○ Results (water)

Locations				2018 October 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°	7.3	1.4	3.3	9.7	19.0	0.10	1.5	3	2.0	N.D.(0.0013)	0.0074	0.0011
	A-1(Bottom layer)	37.6210°	140.5218°	7.4	1.3	3.5	9.9	19.1	0.10	1.6	3	2.2	N.D.(0.0013)	0.011	-
	A-2	37.5673°	140.3946°	7.7	<0.5	2.3	10.8	10.3	0.06	1.0	3	1.9	0.0015	0.011	-
	B-2	37.8121°	140.5058°	7.9	0.8	2.8	12.1	17.8	0.10	1.3	4	2.1	N.D.(0.0012)	0.0089	-
	B-3	37.8182°	140.4679°	8.0	<0.5	2.8	11.1	9.3	0.05	1.2	2	1.3	N.D.(0.0013)	0.0071	-
Uda River	C-6	37.7764°	140.8877°	7.6	<0.5	1.7	11.3	9.5	0.05	0.8	<1	0.4	N.D.(0.0014)	0.0050	0.00079
Mano River	D-4 a	37.7308°	140.9081°	7.2	0.7	2.4	11.1	9.8	0.06	1.1	<1	0.7	N.D.(0.0015)	0.012	0.0012
Niida River	E-2 a	37.6640°	140.9447°	7.1	0.6	2.1	11.3	7.4	0.04	0.8	2	1.9	0.0027	0.036	0.0016
Ota River	F-1	37.5975°	140.9252°	7.3	<0.5	2.3	10.4	5.4	0.03	1.0	<1	0.7	0.015	0.18	0.0033
Lake Hayama (Mano Dam)	G-1(Surface layer)	37.7321°	140.8127°	7.3	0.9	3.8	8.5	6.8	0.04	1.8	2	1.7	0.0021	0.024	-
	G-1(Bottom layer)	37.7321°	140.8127°	7.3	1.3	3.7	10.0	7.3	0.04	2.0	2	1.8	0.0026	0.027	0.0013
	G-4	37.7382°	140.8035°	7.7	0.6	1.9	10.9	7.6	0.04	0.9	1	0.4	N.D.(0.0014)	0.0092	-
Lake Akimoto	H-1(Surface layer)	37.6575°	140.1264°	7.2	2.0	3.2	8.5	4.6	0.03	1.7	<1	1.3	N.D.(0.0015)	0.0075	-
	H-1(Bottom layer)	37.6575°	140.1264°	7.0	1.3	3.2	9.6	4.8	0.03	1.6	2	1.8	N.D.(0.0014)	0.0072	0.0014
Lake Inawashiro	J-1(Surface layer)	37.4203°	140.1008°	7.3	1.0	1.6	10.1	11.0	0.06	1.0	<1	0.4	N.D.(0.0016)	0.0067	-
	J-1(Bottom layer)	37.4203°	140.1008°	7.2	1.0	1.8	9.4	11.0	0.06	1.1	<1	0.6	N.D.(0.0015)	0.0071	0.00062
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°	8.0	2.4	1.9	7.9	4850	32.88	1.1	1	0.7	N.D.(0.0013)	0.0044	-
	K-3(Bottom layer)	38.0458°	140.9518°	8.0	2.0	1.5	7.4	4960	33.18	0.9	<1	0.4	N.D.(0.0015)	0.0072	0.00098
Off Soma City (Matsukawaura)	L-2	37.8155°	140.9763°	8.0	1.1	1.8	8.0	4720	31.81	1.1	2	0.9	N.D.(0.0015)	0.0097	0.0010
Off Iwaki City (Hisanohama)	M-2(Surface layer)	37.1996°	141.0853°	8.0	1.5	1.8	7.8	5010	33.65	0.9	1	0.4	N.D.(0.0015)	0.0040	-
	M-2(Bottom layer)	37.1996°	141.0853°	8.0	1.6	1.5	8.0	5030	33.85	0.9	<1	0.3	N.D.(0.0013)	0.0030	0.00085

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

○ Results (sediments)

Locations				2018 October Survey																	
										Grain size distribution											
		Latitude	Longitude	pH	Redox potential $E_{N.H.E}$ (mV)	Water content (%)	IL (%)	TOC (mg/g-dry)	Soil particle density (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)	Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)
Abukuma River System	A-1	37.6210°	140.5218°	7.5	161	58.5	7.5	36.7	2.638	0.1	2.4	25.0	26.0	22.4	24.1	0.12	4.8	68	760	0.32
	A-2	37.5673°	140.3946°	7.3	313	18.7	1.5	2.1	2.681	48.4	37.9	11.6	1.1	1.0		2.0	9.5	11	130	-
	B-2	37.8121°	140.5058°	7.4	312	24.9	1.6	2.1	2.743	0.0	1.7	64.5	32.1	1.7		0.30	4.8	14	140	-
	B-3	37.8182°	140.4679°	7.6	317	17.5	0.8	1.1	2.643	70.8	27.4	1.7	0.1	0.0		2.5	9.5	4.5	42	-
Uda River	C-6	37.7764°	140.8877°	7.3	310	22.3	1.3	1.3	2.691	2.4	40.4	54.2	2.0	1.0		0.77	4.8	17	190	0.59
Mano River	D-4 a	37.7308°	140.9081°	7.5	320	18.9	1.6	1.9	2.697	27.2	38.4	29.4	4.3	0.7		1.2	9.5	26	310	1.1
Niida River	E-2 a	37.6640°	140.9447°	7.2	259	39.5	4.7	23.3	2.627	18.9	22.5	16.0	14.4	12.7	15.5	0.39	4.8	340	3700	0.83
