

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>

Locations	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>

Locations	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°	2024/6/19	13:30	14:00	20.9	20.7	Sand	7.5Y6/3	Waterweed	4.0	>4.0
J-1(Bottom layer)	13:35				20.8								

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

Locations	Items	Latitude and longitude of the location		Survey date and time		pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electric conductivity (mS/m)	Salinity	TOC (mg/L)	SS (mg/L)	Turbidity (FNU)	Cs-134 (Bq/L)	Cs-137 (Bq/L)	Sr-90 (Bq/L)
		Latitude	Longitude	Date	Time (water)												
J-1(Surface layer)		37.4203°	140.1008°	2024/6/19	13:30	6.9	1.0	1.6	9.6	12.2	0.06	0.8	1	0.4	N.D.(0.0015)	0.0036	-
J-1(Bottom layer)	13:35				7.0	0.8	1.5	9.6	12.3	0.08	0.8	<1	0.4	N.D.(0.0016)	0.0035	0.00082	

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>

Locations	Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHLE} (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°	2024/6/19	14:00	6.7	390	25.1	1.0	1.3	2.700	0.7	2.8	62.5	30.3	0.4	3.3	0.30	9.5	0.75	48	N.D.(0.13)

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°	2024/6/19	Arthropoda	Insecta	Odonata	Gomphidae	<i>Shaogomphus postocularis</i>	<i>Shaogomphus postocularis</i>	32	0.010	Larva (Dragonfly larva)	-	-	N.D.	N.D.(3.7)	N.D.(2.3)	-		
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Orthetrum albistylum speciosum</i>	Common skimmer			-	-	-	-	-				
					Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red swamp crawfish			2	0.037	Imago	-	-	1.9	N.D.(1.3)	1.9	-
					Arthropoda	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish			6	0.034	Juvenile, Imago	-	-	2.2	N.D.(1.3)	2.2	-
				2024/6/20	Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	166	0.064	Juvenile, Imago	-	-	2.1	N.D.(0.89)	2.1	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	21	4.8	Mature fish	Obscure digesta	Viscera removed	17	N.D.(1.4)	17	0.17		
				2024/6/19	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorfii</i>	14	3.0	Mature fish	Obscure digesta	Viscera removed	20	N.D.(1.4)	20	0.29		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorfii</i>	2	2.0	Mature fish	Obscure digesta	Viscera removed	4.7	N.D.(0.56)	4.7	0.34		
				2024/6/20	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	<i>Hemibarbus barbus</i>	3	4.5	Mature fish	Obscure digesta	Viscera removed	14	N.D.(1.2)	14	0.39		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	<i>Hemibarbus barbus</i>	2	3.9	Mature fish	Obscure digesta	Viscera removed	15	N.D.(0.97)	15	0.26		
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	6	6.6	Mature fish	Japanese smelt	Viscera removed	14	N.D.(1.2)	14	0.063		
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Seema	2	0.59	Immature fish	Obscure digesta	Viscera removed	16	N.D.(1.3)	16	-		
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	3	1.9	Immature fish, Mature fish	Empty stomach	Viscera removed	9.9	N.D.(1.1)	9.9	0.21		
				2024/6/19	Vertebrata	Osteichthyes	Perciformes	Actinopterygii	<i>Channa argus</i>	Snakehead	1	3.0	Mature fish	Empty stomach	Viscera removed	42	N.D.(1.3)	42	0.35		
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	0.97	Mature fish	Empty stomach	Viscera removed	16	N.D.(1.9)	16	0.20		
Vertebrata	Osteichthyes	Siluriformes	Siluridae		<i>Silurus asotus</i>	Amur catfish	1	1.7	Mature fish	Empty stomach	Viscera removed	11	N.D.(1.2)	11	0.14						
Coarse Particulate Organic Matter	-	-	-		-	Bottom fallen leaves	-	0.25	-	-	-	5.5	N.D.(0.80)	5.5	-						
J-1 (south lakeside)	Within the lake and around the Oninuma	37.4203°	140.1008°	2024/6/19	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.021	-	-	-	N.D.	N.D.(1.6)	N.D.(1.6)	-		
					Algae/plant	Dicotyledoneae	Nymphaeales	Nymphaeaceae	<i>Nuphar japonicum</i>	Cow lily	-	0.34	-	-	-	0.54	N.D.(0.20)	0.54	-		
					Algae/plant	Dicotyledoneae	Solanales	Menyanthaceae	<i>Nymphoides peltata</i>	Fringed water-lily	-	0.31	-	-	-	N.D.	N.D.(0.48)	N.D.(0.24)	-		
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Sympetrum</i> sp.	Sympetrum	39	0.012	Larva (Dragonfly larva)	-	-	N.D.	N.D.(3.9)	N.D.(3.1)	-		
				2024/6/20	Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	1133	0.73	Imago	-	-	5.2	N.D.(0.68)	5.2	0.60		
					Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Cipangopaludina chinensis laeta</i>	Mud-snail	30	0.16	Juvenile	-	Molluscos part	2.3	N.D.(0.34)	2.3	-		
				2024/6/19	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorfii</i>	10	3.3	Mature fish	Obscure digesta	Viscera removed	19	N.D.(1.1)	19	0.36		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	2.1	Mature fish	Obscure digesta	Viscera removed	6.7	N.D.(0.64)	6.7	0.22		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	<i>Hemibarbus barbus</i>	1	0.63	Mature fish	Obscure digesta	Viscera removed	21	N.D.(0.98)	21	-		
				2024/6/20	Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	29	0.17	Immature fish, Mature fish	-	-	3.9	N.D.(0.42)	3.9	-		
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	5	3.1	Immature fish, Mature fish	Empty stomach	Viscera removed	17	N.D.(1.1)	17	0.25		
				2024/6/19	Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	2	1.6	Mature fish	Empty stomach	Viscera removed	20	N.D.(1.4)	20	0.21		
					Vertebrata	Amphibia	Anura	-	-	Frog	145	0.074	Larva (Tadpole)	-	-	6.0	N.D.(0.79)	6.0	-		
					Vertebrata	Amphibia	Anura	Hylidae	<i>Hyla japonica</i>	Japanese tree frog	6	0.042	Imago	-	-	N.D.	N.D.(0.89)	N.D.(1.2)	-		
					Vertebrata	Amphibia	Anura	Pelophylax	<i>Pelophylax porosus porosus</i>	Tokyo daruma pond frog	6	0.042	Imago	-	-	N.D.	N.D.(0.89)	N.D.(1.2)	-		
Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	<i>Cynops pyrrhogaster</i>	23	0.12	Imago	-	-	0.52	N.D.(0.48)	0.52	-							

*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.