

(News Release)
The Results of Radioactive Material Monitoring of the Surface Water Bodies
within Tochigi Prefecture
(October-December 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 October 12-December 25 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 (July-October 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))

Overall, the levels of both the rivers and lakes/headwaters measured were around 500Bq/kg or below,

and have generally remained constant or had a declining tendency.

(Rivers)

Cs-134+Cs-137: ND-500Bq/kg (dried mud) (*ND-1,780Bq/kg (dried mud))

(Lakes and headwaters)

Cs-134+Cs-137: 25-2,500Bq/kg (dried mud) (*11-4,100Bq/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	63 (91)	0 (2)	0 (2)	0 (0)	0 (0)	0 (0)	0 (0)	63 (95)
Lakes and headwaters	5 (6)	1 (6)	0 (1)	0 (0)	1 (0)	0 (0)	(2)	7 (15)

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

(Rivers)

Cs-134+Cs-137: 48-9,600Bq/kg (dry) (*25-32,000Bq/kg (dry))

Spatial dose: 0.07-0.82μSv/h

(Lakes and headwaters)

Cs-134+Cs-137: 69-3,600Bq/kg (dry) (*94-4,700Bq/kg (dry))

Spatial dose: 0.08-0.52μSv/h

(Annex for details)
(Map attached)

Future Plans

MOE intends to continue to measure radioactive materials in water, sediment, etc. in rivers, lakes, etc. since concentrations of radioactive materials seem to show fluctuations, depending on locations, due to minor differences in sampling points or properties of samples of each survey.

ORiver: Water Quality Monitoring Results

Table with columns: No., Water body, Point, Municipality, Sampling date, Weather, Full depth m, General items (Sampling depth m, Transparency cm, Electrical conductivity mS/m, SS mg/L, Turbidity), Concentration of radioactive material Bq/L (Radioactive iodine I-131, Radioactive cesium Cs-134, Cs-137), Remarks. Rows include various rivers like Nakagawa, Yonagoi, and Watarasegawa.

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

○Lake 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			Center				Surface layer	Lower layer	Sampling depth m	Secchi disk depth m	Electrical conductivity nS/m	SS mg/L	Turbidity		Radioactive iodine I-131	Radioactive cesium Cs-134
1	Nakagawa River System	Miyama Dam Reservoir	Center	Surface layer	2012/12/6	Cloudy	-	-	-	-	-	-	-	-	-	Unable to collect samples due to strong wind causing boat to stay	
			Lower layer														
2		Shiobara Dam Reservoir	Center	Surface layer	2012/12/6	Sunny	30.1	0.5	3.4	20	<1	1	<1	<1	<1		
				Lower layer				29.1		20	<1	1	<1	<1	<1		
3	Kiyugawa River System	Kawaji Dam Reservoir	Center	Surface layer	2012/12/5	Sunny	71.4	0.5	1.5	8	<1	3	<1	<1	<1		
				Lower layer				70.4		8	11	28	<1	<1	<1		
4			Ikari Dam Reservoir	Center	Surface layer	2012/12/5	Sunny	54	0.5	2.4	9	<1	1	<1	<1	<1	
					Lower layer				53.0		9	2	2	<1	<1	<1	
5		Kawamata Dam Reservoir	Center	Surface layer	2012/12/7	Sunny	78.4	0.5	4.6	12	<1	1	<1	<1	<1		
				Lower layer				77.4		15	5	8	<1	<1	<1		
6		Yunoko Lake	Center	Surface layer	2012/12/4	Rain	12.1	0.5	2.6	19	3	3	<1	<1	<1		
				Lower layer				11.1		30	3	3	<1	<1	<1		
7		Chuzenjiko Lake	Center	Surface layer	2012/12/4	Cloudy	172	0.5	7.3	12	<1	0	<1	<1	<1		
				Lower layer				171.0		13	<1	1	<1	<1	<1		
8	Watarasegawa River	Watarase Reservoir	Center	Surface layer	2012/11/29	Cloudy	6.6	0.5	0.5	19	17	10	<1	<1	<1		
				Lower layer				5.6		20	240	110	<1	<1	<1		

