

○ Results (water)

Locations			2017 October - November Survey												
		Latitude	Longitude	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)
Abukuma River System	A-1(Surface layer)	37.6210°	140.5218°	7.2	0.6	2.7	10.6	14.8	0.08	1.2	4	2.6	N.D.(0.0011)	0.0073	0.0011
	A-1(Bottom layer)	37.6210°	140.5218°	7.4	0.6	2.9	10.9	15.1	0.08	1.2	4	2.6	0.0024	0.015	-
	A-2	37.5673°	140.3946°	7.3	<0.5	2.2	11.3	9.5	0.05	0.7	2	1.3	0.0017	0.014	-
	B-2	37.8121°	140.5058°	7.3	<0.5	2.7	10.9	13.6	0.07	1.1	4	3.1	0.0013	0.012	-
	B-3	37.8182°	140.4679°	7.4	<0.5	2.8	11.2	8.1	0.05	1.1	2	2.2	0.0011	0.0087	-
Uda River	C-6	37.7764°	140.8877°	7.4	<0.5	2.0	11.7	10.4	0.06	0.9	1	0.9	N.D.(0.00099)	0.0079	0.00084
Mano River	D-4 a	37.7308°	140.9081°	7.2	<0.5	3.1	11.3	7.7	0.05	1.5	2	1.5	0.0049	0.031	0.0011
Niida River	E-2 a	37.6640°	140.9447°	7.3	<0.5	2.3	11.8	6.9	0.04	0.9	2	1.4	0.0034	0.027	0.0016
Ota River	F-1	37.5975°	140.9252°	7.2	<0.5	2.4	11.0	5.4	0.03	1.0	2	1.2	0.022	0.17	0.0035
Lake Hayama (Mano Dam)	G-1(Surface layer)	37.7321°	140.8127°	7.2	1.5	3.7	8.6	7.0	0.04	1.7	2	1.9	0.0071	0.053	-
	G-1(Bottom layer)	37.7321°	140.8127°	7.2	2.0	3.6	8.2	7.0	0.04	1.6	2	1.7	0.0057	0.044	0.0010
	G-4	37.7382°	140.8035°	7.4	1.5	4.7	10.8	7.4	0.04	2.1	10	4.0	0.010	0.079	-
Lake Akimoto	H-1(Surface layer)	37.6575°	140.1264°	7.0	<0.5	3.2	8.9	5.1	0.03	1.3	2	1.4	N.D.(0.0019)	0.0095	-
	H-1(Bottom layer)	37.6575°	140.1264°	6.9	1.0	3.3	8.4	5.2	0.03	1.7	2	2.3	0.0015	0.013	0.0010
Lake Inawashiro	J-1(Surface layer)	37.4203°	140.1008°	7.6	<0.5	1.7	10.0	10.7	0.06	0.7	<1	0.5	N.D.(0.0012)	0.0084	-
	J-1(Bottom layer)	37.4203°	140.1008°	6.9	<0.5	1.8	9.7	10.8	0.06	0.9	<1	0.9	N.D.(0.0012)	0.0077	0.00071
Off the mouth of the Abukuma River (Sea Area in front of the mouth of the Abukuma River)	K-3(Surface layer)	38.0458°	140.9518°	8.1	0.8	2.4	8.7	3830	23.78	1.3	4	2.9	0.0014	0.0080	-
	K-3(Bottom layer)	38.0458°	140.9518°	8.0	<0.5	1.7	7.8	4960	33.36	1.0	3	1.9	0.0012	0.010	0.00091
Off Soma City (Matsukawaura)	L-2	37.8155°	140.9763°	8.0	<0.5	2.3	7.9	4550	29.98	1.1	4	2.8	0.0012	0.011	0.0012
Off Iwaki City (Hisanohama)	M-2(Surface layer)	37.1996°	141.0853°	8.0	<0.5	1.7	7.9	4930	32.89	1.0	1	0.8	0.0019	0.0080	-
	M-2(Bottom layer)	37.1996°	141.0853°	8.0	<0.5	1.4	7.2	5020	33.56	0.9	1	0.6	N.D.(0.0011)	0.0052	0.0012

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

○ Results (sediments)

Locations			2017 October - November Survey																	
	Latitude	Longitude	pH	Redox potential E _{N,H.E} (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)	
									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)				
Abukuma River System	A-1	37.6210°	140.5218°	7.5	318	24.6	1.4	1.6	2.701	0.1	2.7	75.7	18.7	1.4	1.4	0.39	4.8	20	140	0.20
	A-2	37.5673°	140.3946°	7.2	330	25.0	1.6	2.4	2.738	15.8	37.3	40.7	4.1	1.3	0.8	0.91	4.8	17	140	-
	B-2	37.8121°	140.5058°	7.4	327	24.2	1.7	1.6	2.727	0.1	0.8	56.6	39.4	1.4	1.7	0.27	4.8	18	130	-
	B-3	37.8182°	140.4679°	7.2	316	23.6	1.4	1.8	2.707	17.7	36.5	33.7	6.7	3.6	1.8	0.94	9.5	13	110	-
Uda River	C-6	37.7764°	140.8877°	7.2	306	20.0	1.0	1.2	2.696	6.7	47.3	44.6	1.1	0.3		0.90	19	18	160	0.44
