

**OResults 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-1	o	o	o	-	o	-
C-2	o	o	o	-	o	-
C-3	o	-	o	-	-	-
C-4	o	o	o	o	o	o
C-5	o	o	o	-	o	-
C-6	o	o	o	-	o	-

<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-1	37.7953°	140.7459°	2016/10/18	08:35	08:40	14.9	15.1	Sand with gravel	2.5Y3/3	None	0.33	>50		
C-2	37.7718°	140.7290°		09:20	09:30	14.3	15.1	Sediment with sand	2.5Y3/2	None	0.31	>50		
C-3	37.7792°	140.8040°		10:18	-	15.0	-	-	-	-	0.47	>50		
C-4	37.7687°	140.8443°		11:02	11:16	16.1	16.4	Sand	2.5Y4/2	None	0.34	>50		
C-5	37.7646°	140.8603°		13:12	13:25	17.1	17.5	Gravel with sand	2.5Y4/4	None	0.40	>50		
C-6	37.7764°	140.8877°		14:00	14:08	17.1	17.3	Sand	2.5Y4/2	None	0.44	>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-1	37.7953°	140.7459°	2016/10/18	08:35	7.5	<0.5	1.9	10.9	12.0	0.06	0.8	1	0.9	0.0020	0.010	-
C-2	37.7718°	140.7290°		09:20	7.3	<0.5	4.1	9.8	9.1	0.05	1.5	12	4.5	0.0053	0.034	-
C-3	37.7792°	140.8040°		10:18	7.5	<0.5	2.2	10.2	8.9	0.05	0.9	2	1.9	0.0043	0.023	-
C-4	37.7687°	140.8443°		11:02	7.6	<0.5	1.7	10.7	7.9	0.05	0.7	<1	0.8	0.0015	0.0074	0.00086
C-5	37.7646°	140.8603°		13:12	7.7	<0.5	1.7	10.4	8.2	0.05	0.7	<1	0.7	0.0014	0.0071	-
C-6	37.7764°	140.8877°		14:00	7.9	<0.5	1.9	10.6	9.4	0.05	0.8	1	0.8	N.D.(0.0016)	0.0080	-

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 <sub>NHLE</sub> (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)
C-1	37.7953°	140.7459°	2016/10/18	08:40	7.0	341	34.6	7.1	6.9	2.641	26.2	29.0	29.4	10.8	1.1	3.5	1.0	9.5	84	500	-
C-2	37.7718°	140.7290°		09:30	6.9	131	29.9	4.5	10.3	2.678	27.4	29.5	24.9	8.3	4.2	5.7	1.1	9.5	50	370	-
C-4	37.7687°	140.8443°		11:16	7.0	326	16.2	0.8	1.7	2.673	36.0	47.2	15.1	1.4	0.1	0.2	1.6	9.5	37	200	0.30
C-5	37.7646°	140.8603°		13:25	7.0	322	13.2	0.7	1.5	2.655	52.9	41.1	5.9	0.0	0.0	0.1	2.1	9.5	23	130	-
C-6	37.7764°	140.8877°		14:08	7.1	313	21.9	1.5	1.6	2.649	0.5	16.3	77.6	5.3	0.1	0.2	0.55	4.8	35	190	-

<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	-	37.7764°	140.8877°	2016/10/20	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.025	-	-	-	84.7	9.7	75	-			
					Algae/plant	Zygnematophyceae	Zygnematales	Zygnemataceae	<i>Spirogyra sp.</i>	Spirogyra	-	0.23	-	-	-	-	16.0	3.0	13	-		
					Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	5	0.080	Imago	-	-	-	19.4	2.4	17	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	6	0.11	Immature fish,Mature fish	-	-	-	9.5	1.3	8.2	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	10	0.055	Immature fish	-	-	-	10.6	2.0	8.6	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus</i>	Pseudogobio esocinus	2	0.013	Immature fish	-	-	-	6.3	N.D.(3.0)	6.3	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Nipponocypris temminckii</i>	Dark chub	7	0.073	Immature fish,Mature fish	-	-	-	10.4	1.3	9.1	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	7	0.046	Immature fish	-	-	-	7.3	1.2	6.1	-		
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Cobitis biwae</i>	Cobitis biwae	9	0.0091	Immature fish,Mature fish	-	-	-	5.5	N.D.(4.2)	5.5	-		
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	Rhinogobius fluviatilis	7	0.029	Mature fish	-	-	-	19.2	3.2	16	-		
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp. CB</i>	Rhinogobius nagoyae												
					Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	-	-	-	12.6	1.6	11	-

\*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.