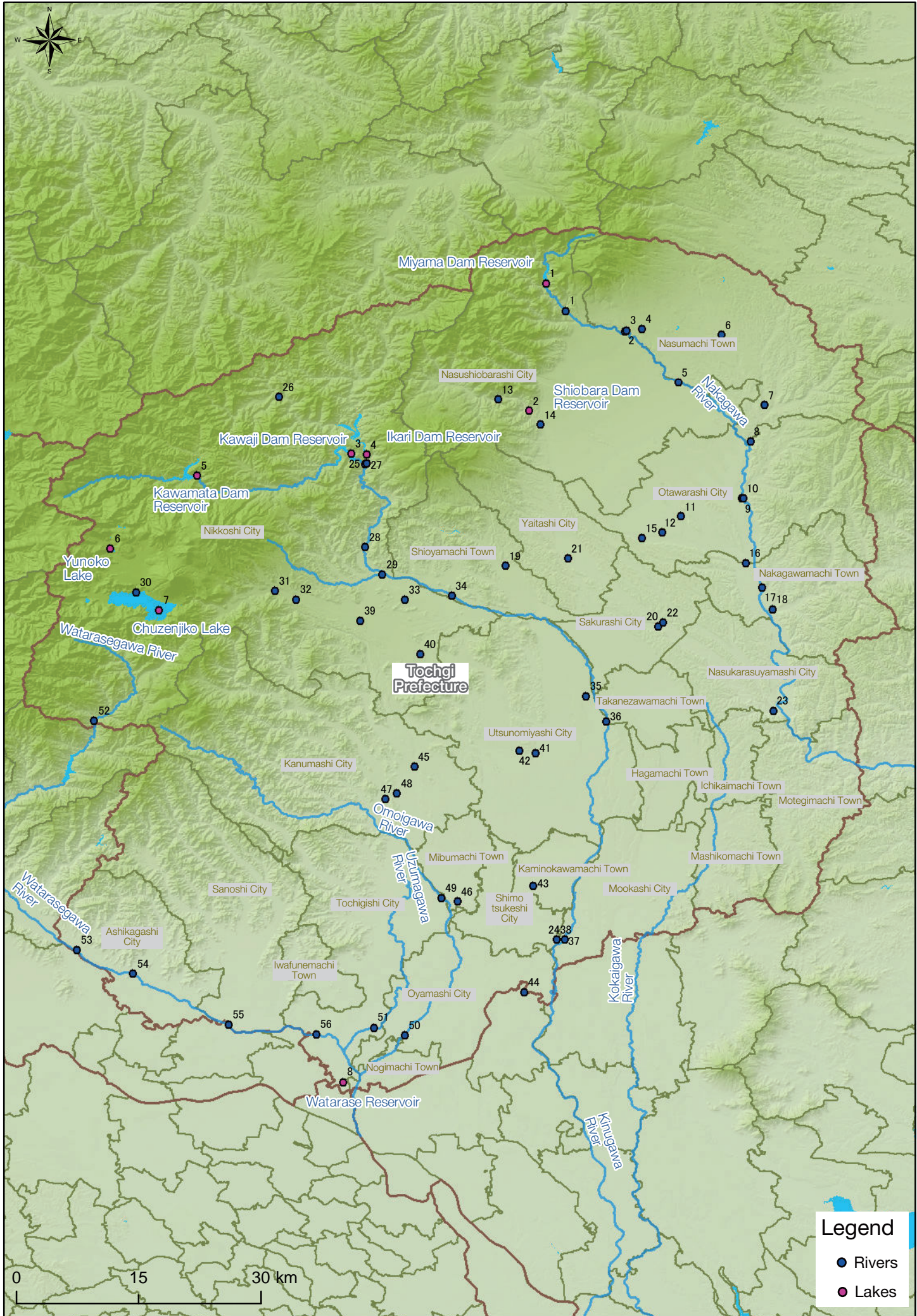
○Lake and Headwater: Sediment and Surrounding Environment (Lake Shore) Monitoring Results

Sampling point					Sampling date	Weather	Full depth m	Sediment					Surrounding environment (lake shore)					Remarks		
No.	Point			Center				General items			Concentration of radioactive material Bq/kg (dried mud)				Soil					
					Mud sampling depth cm	Mud content %	Property	Radioactive iodine I-131	Cs-134	Radioactive cesium Cs-137	Total	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	Nakagawa River System	Miyama Dam Reservoir	Center	2012/12/6	Cloudy	-	-	-	-	-	-	-	Loamy	<30	520	900	1,420	0.15	Unable to collect mud due to strong wind causing boat to stay	
			Shiobara Dam Reservoir	Center	2012/12/6	Sunny	30.1	5	44	Silt	<30	360	630	990	<30	1,300	2,300	3,600		0.52
3		Kawaji Dam Reservoir	Center	2012/12/5	Sunny	71.4	15	57	Silt	<30	<10	25	25	Skeletal	<30	570	990	1,560	0.22	
4	Kiyugawa River System	Ikari Dam Reservoir	Center	2012/12/5	Sunny	54	15	50	Silt	<30	900	1,600	2,500	Loamy	<30	480	860	1,340	0.24	
			Kawamata Dam Reservoir	Center	2012/12/7	Sunny	78.4	10	50	Silt	<30	45	95	140	Loamy	<30	26	45	69	0.08
			Yunoko Lake	Center	2012/12/4	Rain	12.1	15	25	Silt	<30	150	240	390	Loamy	<30	260	470	730	0.11
			Chuzenjiko Lake	Center	2012/12/4	Cloudy	172	15	23	Silt	<30	30	85	115	Loamy/skeletal	<30	410	730	1,140	0.16
8	Watarasegawa River	Watarase Reservoir	Center	2012/11/29	Cloudy	6.6	5	52	Silt	<30	77	120	197	Skeletal	<30	130	220	350	0.09	

*Samples for surrounding environment (lake shore) were generally collected from 5 points in 3m square on the lake shore, 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 are listed from north to south.



Legend

- Rivers
- Lakes

0 15 30 km