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

<Location N along the Ukedo River: Samples collected>

Items / 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>

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)
N-1	37.4998°	140.9835°	2022/8/20	08:15	08:10	19.0	21.7	Sand gravel	7.5Y5/3	None	0.30	>100
N-2	37.5070°	140.9456°		10:04	10:10	18.2	18.7	Sand gravel	7.5Y6/3	None	0.20	>100
N-3	37.4754°	140.9598°		12:30	12:30	21.8	22.3	Sand gravel	7.5Y5/3	None	0.30	>100

<Location N along the Ukedo 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)
N-1	37.4998°	140.9835°	2022/8/20	08:15	7.4	<0.5	2.0	9.2	7.7	0.04	0.8	2	0.9	0.0020	0.074	0.0019
N-2	37.5070°	140.9456°		10:04	7.5	<0.5	2.0	9.6	6.6	0.04	0.8	<1	0.6	0.0024	0.070	-
N-3	37.4754°	140.9598°		12:30	7.6	<0.5	2.3	8.6	7.6	0.04	0.8	2	0.9	N.D.(0.0018)	0.023	-

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>

Items / Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential $E_{N.H.E}$	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134	Cs-137	Sr-90
	Latitude	Longitude	Date	Time (sediment)		(mV)	(%)	(%)	(mg/g-dry)	(g/cm^3)	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)	(Bq/kg-dry)	(Bq/kg-dry)	(Bq/kg-dry)
N-1	37.4998°	140.9835°	2022/8/20	08:10	7.5	453	21.2	0.7	1.5	2.640	9.3	48.7	34.7	2.1	1.2	4.0	0.96	19	30	1200	N.D.(0.15)
N-2	37.5070°	140.9456°		10:10	7.3	433	23.8	1.3	2.8	2.640	4.0	13.5	32.0	41.7	4.4	4.4	0.25	9.5	120	4500	-
N-3	37.4754°	140.9598°		12:30	7.6	444	22.4	0.8	2.1	2.630	7.0	39.7	37.2	8.7	4.2	3.2	0.79	9.5	20	720	-

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°	2022/8/20	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.010	-	-	-	220	N.D.(29)	220	-
					Algae/plant	Monocotyledoneae	Najadales	Potamogetonaceae	*Potamogeton crispus*	Curly-leaf pondweed	-	0.26	-	-	-	163.4	3.4	160	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	*Stenopsyche marmorata*	82	0.017	Larva	-	-	321	11	310	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	63	0.047	Imago	-	-	98	N.D.(4.4)	98	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir japonica*	Japanese mitten crab	13	0.019	Juvenile	-	-	110	N.D.(6.7)	110	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus reinii*	Sculpin	36	0.24	Immature fish	-	-	113.2	3.2	110	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	5	0.15	Immature fish, Mature fish	Obscure digesta	Viscera removed	112.9	2.9	110	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale chub	5	0.028	Immature fish	-	-	72	N.D.(7.7)	72	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Candidia temminckii*	Dark chub	15	0.066	Immature fish	-	-	56	N.D.(4.5)	56	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	3	0.016	Immature fish	-	-	52	N.D.(11)	52	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	7.3	Mature fish	Obscure digesta	Viscera removed	205.2	5.2	200	2.2
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Acheilognathus melanogaster*	*Acheilognathus melanogaster*	4	0.0094	Immature fish, Mature fish	-	-	110	N.D.(23)	110	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudorasbora parva*	Stone moroko	2	0.013	Mature fish	-	-	65	N.D.(11)	65	-
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	50	0.34	Immature fish	-	-	256.6	6.6	250	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius nagoyae*	*Rhinogobius nagoyae*	24	0.033	Immature fish, Mature fish	-	-	100	N.D.(6.3)	100	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Tridentiger brevispinis*	Dusky tripletooth goby	5	0.025	Immature fish, Mature fish	-	-	110	N.D.(6.3)	110	-
					Vertebrata	Amphibia	Anura	Lithobates	*Lithobates catesbeianus*	American bullfrog	2	0.78	Imago	-	-	73.9	1.9	72	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.26	-	-	-	607	17	590	-
N-2	The main stream of the Ukedo River	37.5070°	140.9456°	2022/8/20	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0078	-	-	-	490	N.D.(19)	490	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	*Stenopsyche marmorata*	54	0.012	Larva	-	-	170	N.D.(13)	170	-
					Arthropoda	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	*Protohermes grandis*	68	0.033	Larva	-	-	41	N.D.(4.5)	41	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	64	0.052	Imago	-	-	134.6	4.6	130	-
					Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	131	0.0085	Juvenile	-	-	87	N.D.(14)	87	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir japonica*	Japanese mitten crab	13	0.11	Juvenile	-	-	185.6	5.6	180	-
					Mollusca	Bivalvia	Veneroida	Corbicula	Corbicula.sp	Corbicula	60	0.0093	Imago	-	Molluscous part	99	N.D.(18)	99	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus reinii*	Sculpin	7	0.15	Immature fish	-	-	174.2	4.2	170	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	4	0.12	Immature fish, Mature fish	-	-	255.7	5.7	250	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale chub	36	0.17	Immature fish	-	-	101.4	2.4	99	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Candidia temminckii*	Dark chub	6	0.018	Immature fish	-	-	110	N.D.(11)	110	-
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	56	0.64	Immature fish, Mature fish	-	-	265.6	5.6	260	-
					Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou masou*	Yamame trout	1	0.033	Immature fish	-	-	230	N.D.(6.2)	230	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius nagoyae*	*Rhinogobius nagoyae*	13	0.018	Immature fish, Mature fish	-	-	210	N.D.(9.0)	210	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Tridentiger brevispinis*	Dusky tripletooth goby	4	0.055	Mature fish	-	-	130	N.D.(4.2)	130	-
					Vertebrata	Osteichthyes	Siluriformes	Amblycipitidae	*Liobagrus reini*	Torrent catfish	2	0.015	Mature fish	-	-	120	N.D.(14)	120	-
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	350	10	340	-
N-3	The main stream of the Takase River	37.4754°	140.9598°	2022/8/20	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.014	-	-	-	26	N.D.(3.9)	26	-
					Arthropoda	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	*Stenopsyche marmorata*	108	0.022	Larva	-	-	90	N.D.(8.7)	90	-
					Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	7	0.0093	Imago	-	-	28	N.D.(3.3)	28	-
					Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir japonica*	Japanese mitten crab	10	0.039	Juvenile	-	-	39	N.D.(5.2)	39	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus reinii*	Sculpin	19	0.15	Immature fish	-	-	12	N.D.(1.2)	12	-
					Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Candidia temminckii*	Dark chub	1	0.0078	Immature fish	-	-	71	N.D.(16)	71	-
					Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Nemacheilus toni*	Stone loach	155	1.2	Immature fish	-	-	17	N.D.(1.3)	17	0.26
					Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	265	2.8	Immature fish	-	-	70.4	2.4	68	0.27
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius nagoyae*	*Rhinogobius nagoyae*	52	0.089	Immature fish, Mature fish	-	-	29	N.D.(2.4)	29	-
					Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius* sp.	Rhinogobius									
					Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.24	-	-	-	163.7	3.7	160	-

*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.