

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 Locations	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 Locations	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°	2018/10/17	14:30	14:50	17.8	12.9	Sand	7.5Y 5/3	Carcicula,Waterweed	3.5	>3.5
J-1(Bottom layer)						17.9						

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

Items Locations	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°	2018/10/17	14:30	7.3	1.0	1.6	10.1	11.0	0.06	1.0	<1	0.4	N.D.(0.0016)	0.0067	-
J-1(Bottom layer)					7.2	1.0	1.8	9.4	11.0	0.06	1.1	<1	0.6	N.D.(0.0015)	0.0071	0.00062

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 Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHLE}	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)
	Latitude	Longitude	Date	Time (sediment)		(mV)	(%)	(%)	(mg/g-dry)	(g/cm ³)	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°	2018/10/17	14:50	6.6	317	25.6	1.9	3.3	2.717	0.1	1.2	46.6	47.9	1.1	3.1	0.24	4.8	19	230	0.36

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°	2018/10/17	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	8	0.45	Mature fish	-	-	13	N.D.(1.3)	13	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus esocinus</i>	<i>Pseudogobio esocinus esocinus</i>	27	0.45	Immature fish,Mature fish	-	-	2.8	N.D.(1.4)	2.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorfii</i>	4	1.8	Mature fish	Obscure digesta	Viscera removed	20.1	2.1	18	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	<i>Hemibarbus barbus</i>	2	1.9	Mature fish	Obscure digesta	Viscera removed	17	N.D.(1.4)	17	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	2	2.1	Mature fish	Fish	Viscera removed	32.8	2.8	30	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	1	0.85	Mature fish	Stink bug,Plant pieces,Fish	Viscera removed	26	N.D.(1.5)	26	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.0	Immature fish,Mature fish	Fish	Viscera removed	22.5	1.5	21	-
					Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.013	-	-	-	N.D.	N.D.(2.7)	N.D.(2.1)	-
J-1 (south lakeside)	Within the lake and around the Oninuma	37.4203°	140.1008°	2018/10/17	Arthropoda	Insecta	Odonata	Libellulidae	<i>Orthetrum albistylum speciosum</i>	Common skimmer	12	0.0074	Larva(Dragonfly larva)	-	-	N.D.	N.D.(4.4)	N.D.(4.3)	-
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Crocothemis servilla mariannae</i>	Scarlet Skimmer									
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Anax parthenope julius</i>	<i>Anax parthenope julius</i>									
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Anax nigrofasciatus nigrofasciatus</i>	<i>Anax nigrofasciatus nigrofasciatus</i>									
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	1088	0.38	Juvenile,Imago	-	-	4.8	N.D.(1.4)	4.8	-
					Mollusca	Bivalvia	Unionoida	Unionidae	<i>Sinanodonta japonica</i>	<i>Sinanodonta japonica</i>	9	0.32	Imago	-	Molluscos part	0.63	N.D.(0.42)	0.63	-
					Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Cipangopaludina chinensis laeta</i>	Mud-snail	9	0.020	Imago	-	Molluscos part	N.D.	N.D.(2.2)	N.D.(2.1)	-
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	<i>Semisulcospira libertina</i>	30	0.024	Imago	-	Molluscos part	N.D.	N.D.(1.6)	N.D.(1.9)	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	7	0.76	Mature fish	Obscure digesta	Viscera removed	16	N.D.(1.4)	16	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsariichthys platypus</i>	Pale chub	24	0.38	Immature fish,Mature fish	-	-	7.7	N.D.(1.4)	7.7	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus esocinus</i>	<i>Pseudogobio esocinus esocinus</i>	24	0.39	Immature fish,Mature fish	-	-	6.9	N.D.(1.4)	6.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorfii</i>	5	1.6	Mature fish	Obscure digesta	Viscera removed	22.9	1.9	21	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	<i>Hemibarbus barbus</i>	7	0.95	Immature fish	Obscure digesta	Viscera removed	22.3	2.3	20	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	2	1.4	Mature fish	Empty stomach	Viscera removed	41.1	4.1	37	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou masou</i>	Seema	1	0.29	Immature fish	Obscure digesta	Viscera removed	9.3	N.D.(1.2)	9.3	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	3	0.29	Immature fish	Sieboldius albardae,Fish	Viscera removed	21.4	2.4	19	-
					Vertebrata	Osteichthyes	Perciformes	Actinopterygii	<i>Channa argus</i>	Snakehead	2	0.018	Immature fish	Rhinogobius	Viscera removed	6.9	N.D.(3.2)	6.9	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gymnogobius urotaenia</i>	Goby	21	0.061	Immature fish	-	-	7.4	N.D.(2.9)	7.4	-
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	0.019	Immature fish	Obscure digesta	Viscera removed	6.9	N.D.(2.7)	6.9	-
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	0.040	Immature fish	Common prawn	Viscera removed	4.4	N.D.(1.8)	4.4	-
					Vertebrata	Amphibia	Anura	Glandirana	<i>Glandirana rugosa</i>	Wrinkled Frog	3	0.020	Imago	-	-	N.D.	N.D.(2.6)	N.D.(2.1)	-

*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.