Mano River	D-4 a	37.7308°	140.9081°	7.2	302	18.2	1.5	2.2	2.712	36.5	32.3	24.3	4.8	0.6	1.5	1.4	19	39	310	0.83
Niida River	E-2 a	37.6640°	140.9447°	7.0	327	29.0	2.5	5.9	2.683	16.0	15.9	32.2	21.3	4.7	9.9	0.35	4.8	190	1500	0.50
Ota River	F-1	37.5975°	140.9252°	7.3	321	21.9	1.0	1.6	2.651	2.9	18.7	67.0	9.5	0.6	1.3	0.52	4.8	200	1700	0.83
Lake Hayama (Mano Dam)	G-1	37.7321°	140.8127°	7.0	281	40.1	7.4	11.7	2.662	13.3	11.7	27.8	24.1	14.8	8.3	0.28	27	270	2100	2.7
	G-4	37.7382°	140.8035°	7.1	301	50.1	7.4	14.0	2.654	5.4	1.3	30.5	36.0	15.9	10.9	0.19	19	120	970	-
Lake Akimoto	H-1	37.6575°	140.1264°	6.7	203	69.1	9.6	21.5	2.564	0.0	0.0	0.1	0.7	57.5	41.7	0.0067	2.0	100	780	1.2
Lake Inawashiro	J-1	37.4203°	140.1008°	6.5	394	34.9	2.3	4.4	2.683	0.1	1.4	23.8	66.2	4.6	3.9	0.18	4.8	22	170	0.21
Off the mouth of the Abukuma River (Sea Area in front of the mouth of the Abukuma River)	K-3	38.0458°	140.9518°	7.7	245	44.5	4.5	8.9	2.696	0.0	0.0	0.3	33.0	52.8	13.9	0.057	2.0	26	220	N.D.(0.12)
Off Soma City (Matsukawaura)	L-2	37.8155°	140.9763°	7.8	247	23.1	1.4	2.7	2.692	0.0	0.7	54.6	37.9	2.9	3.9	0.27	4.8	6.6	49	N.D.(0.14)
Off Iwaki City (Hisanohama)	M-2	37.1996°	141.0853°	7.9	244	26.8	1.9	1.8	2.781	1.0	0.8	5.7	89.5	0.9	2.1	0.17	4.8	2.6	19	N.D.(0.13)

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

○ Results (aquatic organisms)

Location	Sampling point	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)		
											Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137			
Abukuma River System	A-2	Harase River	2017/10/17	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0065	-	-	-	120	20	100	-	
				Arthropoda	Malacostraca	Decapoda	Potamidae	<i>Geothelphusa dehaani</i>	Japanese Freshwater Crab	3	0.0054	Juvenile	-	-	-	9.5	N.D.(8.7)	9.5	-
				Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Neocaridina sp.</i>	Neocaridina	404	0.28	Juvenile	-	-	-	17.1	2.1	15	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	25	0.17	Immature fish, Mature fish	-	-	-	8.75	0.95	7.8	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Nipponocypris temminckii</i>	Dark chub	15	0.069	Immature fish	-	-	-	7.63	0.83	6.8	-
				Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Noemacheilus barbatulus</i>	Stone loach	10	0.16	Immature fish	-	-	-	6.23	0.93	5.3	-
				Vertebrata	Amphibia	Caudata	Salamandridae	<i>Cynops pyrrhogaster</i>	<u>Cynops pyrrhogaster</u>	12	0.093	Imago	-	-	-	6.3	N.D.(0.55)	6.3	-
		Coarse Particulate Organic Matter	-	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	43.5	4.5	39	-		
	B-2	The main stream of the Abukuma River	2017/10/22	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	3	0.94	Mature fish	Bryophyte	Viscera removed	23.0	2.0	21	-	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	3	3.8	Mature fish	Empty stomach	Viscera removed	7.38	0.88	6.5	0.36	
				Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	0.89	Mature fish	Empty stomach	Viscera removed	18.7	1.7	17	-	
	B-3	Surikami River	2017/10/19	Algae/plant	-	-	-	-	-	Riverbed Deposits (Include algae)	-	0.018	-	-	-	117	17	100	-
				Algae/plant	Monocotyledoneae	Najadales	Potamogetonaceae	<i>Potamogeton crispus</i>	Curly-leaf pondweed	-	0.043	-	-	-	-	10.1	1.4	8.7	-
