sakurashi City	2013/2/12 2013/2/14	Sunny Cloudy	0.2	1	91 82	Gravel/sand	<30	58	110	168	
20		t		Tanakabashi Bridge	Yaitashi City	2013/2/14	Cloudy	0.3	2	88	Sand Gravel/sand	<30	51	92	143	
22		e	Uchikawa River	Asahihashi Bridge	Sakurashi City	2013/2/14	Cloudy	0.3		92	Gravel/sand	<30	32		82	
23		m	Arakawa River	Mukadabashi Bridge		2013/2/15	Rain	1.1		72	Sand	<30	36		99	
24			Egawa River	Tributary	Nasukarasuyamashi City	2013/2/15	Cloudy	0.3	2	88	Sand	<30	20	43	63	
25			Kinugawa River	Kawaji Daiichi Power Station, front		2013/2/20	Sunny	0.6	2	92	Sand	<30	15	30	45	
26		К	Yunishigawa River	Maesawabashi Bridge]	2013/2/20	Sunny	0.5	2	92	Gravel/sand	<30	<10	<10	-	
27	Tr.	i	Ojikagawa River	Tributary	1	2013/2/20	Sunny	0.5	2	94	Gravel/sand	<30	<10		15	
28	1	· n	Kinugawa River	Kosagoe		2013/2/20	Sunny	0.6	2	90	Sand	<30	240	450	690	
29	0		Itaanagawa River	Tributary	Nikkoshi City	2013/2/19	Sunny	- 0.7	-			-20	- 27	- 45		hable to collect samples due to construction
30	n	-	Yukawa River Daiyagawa River	Tributary Shinkyo Bridge		2013/2/20	Snow	0.7	2	71	Sand Sand	<30 <30	27	45 24	72 38	
31	e	S g	Shidobuchigawa River	Sninkyo Bridge Suiichigaibashi Bridge	1	2013/2/20	Sunny	0.2	3	91	Gravel/sand	<30	76		226	
33	g	у	Daiyagawa River	Kaishinbashi Bridge (Harigai)	1	2013/2/19	Cloudy	0.6	3	92	Sand	<30	<10		13	
34	a	s W	Kinugawa River	Sanuki	Shioyamachi Town	2013/2/19	Cloudy	0.3		83	Sand	<30	13		42	
35	w	t a	Nishikinugawa River	Nishikinugawabashi Bridge	Utsunomiyashi City	2013/2/21	Sunny	0.6	5	59	Sand	<30	120	240	360	
36	a	e	Kinugawa River	Kinugawabashi Bridge (Hoshakuji Temple)	Utsunomiyashi City/Takanezawamachi Town	2013/2/21	Sunny	0.2	2	88	Sand	<30	<10	14	14	
37		m	Kiliugawa Kivei	Daidoizumibashi Bridge	Mookashi City	2013/2/5	Sunny	1.0	2	77	Sand	<30	18		51	
38		R	Egawa River	Tributary	Shimotsukeshi City	2013/2/5	Sunny	0.3	2	85	Sand	<30	31		88	
39		i	Akaborigawa River	Nikko City Hall, front	Nikkoshi City	2013/2/21	Sunny	0.1	3	84	Sand	<30	150		450	<u> </u>
40	R	v		Kiwadajima Ozobashi Bridge		2013/2/21	Sunny	0.5	3	43	Sand	<30	150		380 150	
41	i	e	Tagawa River Kamagawa River	Ozobashi Bridge Tsukushibashi Bridge	Utsunomiyashi City	2013/2/22 2013/2/21	Sunny	0.2	3	90 87	Sand Sand	<30	53		150	
42	·	r		Meijibashi Bridge	Kaminokawamachi Town	2013/2/21	Sunny	0.1	2	94	Gravel/sand	<30	12	7.0	29	
44			Tagawa River	Yanabashi Bridge	Ovamashi City	2013/2/5	Sunny	0.6		92	Sand	<30	21		69	
45	r w			Kaijimabashi Bridge	Kanumashi City	2013/2/4	Sunny	0.2	2	93	Gravel/sand	<30	<10	<10	0,	
43	W		Kurokawa River	Onaribashi Bridge	Mibumachi Town	2013/2/5	,	0.3	,		Gravel/sand	<30	<10			
46	a		Oashigawa River	Onaribashi Bridge Akaishibashi Bridge		2013/2/5	Sunny Cloudy	0.3	2	94	Gravel/sand Sand	<30	<10 <10		- 11	
48	t	Omoigawa River	Koyabugawa River	Koyabubashi Bridge	Kanumashi City	2013/2/4	Rain	0.3	2	92 86	Gravel/sand	<30	22		65	
49	R a				Taraki alaki Cika	2013/2/6	Snow	0.2		93	Gravel/sand	<30	<10	<10	0.5	
49	S i r		Omoigawa River	Tamotsubashi Bridge	Tochigishi City				4						-	
50	y a			Otomeohashi Bridge	Oyamashi City	2013/2/5	Sunny	0.2	2	94	Sand	<30	<10	<10		
51	s e s	Uzumagawa River	Uzumagawa River	Uzumabashi Bridge	Tochigishi City	2013/2/6	Snow	0.5	3	81	Gravel/sand	<30	20	36	56	
52	t r e			Watarasegawa River intake weir at Sori Power Station	Nikkoshi City	2013/2/5	Sunny	0.2	8	93	Sand	<30	<10	27	27	
53	m a	Watarasegawa River	Watarasegawa River	Hajikabashi Bridge	Ashikagashi City/Otashi City	2013/2/7	Sunny	0.4	4	85	Sand	<30	17	29	46	
54	w w	watarasegawa Kivei	vi atarasegawa KIVCI	Nakabashi Bridge	Ashikagashi City	2013/2/7	Sunny	1.3	3	86	Sand	<30	18	35	53	
55	, a			Wataraseohashi Bridge	Tatebayashishi City	2013/2/6	Rain	0.5	2	52	Clay	<30	78	150	228	
56	_		l	Shinkaibashi Bridge	Tochigishi City	2013/2/6	Rain	0.3	4	87	Sand/clay	<30	13		36	
	· Sampling points for	or rivers are listed from north to	south, and for different points alon	ng the river, from upstream to downstream.												

