

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

<Location C along the Uda River: Samples collected>

Items 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>

Items 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°	2018/10/23	10:35	10:48	13.0	14.8	Sand	2.5Y4/3	None	0.50	>50

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

Items Locations	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)		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
C-6	37.7764°	140.8877°	2018/10/23	10:35	7.6	<0.5	1.7	11.3	9.5	0.05	0.8	<1	0.4	N.D.(0.0014)	0.0050	0.00079

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>

Items 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)	Maximum grain diameter (mm)			
C-6	37.7764°	140.8877°	2018/10/23	10:48	7.3	310	22.3	1.3	1.3	2.691	2.4	40.4	54.2	2.0	1.0		0.77	4.8	17	190	0.59

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°	2018/10/20	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.012	-	-	-	16	N.D.(13)	16	-
					Arthropoda	Insecta	Odonata	Cordulegastridae	Anotogaster sieboldii	Anotogaster sieboldii	29	0.0045	Larva(Dragonfly larva)	-	-	19	N.D.(9.7)	19	-
					Arthropoda	Insecta	Odonata	Gomphidae	Davidius sp.	Davidius									
					Arthropoda	Insecta	Odonata	Gomphidae	Asiagomphus melaeonops	Asiagomphus melaeonops									
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Phoxinus lagowskii steindachneri	Amur Minnow	13	0.052	Immature fish,Mature fish	-	-	2.9	N.D.(1.2)	2.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	107	2.2	Immature fish,Mature fish	-	-	7.71	0.61	7.1	0.24
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Opsarichthys platypus	Pale chub	71	0.40	Immature fish,Mature fish	-	-	6.51	0.61	5.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Pseudogobio esocinus esocinus	Pseudogobio esocinus esocinus	8	0.093	Immature fish,Mature fish	-	-	5.3	N.D.(0.64)	5.3	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsdorffii	41	0.27	Immature fish	-	-	8.19	0.69	7.5	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Cyprinus carpio	Common carp	1	4.5	Mature fish	Obscure digesta	Viscera removed	9.20	0.90	8.3	0.39
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Gnathopogon elongatus elongatus	Gnathopogon elongatus elongatus	80	0.20	Immature fish,Mature fish	-	-	4.28	0.38	3.9	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	47	0.27	Immature fish	-	-	5.24	0.54	4.7	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Pseudorasbora parva	Stone moroko	2	0.0059	Mature fish	-	-	5.9	N.D.(6.5)	5.9	-
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	Plecoglossus altivelis altivelis	Sweetfish	17	0.25	Immature fish,Mature fish	-	-	17.5	1.5	16	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Oncorhynchus keta	Salmon	1	1.6	Mature fish	Empty stomach	Viscera removed	N.D.	N.D.(0.35)	N.D.(0.39)	0.023
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	Gymnogobius urotaenia	Goby	5	0.023	Immature fish	-	-	5.7	N.D.(2.1)	5.7	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.23	-	-	-	5.6	N.D(1.7)	5.6	-

*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.