				Arthropoda	Insecta	Trichoptera	Stenopsychidae	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	314	0.083	Larva	-	-	-	15.7	1.7	14	-
				Arthropoda	Insecta	Megaloptera	Corydalidae	<i>Protohermes grandis</i>	Protohermes grandis	50	0.044	Larva	-	-	-	3.2	N.D.(1.5)	3.2	-
				Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	<i>Cottus pollux</i>	Japanese fluvial sculpin	5	0.065	Immature fish	-	-	-	3.0	N.D.(0.80)	3.0	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	14	0.18	Mature fish	-	-	-	6.13	0.63	5.5	-
				Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Noemacheilus barbatulus</i>	Stone loach	20	0.27	Immature fish	-	-	-	4.43	0.53	3.9	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	8	0.19	Immature fish	Stenopsyche marmorata	Viscera removed	2.6	N.D.(0.55)	2.6	-	
Vertebrata				Amphibia	Anura	Ranidae	<i>Rana catesbeiana</i>	American Bullfrog	4	0.068	Imago	-	-	-	12.5	1.5	11	-	
Vertebrata				Amphibia	Anura	Ranidae	<i>Rana rugosa</i>	<u>Wrinkled Frog</u>											
	Coarse Particulate Organic Matter	-	-	-	-	-	Bottom fallen leaves	-	0.25	-	-	-	5.10	0.70	4.4	-			
Uda River	C-6	The main stream of the Uda River	2017/10/21	Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	1	0.11	Juvenile	-	-	-	12.4	1.4	11	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	110	0.024	Immature fish	-	-	-	1.7	N.D.(1.9)	1.7	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Nipponocypris temminckii</i>	Dark chub	10	0.024	Immature fish, Mature fish	-	-	-	3.8	N.D.(1.9)	3.8	-
				Vertebrata	Amphibia	Anura	Ranidae	<i>Rana rugosa</i>	<u>Wrinkled Frog</u>	4	0.038	Imago	-	-	-	35.9	3.9	32	-
				Vertebrata	Amphibia	Anura	Ranidae	<i>Rana japonica</i>	Japanese Brown Frog										
Mano River	D-3	The main stream of the Mano River	2017/10/20	Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	4	0.36	Immature fish	Japanese mitten Crab	Viscera removed	6.03	0.83	5.2	-	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	7	0.085	Immature fish, Mature fish	Algae	Viscera removed	33.7	3.7	30	-	
				Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish	29	1.0	Immature fish, Mature fish	-	-	-	21.6	2.6	19	-
	D-4b	The main stream of the Mano River	2017/10/20	Algae/plant	-	-	-	-	-	Riverbed Deposits (Include algae)	-	0.013	-	-	-	61.6	7.6	54	-
				Arthropoda	Malacostraca	Decapoda	Atyidae	<i>Paratya improvisa</i>	Freshwater shrimp	230	0.044	Juvenile, Imago	-	-	-	32.4	4.4	28	-
				Mollusca	Bivalvia	Unionoida	Unionidae	<i>Inversunio jokohamensis</i>	Inversunio jokohamensis	20	0.084	Imago	-	-	Molluscos part	62.5	8.5	54	-
				Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	Semisulcospira libertina	30	0.023	Imago	-	-	Molluscos part	260	30	230	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	2	0.038	Immature fish	-	-	-	35.1	4.1	31	-
				Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	3	0.021	Immature fish, Mature fish	-	-	-	86.1	9.1	77	-
		Coarse Particulate Organic Matter	-	-	-	-	-	Bottom fallen leaves	-	0.22	-	-	-	37.7	4.7	33	-		
	D-5	The main stream of the Mano River	2017/10/20	Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Yamame trout	6	0.47	Immature fish, Mature fish	Grasshopper, Kamimuria tibialis, Dragonfly(larva), Water strider, Baetidae, Moth, Antocha sp., Stenopsyche marmorata	Viscera removed	294	34	260	-	
