

OResults of Radioactive Material Monitoring of Aquatic Organisms (Location E along the Niida River)

<Location E along the Niida River: Samples collected>

Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
E-2 a	○	○	○	○	○	○

<Location E along the Niida River: Site measurement item>

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)	Transparency (cm)		
E-2 a	37.6640°	140.9447°	2024/6/27	13:29	13:35	24.1	24.5	Sand	10YR4/2	None	0.55	>50		

<Location E along the Niida River: General survey items/Analysis of radioactive materials Water>

Locations	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)												
E-2 a	37.6640°	140.9447°	2024/6/27	13:29	7.6	1.1	3.3	9.9	9.8	0.05	1.6	2	1.7	N.D.(0.0014)	0.019	0.0019

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

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

Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHE} (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)			
E-2 a	37.6640°	140.9447°	2024/6/27	13:35	7.3	512	21.3	1.5	3.5	2.670	31.6	50.8	12.5	2.8	2.3	1.5	4.8	3.4	280	0.14	

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

<Location E along the Niida 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		
E-2 b	The main stream of the Niida River	37.6635°	140.9452°	2024/6/23	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0093	-	-	-	46	N.D.(5.6)	46	-	
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	280	0.10	Larva	-	-	-	86	N.D.(2.2)	86	-
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<i>Macromia amphigena</i>	165	0.044	Larva (Dragonfly larva)	-	-	-	18	N.D.(2.4)	18	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Meligomphus viridicostus</i>	<i>Meligomphus viridicostus</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<i>Sieboldius albardae</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius</i> sp.	<i>Davidius</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	<i>Asiagomphus melaenops</i>										
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Sympetrum</i> sp.	<i>Sympetrum</i>										
					Arthropoda	Insecta	Odonata	Libellulidae	<i>Orthetrum albistylum speciosum</i>	Common skimmer										
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	<i>Protohermes grandis</i>	51	0.059	Larva	-	-	-	9.5	N.D.(2.2)	9.5	-
					Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red swamp crawfish	11	0.034	Juvenile	-	-	-	18	N.D.(4.8)	18	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	172	0.033	Juvenile, Imago	-	-	-	11	N.D.(1.5)	11	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	29	0.20	Juvenile	-	-	-	16	N.D.(1.2)	16	-
					Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	<i>Semisulcospira libertina</i>	28	0.015	Juvenile, Imago	-	-	-	15	N.D.(2.4)	15	-
					Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	2	0.17	Immature fish	Empty stomach	-	-	10	N.D.(1.5)	10	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	2	0.067	Immature fish, Mature fish	Obscure digesta	-	-	26	N.D.(2.7)	26	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Opsarichthys platypus</i>	Pale chub	23	0.16	Immature fish, Mature fish	-	-	-	9.2	N.D.(1.7)	9.2	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus esocinus</i>	<i>Pseudogobio esocinus esocinus</i>	6	0.15	Mature fish	-	-	-	9.0	N.D.(0.81)	9.0	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Sarcocheilichthys variegatus variegatus</i>	<i>Sarcocheilichthys variegatus variegatus</i>	5	0.064	Immature fish, Mature fish	-	-	-	6.6	N.D.(0.69)	6.6	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Candidia temminckii</i>	Dark chub	4	0.027	Immature fish	-	-	-	8.2	N.D.(1.4)	8.2	-
					Vertebrata	Osteichthyes	Salmiformes	Osmeridae	<i>Plecoglossus altivelis altivelis</i>	Sweetfish	17	0.40	Immature fish, Mature fish	-	-	-	26	N.D.(1.2)	26	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	<i>Rhinogobius fluviatilis</i>	32	0.15	Mature fish	-	-	-	15	N.D.(0.99)	15	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius nagoyae</i>	<i>Rhinogobius nagoyae</i>										
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Sicyopterus japonicus</i>	Monk goby	3	0.016	Immature fish	-	-	-	22	N.D.(3.1)	22	-
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	0.12	Immature fish	Empty stomach	-	-	20	N.D.(2.4)	20	-
Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.26	-	-	-	-	86	N.D.(1.8)	86	-					

*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.