ORiver: Surrounding Environment Monitoring Results

<u> </u>	01. 5 011	runung L		ng point				Left bank Right bank												
			Sumpin	ng pom		Sampling date	Weather		Concentration of radioactive material Bq/kg (dry)				Air dose		(oncentration of radioa	ective material Bq/kg (dry)		Air dose	Remarks
No.		Water body		Point	Municipality	. •		Property	Radioactive iodine I-131	Cs-134	Radioactive cesium Cs-137	Total	μSv/h	Property	Radioactive iodine I-131	Cs-134	Radioactive cesium Cs-137	Total	μSv/h	
1		N	Nakagawa River	Ikuyobashishita	Nasushiobarashi City	2013/2/13	Sunny	-	1	-	-	-	1	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
2		a	-	Komeibashi Bridge	Nasushiobarashi City/Nasumachi Town	2013/2/13	Sunny	Loamy	<30	1,600	3,100	4,700	0.24	Sandy	<30	600	1,100	1,700	0.28	
3		k	Takaomatagawa River		Nasumachi Town	2013/2/14	Sunny	Loamy	<30		2,200	3,400	0.29	Loamy	<35	2,500		7,100	0.25	
4		a	Yukawa River	Yukawabashi Bridge		2013/2/14	Sunny	Loamy	<30		2,300	3,500	0.34	Loamy	<30	2,200		6,200	0.35	
5		g	Nakagawa River	Kamikuroiso	Nasushiobarashi City/Nasumachi Town	2013/2/14	Sunny	Loamy	<30	1,600	2,800	4,400	0.32	Loamy	<30	580	1,100	1,680	0.30	
6		a	Yosasagawa River	Yosasabashi Bridge	Nasumachi Town	2013/2/13	Sunny	-	-	-	-	-		-	-	-	-	-		Unable to collect samples due to snow on the ground
7		w	Kurokawa River	Shindenbashi Bridge		2013/2/13	Sunny	-	-	-	-	-		Loamy	<30	800	1,500	2,300	0.37	Unable to collect samples due to snow on the ground
8		a	Yosasagawa River	Kawadabashi Bridge	Otawarashi City/Nasumachi Town	2013/2/13	Sunny	Loamy	<30	1,000 750	1,800	2,800	0.28	Loamy	<30	1,700		5,000	0.51	
9			Nakagawa River	Kurobane Tributary	4	2013/2/13	Sunny	Loamy	-50		1,400	2,150 1.890	0.17 0.21		<30	200 330		600 920	0.12	
10		R	Matsubagawa River		Otawarashi City	2013/2/13	Sunny	Loamy	<30 <30		1,200	910	0.21	Loamy	<30	250		710	0.16	
11		i	Sabigawa River	Udagawabashi Bridge Momuranakabashi Bridge	-	2013/2/13	Sunny	Loamy Loamy	<30		1.100	1.740	0.14	Sandy Loamy	<30	250 410		1.140	0.11	
12		v	Momuragawa River	Yunohara	+ +	2013/2/13	Sunny	Loamy	<30		1,100	2.890	0.20		<30	410		1,140	0.15	
13			L	Yunonara Sekibabashi Bridge	Nasushiobarashi City	2013/2/12	Clundy, then sunny	Loamy	<30		4,300	2,890 6,600	0.23	Loamy	<30	2.000		5,500	0.14	
15		r	Hokigawa River	Iwaibashi Bridge	0. 11.00	2013/2/14	Cloudy	Loamy	<30		750	1.150	0.18	Loamy	<30	560		1.560	0.13	
16			l	Hokigawabashi Bridge	Otawarashi City	2013/2/14	Sunny	Sandy	<30		860	1,130	0.15	Loamy	<30	79	130	209	0.13	