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	0.47	Immature fish	Obscure digesta	Viscera removed	202	22	180	-	

*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.

Location	Sampling point	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)		
											Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137			
Niida River	E-2b	The main stream of the Niida River	2017/10/21	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0072	-	-	-	676	76	600	-	
				Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	2	0.067	Juvenile	-	-	-	58.4	6.4	52	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	15	0.062	Immature fish	-	-	-	35.6	4.6	31	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	13	0.085	Immature fish, Mature fish	-	-	-	23.7	2.7	21	-
				Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	23	0.093	Immature fish, Mature fish	-	-	-	15.0	2.0	13	-
				Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Plecoglossus altivelis</i>	Sweetfish	3	0.061	Immature fish	-	-	-	90	11	79	-
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp. CB</i>	Rhinogobius nagoyae	55	0.068	Immature fish, Mature fish	-	-	-	21.5	2.5	19	-
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius kurodai</i>	Rhinogobius kurodai										
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius sp.</i>	Rhinogobius										
				Vertebrata	Amphibia	Anura	-	-	-	Frog	22	0.022	Larva (Tadpole)	-	-	-	181	21	160
Vertebrata	Amphibia	Anura	Ranidae	<i>Rana catesbeiana</i>	American Bullfrog	2	0.011	Imago	-	-	-	27.3	3.3	24	-				
Vertebrata	Amphibia	Anura	Hylidae	<i>Hyla japonica</i>	Japanese tree frog														
Ota River	F-1	The main stream of the Ota River	2017/10/21	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0059	-	-	-	636	86	550	-	
				Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Eriocheir japonica</i>	Japanese mitten crab	1	0.044	Juvenile	-	-	-	537	57	480	-
				Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	<i>Anguilla japonica</i>	Japanese eel	1	0.10	Immature fish	Brandling worm	Viscera removed	473	53	420	-	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	6	0.032	Immature fish	-	-	-	372	42	330	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	64	0.28	Immature fish	Algae	Viscera removed	283	33	250	-	
	Coarse Particulate Organic Matter	-	-	-	-	-	Bottom fallen leaves	-	0.22	-	-	-	76.5	8.5	68	-			
F-5	The main stream of the Ota River	2017/10/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Cyprinus carpio</i>	Common carp	1	3.4	Mature fish	Obscure digesta	Viscera removed	161	21	140	1.9		
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus keta</i>	Salmon	4	8.4	Mature fish	Empty stomach	Viscera removed	1.3	N.D.(0.30)	1.3	0.049		
Lake Hayama	G-1 G-2 G-3	In the lake	2017/10/20	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.019	-	-	-	3.7	N.D.(2.0)	3.7	-	
			2017/11/7	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	2	0.23	Mature fish	Obscure digesta	Viscera removed	43.7	5.7	38	-	
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus langsdorfii</i>	Carassius auratus langsdorfii	2	2.5	Mature fish	Obscure digesta	Viscera removed	83.6	8.6	75	1.1	
