

Results of Radioactive Material Monitoring of Aquatic Organisms (Location C along the Uda River)

<Location C along the Uda River: Samples collected>

Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
C-6	○	○	○	○	○	○

<Location C along the Uda 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)
C-6	37.7764°	140.8877°	2017/8/28	08:47	09:08	18.6	19.0	Sand	2.5Y4/4	None	0.43	>50

<Location C along the Uda 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)												
C-6	37.7764°	140.8877°	2017/8/28	08:47	7.5	<0.5	2.6	9.8	10.6	0.08	1.1	2	1.3	0.0012	0.0092	0.00085

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

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

Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _H (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)
C-6	37.7764°	140.8877°	2017/8/28	09:08	7.6	294	17.1	1.3	1.0	2.710	20.8	47.2	30.3	1.3	0.4	1.2	9.5	24	180	0.35

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

<Location C along the Uda 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		
C-6	The main stream of the Uda River	37.7764°	140.8877°	2017/8/19	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0068	-	-	-	38.3	4.3	34	-	
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	40	0.011	Larva	-	-	-	13	N.D.(3.2)	13	-
					Arthropoda	Malacostraca	Decapoda	Cambaridae	<i>Procambarus clarkii</i>	Red swamp crawfish	3	0.048	Imago	-	-	-	6.9	N.D.(0.83)	6.9	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	70	0.018	Juvenile,Imago	-	-	-	9.6	N.D.(3.7)	9.6	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	4	0.014	Juvenile	-	-	-	15	N.D.(2.9)	15	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	10	0.020	Immature fish	Obscure digesta	Viscera removed	13.6	2.6	11	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	2	0.022	Immature fish	-	-	-	6.8	N.D.(2.0)	6.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Nipponocypris temminckii</i>	Dark chub	26	0.14	Immature fish	-	-	-	5.50	0.70	4.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	6	0.035	Immature fish	-	-	-	5.3	1.3	4.0	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Cobitis biwae</i>	Cobitis biwae	10	0.021	Immature fish,Mature fish	-	-	-	5.8	N.D.(2.0)	5.8	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	17	0.025	Immature fish,Mature fish	-	-	-	2.2	N.D.(1.7)	2.2	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Lefua echigonia</i>	Lefua echigonia	6	0.0065	Immature fish,Mature fish	-	-	-	N.D.	N.D.(6.0)	N.D.(5.1)	-
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish	29	0.38	Immature fish,Mature fish	-	-	-	16.6	1.6	15	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Gymnogobius urotaenia</i>	Goby	4	0.019	Immature fish	-	-	-	9.8	N.D.(2.7)	9.8	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	Rhinogobius fluviatilis	30	0.055	Immature fish,Mature fish	-	-	-	9.4	1.5	7.9	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp. CB</i>	Rhinogobius nagoyae				-	-	-	-	-	-	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Tridentiger brevispinis</i>	Dusky tripletooth goby	4	0.051	Mature fish	-	-	-	15.8	1.8	14	-
					Vertebrata	Osteichthyes	Siluriformes	Bagridae	<i>Pseudobagrus tokiensis</i>	Cut-tailed bullhead	8	0.0034	Immature fish	-	-	-	N.D.	N.D.(12)	N.D.(10)	-
					Vertebrata	Amphibia	Anura	-	-	Frog	5	0.0083	Larva (Tadpole)	-	-	-	108	17	91	-
					Vertebrata	Amphibia	Anura	Ranidae	<i>Rana porosa porosa</i>	Tokyo Daruma pond frog	6	0.035	Imago	-	-	-	3.2	N.D.(1.4)	3.2	-
Vertebrata	Amphibia	Anura	Ranidae	<i>Rana japonica</i>	Japanese Brown Frog	-	-	-	-	-				-	-	-	-			
Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	2	0.0082	Imago	-	-	-	3.9	N.D.(4.4)	3.9	-					
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.24	-	-	-	57.9	6.9	51	-	

*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.