Ota River	F-1	37.5975°	140.9252°	7.1	312	20.1	1.5	3.2	2.644	8.6	25.2	52.4	10.8	1.2	1.8	0.60	4.8	180	2000	0.73
Lake Hayama (Mano Dam)	G-1	37.7321°	140.8127°	7.1	339	31.0	7.1	18.5	2.673	9.1	13.7	40.6	22.8	8.1	5.7	0.35	19	140	1500	2.4
	G-4	37.7382°	140.8035°	7.4	310	23.1	1.9	1.6	2.697	8.9	26.2	58.6	3.7	2.6		0.68	9.5	43	490	-
Lake Akimoto	H-1	37.6575°	140.1264°	6.6	176	63.7	9.7	30.1	2.546	0.0	0.0	0.1	0.1	64.4	35.4	0.0081	2.0	120	1300	1.4
Lake Inawashiro	J-1	37.4203°	140.1008°	6.6	317	25.6	1.9	3.3	2.717	0.1	1.2	46.6	47.9	1.1	3.1	0.24	4.8	19	230	0.36
Off the mouth of the Abukuma River (Sea Area in front of the mouth of the Abukuma River)	K-3	38.0458°	140.9518°	7.8	187	37.2	5.2	9.8	2.693	0.0	0.1	0.2	39.7	42.5	17.5	0.062	2.0	28	280	N.D.(0.14)
Off Soma City (Matsukawaura)	L-2	37.8155°	140.9763°	7.8	222	19.6	1.2	1.7	2.723	0.2	0.7	61.5	32.5	1.5	3.6	0.28	4.8	1.7	22	N.D.(0.15)
Off Iwaki City (Hisanohama)	M-2	37.1996°	141.0853°	7.8	208	22.1	2.0	1.9	2.758	0.0	0.4	3.5	91.5	1.5	3.1	0.17	2.0	2.0	27	N.D.(0.15)

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-1	The main stream of the Abukuma River	2018/10/19	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	1	1.8	Mature fish	Obscure digesta	Viscera removed	11	N.D.(1.5)	11	0.54
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus salmoides*	Largemouth bass	1	0.014	Immature fish	Empty stomach	Viscera removed	7.0	N.D.(2.8)	7.0	-
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	1	1.1	Mature fish	Fish	Viscera removed	13	N.D.(1.8)	13	0.28
	A-2	Harase River	2018/10/17	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.030	-	-	-	73.4	7.4	66	-
				Arthropoda	Malacostraca	Decapoda	Potamidae	*Geothelphusa dehaani*	Japanese Freshwater Crab	30	0.049	Juvenile	-	-	6.8	N.D.(1.3)	6.8	-
				Mollusca	Gastropoda	Discopoda	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	30	0.014	Imago	-	Molluscous part	7.9	N.D.(2.9)	7.9	-
				Mollusca	Gastropoda	Discopoda	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	30	0.021	Imago	-	Molluscous part	4.7	N.D.(2.1)	4.7	-
				Vertebrata	Amphibia	Anura	-	-	Frog	20	0.012	Larva(Tadpole)	-	-	84.5	6.5	78	-
				Vertebrata	Amphibia	Anura	Glandirana	*Glandirana rugosa*	Wrinkled Frog	2	0.017	Imago	-	-	4.9	N.D.(2.3)	4.9	-
				Vertebrata	Amphibia	Anura	Pelophylax	*Pelophylax porosus porosus*	Tokyo Daruma pond frog									
				Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.20	-	-	-	13	N.D.(1.9)	13	-
	B-2	The main stream of the Abukuma River	2018/10/19	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	2	0.41	Mature fish	Obscure digesta	Viscera removed	11	N.D.(1.6)	11	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	1	0.74	Mature fish	Obscure digesta	Viscera removed	6.4	N.D.(1.4)	6.4	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	7.3	Mature fish	Obscure digesta	Viscera removed	8.1	N.D.(1.2)	8.1	0.43
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	2	2.7	Mature fish	Obscure digesta	Viscera removed	18.1	2.1	16	0.49
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	3	2.6	Immature fish,Mature fish	Cut-tailed bullhead	Viscera removed	9.8	N.D.(1.7)	9.8	0.18
				Vertebrata	Osteichthyes	Siluriformes	Ictaluridae	*Ictalurus punctatus*	Channel catfish	2	1.2	Immature fish	Empty stomach	Viscera removed	10	N.D.(1.2)	10	-
				Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	1	0.33	Mature fish	Japanese dace	Viscera removed	4.9	N.D.(1.9)	4.9	-