17			Nakagawa River	Shinnakabashi Bridge		2013/2/14	Cloudy	Loamy	<30		170	267	0.10	Loamy	<30	200		590	0.12	l
18		S	Mumogawa River	Koseibashi Bridge	Nakagawamachi Town	2013/2/14	Sunny	Loamy	<30		460	710	0.12	Loamy	<30	110		320	0.12	
19		y	Arakawa River	Saikachibashi Bridge	Shioyamachi Town	2013/2/12	Sunny	Loamy	<30		660	1,010	0.16		<30	440		1,240	0.18	
20		s	Arakawa River	Renjobashi Bridge	Sakurashi City	2013/2/14	Cloudy	Loamy	<30	130	240	370	0.10	Loamy	<30	100	190	290	0.11	
21		t	Uchikawa River	Tanakabashi Bridge	Yaitashi City	2013/2/12	Cloudy	Loamy	<30	310	580	890	0.13	Loamy	<30	340	640	980	0.14	
22		c	Ocilikawa Kivei	Asahibashi Bridge	Sakurashi City	2013/2/14	Cloudy	Loamy	<30	55	110	165	0.10	Loamy	<30	120	220	340	0.09	
23		m	Arakawa River	Mukadabashi Bridge	Nasukarasuyamashi City	2013/2/15	Rain	Loamy	<30	63	120	183	0.08	Loamy	<30	34	67	101	0.10	
24			Egawa River	Tributary	ivasukarasuyamasm City	2013/2/15	Cloudy	Loamy	<30	150	300	450	0.09	Loamy	<30	84		244	0.09	
25			Kinugawa River	Kawaji Daiichi Power Station, front		2013/2/20	Sunny	Loamy	<30	500	920	1,420	0.19	Loamy	<30	1,000	1,900	2,900	0.21	
26		K	Yunishigawa River	Maesawabashi Bridge]	2013/2/20	Sunny	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
27	т	i	Ojikagawa River	Tributary] [2013/2/20	Sunny	Sandy	<30		42	67	0.13	Loamy/sandy	<30	690		1,990	0.21	
28	0		Kinugawa River	Kosagoe	VIII 11:00	2013/2/20	Sunny	Loamy	<47	3,100	5,800	8,900	0.26	Loamy	<30	650		1,850	0.23	
29	n		Itaanagawa River	Tributary	Nikkoshi City	2013/2/19	Sunny	Loamy	<30	610	1,200	1,810	0.27	Loamy	<30	950	1,800	2,750	0.29	
30	-	u	Yukawa River	Tributary		2013/2/20	Snow			-				-						
31	e	s ^g	Daiyagawa River	Shinkyo Bridge	4	2013/2/20	Sunny	Loamy	<30	870	1,600	2,470	0.21	Loamy	<30	720 4.600		2,020	0.15	
32	g	v a	Shidobuchigawa River Daiyagawa River	Sujichigaibashi Bridge Kaishinbashi Bridge (Harigai)	- I	2013/2/21	Sunny	Loamy	<30	830	1 500	2 330	0.24	Loamy	<69 <30			13,300	0.21	
33	a	, W	Kinugawa River	Sanuki	Shioyamachi Town	2013/2/19	Cloudy	Loamy	<30		520	2,330 780	0.24		<30	1.100		3,200	0.21	
34	w	a		Nishikinugawabashi Bridge	Utsunomiyashi City	2013/2/19	Sunny	Loamy	<30		310	490	0.20	Loamy	<30	1,100		3,200	0.17	
36	a	-		Kinugawabashi Bridge (Hoshakuii Temple)	Utsunomiyashi City/Takanezawamachi Town	2013/2/21	Sunny	Sandy	<30			65	0.10	Loamy	<30	47		157	0.03	
37		C	Kinugawa River	Daidoizumibashi Bridge	Mookashi City	2013/2/5	Sunny	Loamy	<30		220	330	0.10	Loamy	<30	13		38	0.09	