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	3	0.14	Immature fish	Fish	Viscera removed	55.9	5.9	50	-	
	Vertebrata	Osteichthyes		Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	2	1.1	Mature fish	Fish	Viscera removed	121	11	110	-			
	G-4	Inflowing rivers	2017/10/20	Algae/plant	-	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0062	-	-	-	508	48	460	-
				Arthropoda	Insecta	Odonata	Corduliidae	<i>Macromia amphigena amphigena</i>	Macromia amphigena	51	0.0096	Larva (Dragonfly larva)	-	-	-	20	N.D.(5.1)	20	-
				Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii										
				Arthropoda	Insecta	Odonata	Gomphidae	<i>Davidius sp.</i>	Davidius										
				Arthropoda	Insecta	Odonata	Aeshnidae	<i>Boyeria maclachlani</i>	Boyeria maclachlani										
Vertebrata				Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	7	0.019	Immature fish	-	-	-	21.8	3.8	18	-	
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius flumineus</i>	Rhinogobius flumineus	47	0.017	Immature fish	-	-	-	6.2	N.D.(2.7)	6.2	-				
Coarse Particulate Organic Matter	-	-	-	-	-	-	Bottom fallen leaves	-	0.23	-	-	-	57.1	7.1	50	-			

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Location	Sampling point	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)	
											Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137		
Lake Akimoto	H-1 H-2 H-3	In the lake	2017/10/18	Arthropoda	Malacostraca	Decapoda	Astacidae	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish	11	0.64	Imago	-	-	21.5	3.5	18	7.5
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	12	2.2	Mature fish	-	-	49.2	5.2	44	0.71
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<i>Carassius auratus langsdorffii</i>	6	0.80	Mature fish	-	-	42.1	5.1	37	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	3	2.0	Mature fish	Obscure digesta	Viscera removed	43.0	5.0	38	1.3
				Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	<i>Hypomesus nipponensis</i>	Japanese smelt	78	0.31	Immature fish, Mature fish	-	-	21.2	2.2	19	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	4	1.0	Mature fish	Japanese smelt	Viscera removed	33.3	3.3	30	0.30
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Seema	1	0.90	Mature fish	Empty stomach	Viscera removed	34.1	4.1	30	0.20
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus salmoides</i>	Largemouth bass	2	1.7	Immature fish, Mature fish	Japanese smelt	Viscera removed	47.4	5.4	42	1.5
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	8	3.1	Immature fish, Mature fish	Signal crayfish, Japanese dace, Epophthalmia elegans	Viscera removed	91	10	81	0.48
	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Lepomis macrochirus</i>	Bluegill	1	0.26	Mature fish	Elodea nuttallii	Viscera removed	22.9	2.9	20	-			
	H-3	Inflowing rivers	2017/10/18	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.23	-	-	-	37.9	3.9	34	-
	H-4	Within the lake and rivers in the vicinity	2017/10/18	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.026	-	-	-	N.D.	N.D.(1.5)	N.D.(1.3)	-
				Algae/plant	Monocotyledoneae	Alismatales	Hydrocharitaceae	<i>Elodea nuttallii</i>	Western Waterweed	-	0.11	-	-	-	23.4	2.4	21	-