	B-3	Surikami River	2018/10/20	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.019	-	-	-	79.7	8.7	71	-
				Arthropoda	Insecta	Ephemeroptera	Ephemeridae	*Ephemera strigata*	Mont mayfly	432	0.020	Larva	-	-	23	N.D.(1.9)	23	-
				Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red swamp crawfish	4	0.037	Juvenile,Imago	-	-	7.6	N.D.(1.8)	7.6	-
				Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	*Anguilla japonica*	Japanese eel	1	0.22	Mature fish	Empty stomach	Viscera removed	5.99	0.69	5.3	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	50	0.33	Immature fish	-	-	4.1	N.D.(0.32)	4.1	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale chub	2	0.029	Immature fish,Mature fish	-	-	6.8	N.D.(1.9)	6.8	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou masou*	Seema	2	1.2	Mature fish	Empty stomach	Viscera removed	0.46	N.D.(0.37)	0.46	-
				Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.21	-	-	-	2.4	N.D.(1.9)	2.4	-

*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	
Uda River	C-6	The main stream of the Uda River	2018/10/20	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.012	-	-	-	16	N.D.(13)	16	-
				Arthropoda	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii	29	0.0045	Larva(Dragonfly larva)	-	-	19	N.D.(9.7)	19	-
				Arthropoda	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius									
				Arthropoda	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops									
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	13	0.052	Immature fish,Mature fish	-	-	2.9	N.D.(1.2)	2.9	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	107	2.2	Immature fish,Mature fish	-	-	7.71	0.61	7.1	0.24
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale chub	71	0.40	Immature fish,Mature fish	-	-	6.51	0.61	5.9	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus esocinus*	Pseudogobio esocinus esocinus	8	0.093	Immature fish,Mature fish	-	-	5.3	N.D.(0.64)	5.3	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	41	0.27	Immature fish	-	-	8.19	0.69	7.5	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	4.5	Mature fish	Obscure digesta	Viscera removed	9.20	0.90	8.3	0.39
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Gnathopogon elongatus elongatus*	Gnathopogon elongatus elongatus	80	0.20	Immature fish,Mature fish	-	-	4.28	0.38	3.9	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	47	0.27	Immature fish	-	-	5.24	0.54	4.7	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudorasbora parva*	Stone moroko	2	0.0059	Mature fish	-	-	5.9	N.D.(6.5)	5.9	-
				Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	17	0.25	Immature fish,Mature fish	-	-	17.5	1.5	16	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus keta*	Salmon	1	1.6	Mature fish	Empty stomach	Viscera removed	N.D.	N.D.(0.35)	N.D.(0.39)	0.023
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Gymnogobius urotaenia*	Goby	5	0.023	Immature fish	-	-	5.7	N.D.(2.1)	5.7	-
				Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.23	-	-	-	5.6	N.D.(1.7)	5.6	-
Mano River	D-3	The main stream of the Mano River	2018/10/23	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	3.8	Mature fish	Obscure digesta	Viscera removed	8.9	N.D.(1.4)	8.9	0.81
			2018/10/31	Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	1	0.63	Mature fish	Fish	Viscera removed	3.6	N.D.(1.6)	3.6	-
