

OResults of Radioactive Material Monitoring of Aquatic Organisms (Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J)

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Samples collected>

Items	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
J-1	○	○	○	○	○	○

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Site measurement item>

Items	Latitude and longitude of the location		Survey date and time			Water	Sediment				Other	
	Latitude	Longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth (m)	Secchi disk depth (m)
J-1(Surface layer)	37.4203°	140.1008°	2017/8/24	09:42	10:10	24.2	24.0	Sand gravel	7.5Y 5/2	Shellfish	3.4	>3.4
J-1(Bottom layer)						24.0						

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: General survey items/Analysis of radioactive materials Water>

Items	Latitude and longitude of the location		Survey date and time		pH	BOD	COD	DO	Electric conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (water)	(mg/L)	(mg/L)	(mg/L)	(mS/m)	(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)		
J-1(Surface layer)	37.4203°	140.1008°	2017/8/24	09:42	6.7	<0.5	2.2	8.2	10.7	0.06	0.9	<1	0.8	N.D.(0.0012)	0.0091	-
J-1(Bottom layer)					6.7	<0.5	2.2	8.2	10.6	0.06	0.8	1	0.8	N.D.(0.0012)	0.0072	0.0011

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: General survey items/Analysis of radioactive materials Sediment>

Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NH/E} (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm ³)	Grain size distribution								Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)
	Latitude	Longitude	Date	Time (sediment)							Gravel (2-75mm) (%)	Coarse sand (0.85-2mm) (%)	Medium sand (0.25-0.85mm) (%)	Fine sand (0.075-0.25mm) (%)	Silt (0.005-0.075mm) (%)	Clay (Less than 0.005mm) (%)	Median grain diameter (mm)	Maximum grain diameter (mm)			
J-1	37.4203°	140.1008°	2017/8/24	10:10	7.1	285	27.2	1.7	2.4	2.796	0.5	0.7	51.2	44.6	1.0	2.0	0.26	9.5	8.2	72	N.D.(0.15)

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Analysis items Aquatic organisms>

Locations	Sampling point	Latitude and longitude of the location		Sampling date	Division	Class	Order	Family	Scientific name	English name	Population	Sample weight (kg-wet)	Note			Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)			
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137				
I-1 I-2 (north lakeside)	Within the lake and Nagase River	37.5047° 37.4995°	140.1143° 140.1409°	2017/8/24	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	3.54	0.34	3.2	-			
J-1 (south lakeside)	Within the lake and around the Oninuma	37.4203°	140.1008°	2017/8/24	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.016	-	-	-	N.D.	N.D.(2.2)	N.D.(1.8)	-			
					Algae/plant	Dicotyledoneae	Nymphaeales	Nymphaeaceae	<i>Nuphar japonicum</i>	Cow lily	-	0.32	-	-	-	-	-	1.2	N.D.(0.28)	1.2	-	
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Ephthalma elegans</i>	Ephthalma elegans	25	0.022	Larva (Dragonfly larva)	-	-	-	-	21	N.D.(2.4)	21	-	
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	-	-	-	-	-	-	-	-	-	-	-	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	183	0.072	Juvenile, Imago	-	-	-	-	6.1	N.D.(0.75)	6.1	-	
					Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Bellamya chinensis laeta</i>	Mud-snail	26	0.075	Imago	-	-	-	-	7.1	1.1	6.0	-	
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	19	0.010	Imago	-	-	-	-	N.D.	N.D.(4.1)	N.D.(3.4)	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	1	0.0062	Mature fish	-	-	-	-	N.D.	N.D.(6.6)	N.D.(5.1)	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorfii	2	0.14	Mature fish	-	-	-	-	8.3	1.4	6.9	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Gnathopogon elongatus elongatus</i>	Gnathopogon elongatus elongatus	1	0.0085	Mature fish	-	-	-	-	N.D.	N.D.(4.6)	N.D.(4.4)	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	182	1.3	Immature fish, Mature fish	-	-	-	-	0.82	N.D.(0.29)	0.82	0.25	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	7	0.21	Immature fish	Spiders, Worm, Stink bug	Viscera removed	-	-	1.5	N.D.(0.43)	1.5	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	20	0.73	Immature fish	Amphipod, Baetidae, Worm, Midge, Spiders, Diptera, Woodlouse, Grasshopper, Stink bug, Ant, etc.	Viscera removed	-	-	1.1	N.D.(0.36)	1.1	-	
					Vertebrata	Osteichthyes	Perciformes	Actinopterygii	<i>Channa argus</i>	Snakehead	2	0.011	Immature fish	-	-	-	-	8.0	N.D.(3.3)	8.0	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gymnogobius urotaenia</i>	Goby	9	0.14	Immature fish, Mature fish	-	-	-	-	2.3	N.D.(0.56)	2.3	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius kurodai</i>	Rhinogobius kurodai	7	0.019	Mature fish	-	-	-	-	N.D.	N.D.(2.9)	N.D.(2.4)	-	
Vertebrata	Amphibia	Anura	-	-	Frog	110	0.081	Larva (Tadpole)	-	-	-	-	19.4	2.4	17	-						
Vertebrata	Amphibia	Anura	Ranidae	<i>Rana rugosa</i>	Wrinkled Frog	16	0.14	Imago	-	-	-	-	21.4	2.4	19	-						
Vertebrata	Amphibia	Anura	Ranidae	<i>Rana porosa porosa</i>	Tokyo Daruma pond frog																	
Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	5	0.029	Imago	-	-	-	-	N.D.	N.D.(2.6)	N.D.(2.2)	-						

*1: Organisms were collected in or around the targeted water areas.

*2: When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

*3: For a sample made of multiple types of aquatic organisms, the English name of the dominant one largest in number is underlined.

*4: Basically, measurement was conducted for all organism samples. Viscera (stomach and bowels) were removed for the measurement when possible so that undigested food and sediments, etc. in the digestive system would be excluded.

*5: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

*6: River bottom materials (incl. algae) are algae, etc. that were scratched off stones with a brush, etc. and may include very fine particles such as inorganic silt and clay.

*7: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*8: Activity concentrations include counting errors, but the details are omitted here.