

**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°	2017/6/15	09:10	09:00	16.6	17.6	Silt with sand	2.5Y3/3	Tubifex Total length approx.2mm, Plant pieces a little	0.52	>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°	2017/6/15	09:10	7.0	0.8	2.4	9.5	7.8	0.05	0.9	2	2.0	0.0044	0.029	0.0015

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 <sub>h</sub> (H)E (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)	Maximum grain diameter (mm)			
E-2 a	37.6640°	140.9447°	2017/6/15	09:00	7.4	307	48.2	6.8	22.4	2.611	15.9	14.0	18.0	18.7	17.7	15.7	0.23	19	740	5200	0.82

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-2b	The main stream of the Niida River	37.6635°	140.9452°	2017/6/18	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.011	-	-	-	160	20	140	-				
					Algae/plant	-	-	-	-	Bryophyta	Bryophyte	-	0.29	-	-	-	-	137	17	120	-		
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	234	0.032	Larva	-	-	-	-	-	160	20	140	-	
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	27	0.0059	Larva (Dragonfly larva)	-	-	-	-	-	-	89.9	9.9	80	-
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	Sieboldius albardae													
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius													
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaenops</i>	Asiagomphus melaenops													
					Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis	16	0.0081	Larva	-	-	-	-	-	24.2	4.2	20	-	
					Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red swamp crawfish	1	0.021	Imago	-	-	-	-	-	42.7	4.7	38	-	
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	43	0.037	Imago	-	-	-	-	-	31.6	3.6	28	-	
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	219	0.074	Juvenile,Imago	-	-	-	-	-	58.6	8.6	50	-	
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	10	0.15	Juvenile	-	-	-	-	-	43.1	5.1	38	-	
					Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	3	1.2	Immature fish,Mature fish	Japanese mitten Crab	Viscera removed	-	-	-	134	14	120	0.23	
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	<i>Cottus pollux</i>	Japanese fluvial sculpin	3	0.074	Immature fish	-	-	-	-	-	46.5	5.5	41	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	55	0.44	Immature fish	-	-	-	-	-	28.9	2.9	26	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	7	0.035	Immature fish	-	-	-	-	-	30.7	3.7	27	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus</i>	Pseudogobio esocinus	9	0.19	Immature fish,Mature fish	-	-	-	-	-	32.7	3.7	29	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Sarcocheilichthys variegatus variegatus</i>	Sarcocheilichthys variegatus variegatus	9	0.080	Immature fish,Mature fish	-	-	-	-	-	28.3	3.3	25	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	Carassius auratus langsdorffii	15	0.85	Immature fish,Mature fish	Obscure digesta	Viscera removed	-	-	-	40.7	5.7	35	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	0.067	Immature fish	Obscure digesta	Viscera removed	-	-	-	16.8	1.8	15	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Gnathopogon elongatus elongatus</i>	Gnathopogon elongatus elongatus	24	0.082	Immature fish,Mature fish	-	-	-	-	-	39.6	5.6	34	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	2	0.033	Mature fish	-	-	-	-	-	39.9	3.9	36	-	
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish	27	0.21	Immature fish	-	-	-	-	-	128	18	110	-	
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Seema	1	0.15	Immature fish	Empty stomach	Viscera removed	-	-	-	39.5	5.5	34	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluvialtilis</i>	Rhinogobius fluvialtilis	37	0.16	Mature fish	-	-	-	-	-	60.0	6.0	54	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp. CB</i>	Rhinogobius nagoyae													
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	6	4.4	Immature fish,Mature fish	Fish	Viscera removed	-	-	-	285	35	250	0.72	
					Vertebrata	Amphibia	Anura	Ranidae	<i>Rana catesbeiana</i>	American Bullfrog	2	0.78	Imago	-	-	-	-	-	50.2	5.2	45	-	
	Coarse Particulate Organic Matter	-	-	-	-	-	-	-	-	Bottom fallen leaves	-	0.23	-	-	-	-	-	182	22	160	-		

\*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.