			2018/10/23	Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus keta*	Salmon	1	1.7	Mature fish	Sweetfish	Viscera removed	N.D.	N.D.(0.33)	N.D.(0.36)	0.052
	D-4 b	The main stream of the Mano River	2018/10/23	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.010	-	-	-	98	18	80	-
				Algae/plant	-	-	-	*Bryophyta*	Bryophyte	-	0.28	-	-	-	30.0	2.0	28	-
				Arthropoda	Malacostraca	Decapoda	Varunidae	*Eriocheir japonica*	Japanese mitten crab	2	0.067	Juvenile	-	-	25	N.D.(3.5)	25	-
				Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	1	0.035	Immature fish	-	-	23	N.D.(4.1)	23	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	5	0.39	Mature fish	-	-	23.0	2.0	21	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus esocinus*	Pseudogobio esocinus esocinus	2	0.026	Immature fish	-	-	13	N.D.(4.9)	13	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	1	0.018	Immature fish	-	-	11	N.D.(6.6)	11	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudorasbora parva*	Stone moroko	5	0.014	Immature fish,Mature fish	-	-	10	N.D.(8.4)	10	-
				Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	12	0.29	Immature fish,Mature fish	-	-	37.7	2.7	35	-
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	2	0.80	Immature fish	Sieboldius albardae,Fish	Viscera removed	41.5	2.5	39	-
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Gymnogobius urotaenia*	Goby	1	0.019	Immature fish	-	-	43	N.D.(7.1)	43	-
				Vertebrata	Cephalaspidomorphi	Petromyzontiformes	Petromyzontidae	*Lethenteron reissneri*	Far eastern brook lamprey	6	0.014	Ammocoetes(larva)	-	-	21	N.D.(9.7)	21	-
				Vertebrata	Amphibia	Anura	Ranidae	*Rana japonica*	Japanese Brown Frog	6	0.070	Imago	-	-	8.3	N.D.(3.9)	8.3	-
				Vertebrata	Amphibia	Anura	Lithobates	*Lithobates catesbeianus*	American Bullfrog									
				Vertebrata	Amphibia	Anura	Lithobates	*Lithobates catesbeianus*	American Bullfrog	12	0.13	Larva(Tadpole)	-	-	96.3	9.3	87	-
				Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.24	-	-	-	68.9	4.9	64	-
	D-5	The main stream of the Mano River	2018/10/23	Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Plecoglossus altivelis altivelis*	Sweetfish	5	0.17	Immature fish,Mature fish	-	-	44.3	4.3	40	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou masou*	Seema	1	0.41	Immature fish	Empty stomach	Viscera removed	3.8	N.D.(1.6)	3.8	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout	1	0.024	Immature fish	-	-	16	N.D.(5.9)	16	-
			2018/10/31	Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout	11	0.71	Immature fish,Mature fish	Grasshopper,Frog,Fish,Worm,Bee	Viscera removed	131	11	120	-

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												Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	
Niida River	E-2 b	The main stream of the Niida River	2018/10/21	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.019	-	-	-	286	26	260	-
				Algae/plant	-	-	-	*Bryophyta*	Bryophyte	-	0.17	-	-	-	86.2	7.2	79	-
				Arthropoda	Insecta	Plecoptera	Perlidae	*Oyamia lugubris*	Oyamia lugubris	355	0.019	Larva	-	-	10	N.D.(2.6)	10	-
				Arthropoda	Insecta	Plecoptera	Perlidae	*Kamimuria tibialis*	Kamimura tibialis									
				Arthropoda	Insecta	Plecoptera	Perlidae	*Neoperla sp.*	Neoperla									
				Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	1	0.015	Immature fish	-	-	32	N.D.(6.0)	32	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	48	0.39	Immature fish,Mature fish	-	-	42.8	2.8	40	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	9	1.6	Immature fish,Mature fish	Obscure digesta	Viscera removed	29.5	2.5	27	0.97
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	4	0.019	Immature fish	-	-	29	N.D.(5.6)	29	-
				Vertebrata	Cephalaspidomorphi	Petromyzontiformes	Petromyzontidae	*Lethenteron reissneri*	Far eastern brook lamprey	9	0.025	Mature fish	-	-	12	N.D.(4.8)	12	-
				Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.23	-	-	-	93.7	7.7	86	-
Ota River	F-1	The main stream of the Ota River	2018/10/24	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.016	-	-	-	527	47	480	-
				Algae/plant	-	-	-	*Bryophyta*	Bryophyte	-	0.17	-	-	-	362	32	330	-
				Mollusca	Gastropoda	Discopoda	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	30	0.028	Imago	-	Molluscous part	103	11	92	-
				Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	3	0.058	Immature fish	-	-	470	40	430	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	1	0.030	Mature fish	Obscure digesta	Viscera removed	188	18	170	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	0.37	Immature fish	Obscure digesta	Viscera removed	231	21	210	-
				Vertebrata	Cephalaspidomorphi	Petromyzontiformes	Petromyzontidae	*Lethenteron reissneri*	Far eastern brook lamprey	3	0.011	Mature fish	-	-	39	N.D.(13)	39	-
				Vertebrata	Amphibia	Anura	Ranidae	*Rana japonica*	Japanese Brown Frog	6	0.074	Imago	-	-	119.3	9.3	110	-
				Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.18	-	-	-	119.4	9.4	110	-
	F-5	The main stream of the Ota River	2018/10/24	Arthropoda	Malacostraca	Decapoda	Cambaridae	*Procambarus clarkii*	Red swamp crawfish	4	0.069	Imago	-	-	68.6	5.6	63	-
				Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus reinii*	Sculpin	5	0.037	Immature fish	-	-	64	N.D.(5.4)	64	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	1.2	Mature fish	Obscure digesta	Viscera removed	54.9	3.9	51	2.2
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus keta*	Salmon	2	4.1	Mature fish	Empty stomach	Viscera removed	N.D.	N.D.(0.40)	N.D.(0.39)	0.15

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												Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	
Lake Hayama	G-1 G-2 G-3	In the lake	2018/10/22	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.012	-	-	-	3.5	N.D.(2.3)	3.5	-
			2018/10/31	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	1.2	Mature fish	Obscure digesta	Viscera removed	37.6	3.6	34	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou masou*	Seema	1	0.74	Mature fish	Empty stomach	Viscera removed	56.4	4.4	52	-
	G-4	Inflowing rivers	2018/10/22	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.0089	-	-	-	67	N.D.(15)	67	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	2	0.014	Mature fish	-	-	32	N.D.(9.1)	32	-
				Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	5	0.057	Mature fish	Obscure digesta	Viscera removed	5.9	N.D.(4.8)	5.9	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	1	0.83	Mature fish	Empty stomach	Viscera removed	153	13	140	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou masou*	Seema	4	1.6	Immature fish	Ephemeroptera	Viscera removed	81.4	5.4	76	0.28
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	3	1.5	Immature fish,Mature fish	Sweetfish	Viscera removed	163	13	150	1.2
