

Results of Radioactive Material Monitoring of Aquatic Organisms (Location N along the Ukedo River)

<Location N along the Ukedo River: Samples collected>

Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
N-1	○	○	○	○	○	○
N-2	○	○	○	-	○	-
N-3	○	○	○	-	○	-

<Location N along the Ukedo 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)
N-1	37.4998°	140.9835°	2024/12/11	08:15	08:15	7.5	8.4	Sand	7.5Y4/2	Plant pieces	0.37	>50
N-2	37.5070°	140.9456°		10:40	10:40	8.4	8.3	Sand	7.5Y6/3	None	0.53	>50
N-3	37.4754°	140.9598°		13:40	13:40	7.2	7.7	Sand	7.5Y6/3	Plant pieces	0.60	>50

<Location N along the Ukedo 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)												
N-1	37.4998°	140.9835°	2024/12/11	08:15	7.1	<0.5	1.1	11.7	9.2	0.05	0.7	<1	0.5	N.D.(0.0015)	0.043	0.0024
N-2	37.5070°	140.9456°		10:40	7.4	<0.5	1.3	12.3	7.7	0.04	0.7	<1	0.6	N.D.(0.0016)	0.049	-
N-3	37.4754°	140.9598°		13:40	7.8	0.5	1.2	13.1	7.7	0.04	0.6	2	0.8	N.D.(0.0014)	0.0098	-

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

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

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/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)
N-1	37.4998°	140.9835°	2024/12/11	08:15	6.7	458	25.5	1.4	3.0	2.670	9.5	20.1	47.2	18.1	1.8	3.3	0.52	9.5	36	2600	0.45
N-2	37.5070°	140.9456°		10:40	7.4	499	20.3	0.8	0.3	2.620	1.2	54.8	42.6	0.2	1.2	0.93	4.8	26	1800	-	
N-3	37.4754°	140.9598°		13:40	7.0	558	27.3	1.6	1.6	2.640	2.9	11.4	65.3	16.9	0.2	3.3	0.40	9.5	23	1600	-

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

<Location N along the Ukedo 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		
N-1	The main stream of the Ukedo River	37.4998°	140.9835°	2024/12/11	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.030	-	-	-	892	12	880	-	
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	227	0.014	Larva	-	-	-	520	N.D.(7.0)	520	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	7	0.35	Immature fish, Mature fish	Obscure digesta	Viscera removed	120	N.D.(1.6)	120	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	3	1.4	Immature fish, Mature fish	Obscure digesta	Viscera removed	0.87	N.D.(0.26)	0.87	0.27	
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.24	-	-	-	-	121.7	1.7	120	-
N-2	The main stream of the Ukedo River	37.5070°	140.9456°	2024/12/11	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.011	-	-	-	120	N.D.(14)	120	-	
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	15	0.020	Imago	-	-	-	110	N.D.(11)	110	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	11	0.18	Immature fish, Mature fish	Obscure digesta	Viscera removed	302.9	2.9	300	-	
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	7	1.5	Immature fish	Obscure digesta	Viscera removed	120	N.D.(1.5)	120	2.1	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius fluviatilis</i>	<i>Rhinogobius fluviatilis</i>	13	0.042	Mature fish	-	-	130	N.D.(9.3)	130	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius nagoyae</i>	<i>Rhinogobius nagoyae</i>	1	1.2	Mature fish	Empty stomach	Viscera removed	395.5	5.5	390	-	
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.9	Mature fish	Empty stomach	Viscera removed	2633	33	2600	1.6	
					Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	1.9	Mature fish	Empty stomach	Viscera removed	2633	33	2600	1.6	
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.22	-	-	-	-	110	N.D.(1.7)	110	-
N-3	The main stream of the Takase River	37.4754°	140.9598°	2024/12/11	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.015	-	-	-	72	N.D.(11)	72	-	
					Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	<i>Macromia amphigena</i>	45	0.011	Larva (Dragonfly larva)	-	-	7.4	N.D.(3.2)	7.4	-	
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Nihogomphus viridis</i>	<i>Nihogomphus viridis</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Stylogomphus suzukii</i>	<i>Stylogomphus suzukii</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Melligomphus viridicostus</i>	<i>Melligomphus viridicostus</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Sieboldius albardae</i>	<i>Sieboldius albardae</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	<i>Davidius</i>										
					Arthropoda	Insecta	Odonata	Gomphidae	<i>Shaogomphus postocularis</i>	<i>Shaogomphus postocularis</i>										
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	<i>Cottus reinii</i>	Sculpin	6	0.045	Immature fish	-	-	19	N.D.(3.2)	19	-	
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius nagoyae</i>	<i>Rhinogobius nagoyae</i>	18	0.030	Immature fish, Mature fish	-	-	18	N.D.(3.5)	18	-	
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.21	-	-	-	-	67	N.D.(1.4)	67	-

*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.