				Arthropoda	Insecta	Plecoptera	Perlidae	<i>Oyamia sp.</i>	Oyamia	21	0.0040	Larva	-	-	N.D.	N.D.(10)	N.D.(8.7)	-
				Arthropoda	Insecta	Odonata	Cordulegastridae	<i>Anotogaster sieboldii</i>	<u><i>Anotogaster sieboldii</i></u>	26	0.022	Larva (Dragonfly larva)	-	-	12.9	1.9	11	-
				Arthropoda	Insecta	Odonata	Gomphidae	<i>Nihonogomphus viridis</i>	<i>Nihonogomphus viridis</i>									
				Arthropoda	Insecta	Odonata	Gomphidae	<i>Onychogomphus viridicostus</i>	<i>Melligomphus viridicostus</i>									
				Mollusca	Gastropoda	Discopoda	Pleuroceridae	<i>Semisulcospira libertina</i>	<i>Semisulcospira libertina</i>	30	0.029	Imago	-	Molluscos part	4.3	N.D.(1.6)	4.3	-
Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	15	0.072	Immature fish, Mature fish	-	-	8.3	1.0	7.3	-				
Vertebrata	Amphibia	Anura	Ranidae	<i>Rana ornativentris</i>	Montane brown frog	5	0.021	Imago	-	-	11	N.D.(2.0)	11	-				

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Location	Sampling point	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)	
											Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137		
Lake Inawashiro	I-1 I-2 (north lakeside)	2017/10/19	Within the lake and Nagase River	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	42	2.9	Immature fish, Mature fish	Zooplankton, Aquatic insect	Viscera removed	12.4	1.4	11	0.20
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	48	0.87	Immature fish, Mature fish	-	-	4.86	0.46	4.4	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Pseudogobio esocinus</i>	Pseudogobio esocinus	127	1.8	Immature fish, Mature fish	-	-	5.43	0.73	4.7	0.38
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<u>Carassius auratus langsdorffii</u>	6	2.9	Mature fish	Algae	Viscera removed	26.4	3.4	23	0.73
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Hemibarbus barbus</i>	Hemibarbus barbus	3	2.6	Mature fish	Freshwater shrimp, Plant pieces	Viscera removed	27.5	3.5	24	0.42
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	3	1.7	Mature fish	Fish	Viscera removed	44.5	5.5	39	0.11
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	12	3.0	Immature fish, Mature fish	Gobiidae, Japanese smelt, Shrimp	Viscera removed	24.0	3.0	21	0.20
	2017/10/18	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.22	-	-	-	7.00	0.90	6.1	-		
	J-1 (south lakeside)	Within the lake and around the Oninuma	2017/10/18	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.017	-	-	-	N.D.	N.D.(1.8)	N.D.(1.7)	-
				Algae/plant	Dicotyledoneae	Nymphaeales	Nymphaeaceae	<i>Nuphar japonicum</i>	Cow lily	-	0.32	-	-	-	1.5	N.D.(0.27)	1.5	-
				Algae/plant	Dicotyledoneae	Solanales	Menyanthaceae	<i>Nymphoides peltata</i>	Fringed water-lily	-	0.33	-	-	-	1.1	N.D.(0.26)	1.1	-
				Algae/plant	Monocotyledoneae	Alismatales	Hydrocharitaceae	<i>Elodea nuttallii</i>	Western Waterweed	-	0.13	-	-	-	2.7	N.D.(0.42)	2.7	-
				Arthropoda	Malacostraca	Decapoda	Palaemonidae	<i>Palaemon paucidens</i>	Common prawn	286	0.11	Juvenile, Imago	-	-	6.30	0.60	5.7	-