				Vertebrata	Amphibia	Anura	Ranidae	*Rana ornativentris*	Montane brown frog	1	0.022	Imago	-	-	10	N.D.(5.7)	10	-
				Vertebrata	Amphibia	Anura	Lithobates	*Lithobates catesbeianus*	American Bullfrog	2	0.11	Imago	-	-	23	N.D.(2.4)	23	-
				Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.20	-	-	-	18.8	1.8	17	-
Lake Akimoto	H-1 H-2 H-3	In the lake	2018/11/7	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	5	0.73	Mature fish	-	-	38.6	3.6	35	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	4	1.6	Immature fish,Mature fish	Obscure digesta	Viscera removed	36.6	3.6	33	1.2
				Vertebrata	Osteichthyes	Salmoniformes	Osmeridae	*Hypomesus nipponensis*	Japanese smelt	55	0.27	Mature fish	-	-	12	N.D.(1.4)	12	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	5	1.7	Mature fish	Japanese smelt	Viscera removed	33.3	2.3	31	0.36
	H-3	In the lake and Inflowing rivers	2018/10/18	Algae/plant	-	-	-	-	Riverbed Deposits (Include algae)	-	0.011	-	-	-	17	N.D.(13)	17	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	15	0.011	Immature fish	-	-	4.3	N.D.(4.8)	4.3	-
			2018/10/19	Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Lepomis macrochirus*	Bluegill	4	0.0027	Immature fish	-	-	N.D.	N.D.(7.1)	N.D.(7.8)	-
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Gymnogobius urotaenia*	Goby	4	0.042	Immature fish	-	-	31	N.D.(3.4)	31	-
			2018/10/18	Coarse Particulate Organic Matter	-	-	-	-	Bottom fallen leaves	-	0.18	-	-	-	9.4	N.D.(1.7)	9.4	-
	H-4	Within the lake and rivers in the vicinity	2018/10/18	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.013	-	-	-	7.7	N.D.(2.4)	7.7	-
				Arthropoda	Malacostraca	Decapoda	Atyidae	*Paratya improvisa*	Freshwater shrimp	330	0.062	Juvenile,Imago	-	-	27	N.D.(2.8)	27	-
				Mollusca	Bivalvia	Unionoida	Unionidae	*Cristaria plicata*	Cristaria plicata	3	0.86	Imago	-	Molluscous part	6.6	N.D.(1.5)	6.6	-

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												Growth stage	Stomach contents	Measurement site	Total	Cs-134	Cs-137	
Lake Inawashiro	I-1 I-2 (north lakeside)	Within the lake and Nagase River	2018/10/17	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	8	0.45	Mature fish	-	-	13	N.D.(1.3)	13	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus esocinus*	Pseudogobio esocinus esocinus	27	0.45	Immature fish,Mature fish	-	-	2.8	N.D.(1.4)	2.8	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	4	1.8	Mature fish	Obscure digesta	Viscera removed	20.1	2.1	18	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	2	1.9	Mature fish	Obscure digesta	Viscera removed	17	N.D.(1.4)	17	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	2	2.1	Mature fish	Fish	Viscera removed	32.8	2.8	30	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus mykiss*	Rainbow trout	1	0.85	Mature fish	Stink bug,Plant pieces,Fish	Viscera removed	26	N.D.(1.5)	26	-
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	2	1.0	Immature fish,Mature fish	Fish	Viscera removed	22.5	1.5	21	-
	J-1 (south lakeside)	Within the lake and around the Oninuma	2018/10/17	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.013	-	-	-	N.D.	N.D.(2.7)	N.D.(2.1)	-
				Arthropoda	Insecta	Odonata	Libellulidae	*Orthetrum albistylum speciosum*	Common skimmer	12	0.0074	Larva(Dragonfly larva)	-	-	N.D.	N.D.(4.4)	N.D.(4.3)	-
