

•Results 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-1	○	○	○	—	○	—
C-2	○	○	○	—	○	—
C-3	○	—	○	—	—	—
C-4	○	○	○	○	○	○
C-5	○	○	○	—	○	—
C-6	○	○	○	—	○	—

< Locations 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-1	37.79557°	140.74558°	2014/9/4	8:37	8:42	18.2	18.5	Sediment with sand	2.5Y3/3	Pebbles	0.82	>50.0
C-2	37.77107°	140.72778°		9:23	9:32	18.6	18.6	Sediment with sand	2.5Y3/1	None	0.37	>50.0
C-3	37.77908°	140.80408°		10:25	—	19.1	—	—	—	—	0.38	>50.0
C-4	37.76925°	140.84423°		11:20	11:40	19.6	19.7	Sand	2.5Y4/4	Pebbles	0.48	>50.0
C-5	37.76453°	140.86028°		13:12	13:17	19.8	19.8	Sand	2.5Y4/1	None	0.89	>50.0
C-6	37.77642°	140.88752°		14:03	14:09	20.2	20.4	Fine sand	2.5Y5/3	Pebbles	0.60	>50.0

< 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 (mg/L)	COD (mg/L)	DO (mg/L)	Electrical 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												
C-1	37.79557°	140.74558°	2014/9/4	8:37	7.4	<0.5	1.5	9.9	9.1	0.05	0.7	1	0.5	0.0098	0.028	—
C-2	37.77107°	140.72778°		9:23	7.4	0.5	3.7	8.6	9.0	0.05	1.8	4	2.6	0.015	0.045	—
C-3	37.77908°	140.80408°		10:25	7.4	<0.5	2.6	9.5	8.4	0.05	1.1	5	4.7	0.045	0.13	—
C-4	37.76925°	140.84423°		11:20	7.6	<0.5	2.2	9.7	7.9	0.04	1.1	2	2.5	0.024	0.069	0.00095
C-5	37.76453°	140.86028°		13:12	7.7	<0.5	2.3	9.4	8.0	0.04	1.1	6	3.6	0.016	0.045	—
C-6	37.77642°	140.88752°		14:03	7.5	<0.5	2.4	9.6	9.2	0.05	1.1	4	4.7	0.013	0.036	—

< 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 _{NHLE} (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (g/cm3)	Grain size distribution							Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)	
	Latitude	Longitude	Date	Time							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-1	37.79557°	140.74558°	2014/9/4	8:42	7.2	296	29.5	3.6	5.6	2.725	43.6	32.5	16.3	4.3	1.5	1.8	1.7	9.5	270	760	—
C-2	37.77107°	140.72778°		9:32	6.7	154	41.1	4.7	10.7	2.680	27.7	19.4	20.4	7.6	8.5	16.4	0.76	9.5	140	440	—
C-4	37.76925°	140.84423°		11:40	7.4	231	18.8	1.3	1.2	2.717	49.7	30.2	19.2	0.5	0.2	0.2	2.0	9.5	120	370	0.68
C-5	37.76453°	140.86028°		13:17	7.4	258	20.9	1.3	1.7	2.700	36.3	42.9	16.1	2.7	1.0	1.0	1.6	9.5	160	470	—
C-6	37.77642°	140.88752°		14:09	7.2	263	22.1	2.0	1.7	2.744	13.6	20.8	52.2	11.4	1.2	0.8	0.58	9.5	100	330	—

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 >

Location		Latitude and longitude of the location		Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note			Cs-134 (Bq/kg-wet)	Cs-137 (Bq/kg-wet)	Sr-90 (Bq/kg-wet)	
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site				
C-6	—	37.77642°	140.88752°	2014/9/2	Algae/plant	—	—	—	—	River bottom materials (incl. algae)	Considerable number	0.024	—	—	—	53	150	—	
					Arthropod	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	34	0.0064	Larva	—	—	—	12	40	—
					Arthropod	Insecta	Odonata	Corduliidae	<i>Macromia amphigena</i>	Macromia amphigena	155	0.024	Larva (dragonfly larva)	—	—	4.1	9.8	—	
					Arthropod	Insecta	Odonata	Gomphidae	<i>Asiagomphus melaeonops</i>	Asiagomphus melaeonops									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius nanus</i>	Davidius nanus									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	albardae									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Sinogomphus flavolimbatas</i>	Sinogomphus flavolimbatas									
					Arthropod	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii									
					Arthropod	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis	16	0.0054	Larva	—	—	7.2	16	—	
					Arthropod	Malacostraca	Decapoda	Procambarus	<i>Procambarus clarkii</i>	Red swamp crawfish	2	0.016	Imago	—	—	6.1	16	—	
					Arthropod	Malacostraca	Decapoda	Grapsidae	<i>Eriocheir japonica</i>	Japanese mitten crab	7	0.18	Imago	—	—	11	32	—	
					Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	125	0.019	Imago	—	—	13	36	—	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Nipponocypris temminckii</i>	Pale chub	5	0.021	Immature fish/Mature fish (1-year-old)	Many unknown content	Viscera removed	4.5	15	—	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	1	0.021	Mature fish (1-year-old)	Little	Viscera removed	9.8	28	—	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Dark chub	29	0.16	Immature fish/Mature fish (1-year-old)	Many unknown content	Viscera removed	5.4	14	—	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Rhinogobius	4	0.015	Mature fish	—	—	15	42	—	
Coarse particulate organic matters	—	—	—	—	—	—	—	—	Fallen leaves	Considerable number	0.60	—	—	38	130	—			

*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 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: A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith

*6: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

*7: 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.

*8: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*9: Activity concentrations include counting errors, but the details are omitted here.