				Mollusca	Gastropoda	Architaenioglossa	Viviparidae	<i>Bellamya japonica</i>	Japanese mysterysnail	15	0.071	Imago	-	Molluscos part	1.6	N.D.(0.98)	1.6	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon hakonensis</i>	Japanese dace	51	2.1	Immature fish, Mature fish	-	-	13.4	1.4	12	0.25
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Zacco platypus</i>	Pale chub	179	2.5	Immature fish, Mature fish	Algae	Viscera removed	8.9	1.1	7.8	0.36
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius auratus</i>	<u>Carassius auratus langsdorffii</u>	10	3.2	Mature fish	Obscure digesta	Viscera removed	16.1	2.1	14	0.49
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Salvelinus leucomaenis</i>	Char	2	1.2	Mature fish	Pseudogobio esocinus, Rhinogobius, Common prawn	Viscera removed	50.0	5.0	45	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	<i>Oncorhynchus masou</i>	Seema	1	0.81	Mature fish	Empty stomach	Viscera removed	75.7	8.7	67	-
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	<i>Micropterus dolomieu</i>	Small mouth bass	4	1.7	Immature fish, Mature fish	Obscure digesta	Viscera removed	91.7	9.7	82	0.36
Vertebrata				Osteichthyes	Perciformes	Actinopterygii	<i>Channa argus</i>	Snakehead	2	0.037	Immature fish	Obscure digesta	Viscera removed	16.9	1.9	15	-	
Vertebrata	Osteichthyes	Perciformes	Gobiidae	<i>Rhinogobius kurodai</i>	Rhinogobius kurodai	19	0.019	Immature fish, Mature fish	-	-	11.8	2.3	9.5	-				
Vertebrata	Osteichthyes	Siluriformes	Siluridae	<i>Silurus asotus</i>	Amur catfish	1	0.14	Immature fish	Empty stomach	Viscera removed	5.96	0.76	5.2	-				
Vertebrata	Amphibia	Anura	-	-	-	Frog	3	0.031	Imago	-	-	N.D.	N.D.(1.4)	N.D.(1.2)	-			

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												Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137		
Off the mouth of the Abukuma River	Surrounding water area off the mouth of the Abukuma River	Sea area in front of the Abukuma River Estuary	2017/10/20	Arthropoda	Malacostraca	Decapoda	Portunidae	<i>Portunus trituberculatus</i>	Japanese blue crab	2	0.66	Imago	-	-	2.41	0.41	2.0	-	
				Vertebrata	Osteichthyes	Scorpaeniformes	Hexagrammidae	<i>Hexagrammos otakii</i>	Fat greenling	1	0.22	Mature fish	Empty stomach	Viscera removed	0.51	N.D.(0.36)	0.51	-	
				Vertebrata	Osteichthyes	Scorpaeniformes	Platycephalidae	<i>Platycephalus sp.</i>	Flathead	1	0.57	Mature fish	Empty stomach	Viscera removed	0.82	N.D.(0.35)	0.82	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Kareius bicoloratus</i>	Stone flounder	1	0.23	Immature fish	Ragworm,Mantis shrimp	Viscera removed	N.D.	N.D.(0.38)	N.D.(0.42)	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Pseudopleuronectes herzensteini</i>	Yellow striped flounder	1	0.54	Mature fish	Ragworm	Viscera removed	1.1	N.D.(0.46)	1.1	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	<i>Paralichthys olivaceus</i>	Bastard halibut	1	1.2	Mature fish	Anchovy	Viscera removed	0.45	N.D.(0.29)	0.45	N.D.(0.019)	
				Vertebrata	Osteichthyes	Perciformes	Sciaenidae	<i>Nibeia mitsukurii</i>	Nibe croaker	2	0.90	Mature fish	Shrimp,Fish	Viscera removed	0.67	N.D.(0.38)	0.67	-	
Off Soma City	L-1 L-2 L-3	Matsukawaura Lagoon	2017/10/21	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.016	-	-	-	16	N.D.(2.4)	16	-	
