

**Results of Radioactive Material Monitoring of Aquatic Organisms (Location O along the Tomioka River)**

<Location O along the Tomioka River: Samples collected>

Locations	Items	General items		Radioactive materials			
		Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
O-1		○	○	○	○	○	○
O-2		○	○	○	-	○	-

<Location O along the Tomioka River: 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)	Transparency (cm)
O-1		37.3547°	140.9780°	2024/6/28	08:10	08:20	19.7	19.5	Sand	7.5Y6/3	Freshwater clam	0.61	>50
O-2		37.3624°	140.9612°		10:30	10:35	20.0	19.8	Sand gravel	7.5Y5/3	None	0.36	>50

<Location O along the Tomioka River: 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)												
O-1		37.3547°	140.9780°	2024/6/28	08:10	7.4	1.0	2.2	8.9	9.7	0.05	0.8	2	1.0	N.D.(0.0014)	0.013	0.0011
O-2		37.3624°	140.9612°		10:30	7.5	0.9	2.3	8.8	9.0	0.05	0.8	5	1.6	N.D.(0.0017)	0.013	-

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

<Location O along the Tomioka River: General survey items/Analysis of radioactive materials Sediment>

Locations	Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential E <sub>NHLE</sub> (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm <sup>3</sup> )	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)
O-1		37.3547°	140.9780°	2024/6/28	08:20	7.4	515	23.1	1.3	1.0	2.670	11.5	51.8	33.8	1.0	1.9	1.1	9.5	3.4	180	N.D.(0.13)
O-2		37.3624°	140.9612°		10:35	7.3	503	24.1	1.6	1.8	2.670	19.9	36.1	40.4	1.4	2.2	0.96	19	3.7	200	-

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

<Location O along the Tomioka River: 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		
O-1	The main stream of the Tomioka River	37.3547°	140.9780°	2024/6/28	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0026	-	-	-	630	N.D.(4.7)	630	-	
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	270	0.053	Larva	-	-	-	54	N.D.(4.7)	54	-
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<i>Macromia amphigena</i>	192	0.045	Larva (Dragonfly larva)	-	-	-	7.4	N.D.(1.1)	7.4	-
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	<i>Stylogomphus suzukii</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<i>Sieboldius albardae</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	<i>Davidius</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	<i>Asiagomphus melaenops</i>										
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	<i>Boyeria maclachlani</i>										
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	<i>Protohermes grandis</i>	57	0.027	Larva	-	-	-	4.7	N.D.(1.3)	4.7	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	464	1.2	Imago	-	-	-	9.2	N.D.(1.1)	9.2	1.0
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	1106	0.39	Juvenile, Imago	-	-	-	16	N.D.(1.6)	16	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	19	0.21	Juvenile	-	-	-	23	N.D.(1.2)	23	-
					Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	3	0.46	Immature fish, Mature fish	Fish	Viscera removed	20	N.D.(1.6)	20	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	38	0.42	Immature fish, Mature fish	Obscure digesta	Viscera removed	33	N.D.(1.3)	33	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsarichthys platypus</i>	Pale chub	10	0.091	Immature fish	-	-	12	N.D.(1.4)	12	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Candidia temminckii</i>	Dark chub	115	0.53	Immature fish, Mature fish	-	-	18	N.D.(1.3)	18	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Cobitis biwae</i>	<i>Cobitis biwae</i>	17	0.067	Immature fish, Mature fish	-	-	7.5	N.D.(0.67)	7.5	-	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	34	0.54	Immature fish, Mature fish	-	-	36	N.D.(1.7)	36	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	<i>Rhinogobius fluviatilis</i>	18	0.083	Immature fish, Mature fish	-	-	17	N.D.(2.9)	17	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius nagoyae</i>	<i>Rhinogobius nagoyae</i>										
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius kurodai</i>	<i>Rhinogobius kurodai</i>															
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Sicyopterus japonicus</i>	Monk goby	12	0.11	Immature fish, Mature fish	-	-	26	N.D.(2.0)	26	-						
Vertebrata	Cephalaspidomorphi	Petromyzontiformes	Petromyzontidae	<i>Lethenteron reissneri</i>	Far eastern brook lamprey	20	0.039	Ammocoetes (larva)	-	-	6.3	N.D.(1.1)	6.3	-						
Vertebrata	Amphibia	Anura	Lithobates	<i>Lithobates catesbeianus</i>	American bullfrog	1	0.13	Imago	-	-	22	N.D.(1.9)	22	-						
Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.22	-	-	-	28	N.D.(1.7)	28	-						
O-2	The main stream of the Tomioka River	37.3624°	140.9612°	2024/6/28	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0037	-	-	-	100	N.D.(24)	100	-	
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<i>Macromia amphigena</i>	25	0.0095	Larva (Dragonfly larva)	-	-	7.5	N.D.(5.0)	7.5	-	
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<i>Sieboldius albardae</i>										
					Arthropoda	Insecta	Odonata	Aeshnidae	<i>Planaeschna milnei milnei</i>	<i>Planaeschna milnei milnei</i>										
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	<i>Protohermes grandis</i>	69	0.037	Larva	-	-	3.6	N.D.(1.3)	3.6	-	
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	88	0.13	Imago	-	-	7.4	N.D.(1.3)	7.4	-	
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	13	0.13	Juvenile	-	-	15	N.D.(1.6)	15	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	46	0.42	Immature fish	-	-	19	N.D.(1.4)	19	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsarichthys platypus</i>	Pale chub	4	0.085	Mature fish	-	-	14	N.D.(2.5)	14	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Candidia temminckii</i>	Dark chub	46	0.34	Immature fish, Mature fish	-	-	26	N.D.(1.4)	26	-	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	33	0.61	Immature fish, Mature fish	-	-	32	N.D.(1.3)	32	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	4	0.28	Immature fish, Mature fish	Empty stomach	Viscera removed	26	N.D.(1.3)	26	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	<i>Rhinogobius fluviatilis</i>	9	0.051	Immature fish, Mature fish	-	-	17	N.D.(1.3)	17	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius nagoyae</i>	<i>Rhinogobius nagoyae</i>										
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Tridentiger brevispinis</i>	Dusky tripletooth goby	1	0.025	Mature fish	-	-	9.6	N.D.(1.5)	9.6	-						
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Sicyopterus japonicus</i>	Monk goby	4	0.027	Immature fish	-	-	16	N.D.(1.7)	16	-						
Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.24	-	-	-	16	N.D.(1.5)	16	-						

\*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.