38		m R	Egawa River	Tributary	Shimotsukeshi City	2013/2/5	Sunny	Loamy/skeletal	<30		490	750	0.10	Loamy	<30	80		240	0.09	
39		i		Nikko City Hall, front	Nikkoshi City	2013/2/21	Sunny	-		200	- 170	-	0.10	Loamy	<30	980		2.780	0.12	
40	R	v	Akaborigawa River	Kiwadajima	INIKKOSHI CITY	2013/2/21	Sunny	Loamy	<30	570	1,100	1,670	0.13	Loamy	<30	1,000		2,900	0.13	
41	i		Tagawa River	Ozobashi Bridge	Utsunomiyashi City	2013/2/22	Sunny	Loamy	<30	150	290	440	0.08	Loamy	<30	120	220	340	0.09	
42	v		Kamagawa River	Tsukushibashi Bridge	, ,	2013/2/21	Sunny	Loamy	<30		82	127	0.09	Loamy	<30	450		1,320	0.09	
43			Tagawa River	Meijibashi Bridge	Kaminokawamachi Town	2013/2/5	Sunny	Loamy/skeletal	<30		440	680	0.08	Loamy	<30	200		570	0.07	
44	Ĭ			Yanabashi Bridge	Oyamashi City	2013/2/5	Sunny	Loamy	<30		54	85	0.08	Loamy/skeletal	<30	70	140	210	0.07	
45	W	1	Kurokawa River	Kaijimabashi Bridge	Kanumashi City	2013/2/4	Sunny	Loamy	<30		230	360	0.10	Loamy	<30	170		470	0.10	
46		l		Onaribashi Bridge	Mibumachi Town	2013/2/5	Sunny	Loamy	<30		300	480	0.09	Loamy	<30	72		202	0.10	
47	a a	Omoigawa River	Oashigawa River	Akaishibashi Bridge	Kanumashi City	2013/2/4	Cloudy	Loamy	<30	81	150	231	0.10		<30	180	320	500	0.10	
48	t	1	Koyabugawa River			2013/2/4	Rain	Loamy	<30	120	240	360	0.09	Loamy	<30	590	1,100	1,690	0.11	
49	S a	1	Omoigawa River	Tamotsubashi Bridge	Tochigishi City	2013/2/6	Snow		-	-	-	-			-	-	200	-		Unable to collect samples due to snow on the ground
50	y r	l	-	Otomeohashi Bridge	Oyamashi City	2013/2/5	Sunny	Loamy	<30	190	380	570	0.14	Loamy	<30	170	290	460	0.11	
51	s i s	Uzumagawa River	Uzumagawa River	Uzumabashi Bridge	Tochigishi City	2013/2/6	Snow	-	-	-	-	-	-	-	-	-	-	-	-	Unable to collect samples due to snow on the ground
52	e v e			Watarasegawa River intake weir at Sori Power Station	Nikkoshi City	2013/2/5	Sunny	Sandy	<30	280	510	790	0.23	Sandy	<30	19	42	61	0.20	
53	m e g	Watarasegawa River	Watarasegawa River	Hajikabashi Bridge	Ashikagashi City/Otashi City	2013/2/7	Sunny	Loamy	<30	36	68	104	0.08	Loamy	<30	42		121	0.09	
54	r a		umu.xgawa Kivci	Nakabashi Bridge	Ashikagashi City	2013/2/7	Sunny	Loamy	<30	66	130	196	0.08	Loamy	<30	18	32	50	0.09	
55	w	l	l	Wataraseohashi Bridge	Tatebayashishi City	2013/2/6	Rain	-	-		-	-		-			-	-		Unable to collect samples due to snow on the ground
56				Shinkaibashi Bridge	Tochigishi City	2013/2/6	Rain	-	-	-	-	-	-	-	-	-		-	-	Unable to collect samples due to snow on the ground

