

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-I	○	○	○	○	○	○

<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-I(Surface layer)	37.4203°	140.1008°	2019/6/8	12:15	12:40	18.3	18.1	Sand	7.5Y 6/3	Corbicula	4.3	>4.3
J-I(Bottom layer)						18.1						

<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)												
Locations						(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
J-I(Surface layer)	37.4203°	140.1008°	2019/6/8	12:15	6.8	<0.5	1.4	9.9	11.8	0.06	0.6	<1	0.6	N.D.(0.0014)	0.0054	-
J-I(Bottom layer)					6.8	0.6	1.7	9.9	11.9	0.06	0.8	2	0.8	N.D.(0.0016)	0.0065	0.00094

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)
Locations																					
J-1	37.4203°	140.1008°	2019/6/8	12:40	6.6	389	26.8	0.8	1.5	2.791	0.3	0.9	72.3	25.0	1.5		0.31	9.5	0.26	4.6	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°	2019/7/2	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorfii	6	1.9	Mature fish	Obscure digesta	Viscera removed	24.3	2.3	22	0.49
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	1	1.6	Mature fish	Obscure digesta	Viscera removed	24.2	1.2	23	0.59
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus mykiss</i>	Rainbow trout	1	0.95	Mature fish	Common prawn	Viscera removed	19.8	1.8	18	0.13
					Vertebrata	Osteichthyes	Perciformes	Actinopterygii	<i>Channa argus</i>	Snakehead	2	1.9	Immature fish	Common prawn	Viscera removed	17.94	0.94	17	0.41
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.2	Mature fish	Frog,Fish	Viscera removed	11.63	0.63	11	0.20
J-1 (south lakeside)	Within the lake and around the Oninuma	37.4203°	140.1008°	2019/6/8	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	18.5	1.5	17	-
				2019/6/8	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.0087	-	-	-	N.D.	N.D.(3.6)	N.D.(3.2)	-
					Algae/plant	Dicotyledoneae	Nymphaeales	Nymphaeaceae	<i>Nuphar japonicum</i>	Cow lily	-	0.32	-	-	-	0.45	N.D.(0.30)	0.45	-
					Algae/plant	Dicotyledoneae	Solanales	Menyanthaceae	<i>Nymphoides peltata</i>	Fringed water-lily	-	0.33	-	-	-	0.78	N.D.(0.27)	0.78	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii	9	0.013	Larva(Dragonfly larva)	-	-	2.8	N.D.(2.6)	2.8	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	1768	1.3	Imago	-	-	8.02	0.42	7.6	0.67
					Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Cipangopaludina japonica</i>	Japanese mysterysnail	28	0.18	Juvenile,Imago	-	Molluscouc part	4.1	N.D.(0.47)	4.1	-
					Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Cipangopaludina chinensis laeta</i>	Mud-snail	9	0.018	Juvenile,Imago	-	Molluscouc part	7.8	N.D.(2.8)	7.8	-
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	30	0.0097	Imago	-	Molluscouc part	N.D.	N.D.(4.6)	N.D.(3.7)	-
				2019/7/2	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	2	0.037	Immature fish	-	-	11	N.D.(1.4)	11	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsariichthys platypus</i>	Pale chub	13	0.18	Immature fish	-	-	6.2	N.D.(0.45)	6.2	-
				2019/6/8	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorfii	61	0.013	Immature fish	-	-	5.8	N.D.(4.2)	5.8	-
				2019/7/2	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorfii	30	2.3	Mature fish	Obscure digesta	Viscera removed	25.6	1.6	24	0.42
				2019/6/8	Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	48	0.10	Immature fish,Mature fish	-	-	1.1	N.D.(0.59)	1.1	-
					Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	6	1.7	Immature fish,Mature fish	Common prawn	Viscera removed	33.1	2.1	31	0.42
				2019/7/2	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	3	0.076	Immature fish	Shrimp	Viscera removed	7.5	N.D.(0.85)	7.5	-
				2019/6/8	Vertebrata	Amphibia	Anura	Ranidae	<i>Rana japonica</i>	Japanese brown frog	19	0.22	Imago	-	-	2.5	N.D.(0.50)	2.5	-
					Vertebrata	Amphibia	Anura	Glandirana	<i>Glandirana rugosa</i>	Wrinkled frog									
					Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	11	0.056	Imago	-	-	1.5	N.D.(1.6)	1.5	-

*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.