				Algae/plant	Chlorophyceae	Ulvales	Ulvaceae	<i>Ulva pertusa</i>	Ulva pertusa	-	0.16	-	-	-	0.46	N.D.(0.40)	0.46	-	
				Arthropoda	Malacostraca	Decapoda	Varunidae	<i>Hemigrapsus sp.</i>	Hemigrapsus	34	0.019	Juvenile	-	-	N.D.	N.D.(1.8)	N.D.(1.8)	-	
				Vertebrata	Osteichthyes	Perciformes	Mugilidae	<i>Chelon affinis</i>	Chelon affinis	2	0.019	Immature fish	-	-	3.2	N.D.(1.9)	3.2	-	
Off Iwaki City	M-1 M-2 M-3	Offshore of Hisanohama	2017/10/17	Mollusca	Cephalopoda	Decapodiformes	Sepiidae	<i>Sepia andreana</i>	Sepia andreana	1	0.014	Juvenile	-	-	N.D.	N.D.(2.8)	N.D.(2.3)	-	
				Mollusca	Cephalopoda	Octopoda	Octopodidae	<i>Paroctopus dofleini</i>	North Pacific Giant Octopus	1	1.1	Imago	-	-	N.D.	N.D.(0.33)	N.D.(0.32)	-	
				Vertebrata	Osteichthyes	Scorpaeniformes	Triglidae	<i>Lepidotrigla microptera</i>	Searobin	12	2.5	Immature fish,Mature fish	Shrimp	Viscera removed	1.65	0.35	1.3	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Pleuronichthys japonicus</i>	Finespotted flounder	11	1.5	Immature fish,Mature fish	Shellfish,Amphipod,Shrimp	Viscera removed	0.66	N.D.(0.36)	0.66	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Pleuronectes yokohamae</i>	Marbled sole	5	0.89	Immature fish,Mature fish	Empty stomach	Viscera removed	1.1	N.D.(0.37)	1.1	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	<i>Pleuronichthys cornutus</i>	Ridged-eye flounder	1	0.39	Mature fish	Empty stomach	Viscera removed	2.09	0.29	1.8	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	<i>Pseudorhombus cinnamomeus</i>	Cinnamon flounder	5	0.16	Immature fish	Crab,Shrimp,Ragworm,Fish	Viscera removed	0.59	N.D.(0.55)	0.59	-	
				Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	<i>Paralichthys olivaceus</i>	Bastard halibut	3	2.5	Immature fish,Mature fish	Empty stomach	Viscera removed	1.3	N.D.(0.25)	1.3	0.018	
				Vertebrata	Osteichthyes	Perciformes	Sparidae	<i>Pagrus major</i>	Red seabream	2	2.1	Mature fish	Shellfish	Viscera removed	1.2	N.D.(0.40)	1.2	-	
				Vertebrata	Osteichthyes	Tetraodontiformes	Monacanthidae	<i>Stephanolepis cirrhifer</i>	Threadsail filefish	2	0.25	Mature fish	Crab,Shrimp	Viscera removed	N.D.	N.D.(0.43)	N.D.(0.38)	-	
	Vertebrata	Chondrichthyes	Squatiformes	Squatinae	<i>Squatina japonica</i>	Japanese angelshark	2	5.1	Immature fish	Halosaurs	Viscera removed	5.54	0.64	4.9	-				
					Vertebrata	Chondrichthyes	Rajiformes	Rajidae	<i>Okamejei kenojei</i>	Common Skete	3	2.2	Immature fish	Shrimp	Viscera removed	4.37	0.67	3.7	0.20
	M-4	Hisanohama Coastal areas	2017/10/17	Mollusca	Gastropoda	Archaeogastropoda	Haliotidae	<i>Haliotis sp.</i>	Abalone	2	0.23	Imago	-	Molluscous part	0.83	N.D.(0.41)	0.83	-	
				Echinodermata	Echinoidea	Echinoidea	Strongylocentrotidae	<i>Strongylocentrotus nudus</i>	Northern sea urchin	5	0.49	Imago	-	-	1.0	N.D.(0.27)	1.0	-	
Vertebrata				Osteichthyes	Scorpaeniformes	Hexagrammidae	<i>Hexagrammos otakii</i>	Fat greenling	1	0.038	Immature fish	-	-	N.D.	N.D.(1.5)	N.D.(1.4)	-		
Vertebrata				Osteichthyes	Scorpaeniformes	Scorpaenidae	<i>Sebastes cheni</i>	Rockfish	12	0.18	Immature fish	Annelids segmented worms, Mysid shrimp	Viscera removed	0.85	N.D.(0.40)	0.85	-		

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