⁻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.

Air dose was measured with a survey meter, TCS-171 or TCS-172 of Hitachi-Aloka Medical, Ltd.
 Sampling points for rivers are listed from north to south, and for different points along the river, from upstream to downstream.

OLake and Headwater: Water Quality Monitoring Results

		Sampling point					Full depth			General items			Concentrati	on of radioactive mate	erial Bq/L	
No.		Point			Sampling date	Weather	m	Sampling depth m	Secchi disk depth m	Electrical conductivity mS/m	SS mg/L	Turbidity	Radioactive iodine I-131	Radioacti Cs-134	ve cesium Cs-137	Remarks
1	Nakagawa River	Miyama Dam Reservoir	Center	Surface layer Lower layer	2013/2/13 2013/2/13	Cloudy	-	-		-	-	-	-	-	-	Unable to collect samples due to freezing
2	System	Shiobara Dam Reservoir	Center	Surface layer Lower layer	2013/2/19 2013/2/19	Cloudy	34.0	0.5 33.0	4.0	18 18	<1 <1	1	<1 <1	<1 <1	<1 <1	
3	K	Kawaji Dam Reservoir	Center	Surface layer Lower layer	2013/2/13 2013/2/13	Snow	79.0	0.5 78.0	1.7	9	<1	2 2	<1	<1	<1	
4	SR n y i n	Ikari Dam Reservoir	Center	Surface layer Lower layer	2013/2/18 2013/2/18	Snow	63.5	0.5 62.5	4.8	7	<1 3	1 3	<1 <1	<1 <1	<1 <1	
5	s v u	Kawamata Dam Reservoir	Center	Surface layer Lower layer	2013/2/15 2013/2/15	Snow	-	-		-		-	-	-	-	Unable to collect samples due to freezing
6	e r w	Yunoko Lake	Center	Surface layer Lower layer	2013/2/12 2013/2/12	Sunny	-	-		-			-			Unable to collect samples due to freezing
7	a	Chuzenjiko Lake	Center	Surface layer Lower layer	2013/2/12 2013/2/12	Sunny	170.0	0.5 169.0	10.2	12 12	<1 <1	0	<1 <1	<1	<1	
8	Watarasegawa River	Watarase Reservoir	Center	Surface layer Lower layer	2013/2/8 2013/2/8	Sunny	-	-		-		-	-			Unable to collect samples due to strong wind and low water level

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

OLake and readwater. Seament and Surrounding Environment (Lake Shore) Womtoning Results																					
											Sediment						Surrounding enviro	nment (lake shore)			
	Sampling point					W 4	Full depth		General items		Conce	ntration of radioactive	material Ralka (dried m	mrd)			S	oil			
					Sampling date	Weather	m		General nems		Concentration of radioactive material Bq/kg (dried mud)					Concentration of radioactive material Bq/kg (dry)			ry)	Air dose	Remarks
								Mud sampling depth	Mud content	ъ.	Radioactive iodine		Radioactive cesium		Property	Property Radioactive iodine		Radioactive cesium		uSv/h	1
No.	Point					cm	%	Property	I-131	Cs-134	Cs-137	Total		I-131	Cs-134	Cs-137 Total		p.54711			
1	Nakagawa Riv	er Miyama Dam R	eservoir	Center	2013/2/13	Cloudy		-		-	-			-					-		Unable to collect samples due to freezing, etc.
2	System	Shiobara Dam F	eservoir	Center	2013/2/19	Cloudy	34.0	10	51	Silt	<30	350	650	1,000	Loamy	<30	1,700	3,200	4,900	0.48	
3		Kawaji Dam Re	ervoir	Center	2013/2/13	Snow	79.0	10	59	Silt	<30	110	210	320	-	-	-		-		Unable to collect samples due to increased water level
4	V: p:	Ikari Dam Reser	voir	Center	2013/2/18	Snow	63.5	10	50	Silt	<30	1,400	2,600	4,000	Loamy	<30	370	710	1,080	0.23	
- 5	Kinugawa River Kawamata Dam Reservoir		Reservoir	Center	2013/2/15	Snow	-	-		-	-		-	-	-	-	-	-	-		Unable to collect samples due to freezing, etc.
6	System	Yunoko Lake		Center	2013/2/12	Sunny	-	-		-	-		-	-	-	-	-	-	-		Unable to collect samples due to freezing, etc.
7		Chuzenjiko Lak	Chuzenjiko Lake		2013/2/12	Sunny	170.0	8	20	Silt	<30	260	450	710	-	-	-	-	-		Unable to collect samples due to snow on the ground
8	Watarasegawa R	iver Watarase Reserv	oir	Center	2013/2/8	Sunny		-		-	-		-	-	Loamy	<30	56	85	141	0.09	

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