				Arthropoda	Insecta	Odonata	Libellulidae	*Crocothemis servilia mariannae*	Scarlet Skimmer									
				Arthropoda	Insecta	Odonata	Aeshnidae	*Anax parthenope julius*	Anax parthenope julius									
				Arthropoda	Insecta	Odonata	Aeshnidae	*Anax nigrofasciatus nigrofasciatus*	Anax nigrofasciatus nigrofasciatus									
				Arthropoda	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	1088	0.38	Juvenile,Imago	-	-	4.8	N.D.(1.4)	4.8	-
				Mollusca	Bivalvia	Unionoida	Unionidae	*Sinanodonta japonica*	Sinanodonta japonica	9	0.32	Imago	-	Molluscous part	0.63	N.D.(0.42)	0.63	-
				Mollusca	Gastropoda	Architaenioglossa	Viviparidae	*Cipangopaludina chinensis laeta*	Mud-snail	9	0.020	Imago	-	Molluscous part	N.D.	N.D.(2.2)	N.D.(2.1)	-
				Mollusca	Gastropoda	Discopoda	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	30	0.024	Imago	-	Molluscous part	N.D.	N.D.(1.6)	N.D.(1.9)	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	7	0.76	Mature fish	Obscure digesta	Viscera removed	16	N.D.(1.4)	16	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Opsariichthys platypus*	Pale chub	24	0.38	Immature fish,Mature fish	-	-	7.7	N.D.(1.4)	7.7	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus esocinus*	Pseudogobio esocinus esocinus	24	0.39	Immature fish,Mature fish	-	-	6.9	N.D.(1.4)	6.9	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	5	1.6	Mature fish	Obscure digesta	Viscera removed	22.9	1.9	21	-
				Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	7	0.95	Immature fish	Obscure digesta	Viscera removed	22.3	2.3	20	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	2	1.4	Mature fish	Empty stomach	Viscera removed	41.1	4.1	37	-
				Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou masou*	Seema	1	0.29	Immature fish	Obscure digesta	Viscera removed	9.3	N.D.(1.2)	9.3	-
				Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	3	0.29	Immature fish	Sieboldius albardae,Fish	Viscera removed	21.4	2.4	19	-
				Vertebrata	Osteichthyes	Perciformes	Actinopterygii	*Channa argus*	Snakehead	2	0.018	Immature fish	Rhinogobius	Viscera removed	6.9	N.D.(3.2)	6.9	-
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Gymnogobius urotaenia*	Goby	21	0.061	Immature fish	-	-	7.4	N.D.(2.9)	7.4	-
				Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	1	0.019	Immature fish	Obscure digesta	Viscera removed	6.9	N.D.(2.7)	6.9	-
				Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	1	0.040	Immature fish	Common prawn	Viscera removed	4.4	N.D.(1.8)	4.4	-
				Vertebrata	Amphibia	Anura	Glandirana	*Glandirana rugosa*	Wrinkled Frog	3	0.020	Imago	-	-	N.D.	N.D.(2.6)	N.D.(2.1)	-

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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	2018/10/22	Arthropoda	Malacostraca	Decapoda	Portunidae	*Portunus trituberculatus*	Japanese blue crab	1	0.35	Imago	-	-	N.D.	N.D.(0.38)	N.D.(0.34)	-
				Arthropoda	Malacostraca	Decapoda	Portunidae	*Ovalipes punctatus*	Ovalipes punctatus	3	0.76	Imago	-	-	N.D.	N.D.(0.30)	N.D.(0.30)	-
				Vertebrata	Osteichthyes	Perciformes	Lateolabracidae	*Lateolabrax japonicus*	Japanese sea bass	1	0.58	Immature fish	Japanese sardine	Viscera removed	0.96	N.D.(0.39)	0.96	-
Off Soma City	L-1 L-2 L-3	Matsukawaura Lagoon	2018/10/21	Algae/plant	-	-	-	-	Plankton (Planktonic algae)	-	0.021	-	-	-	4.4	N.D.(1.7)	4.4	-
			2018/10/23	Mollusca	Bivalvia	Ostreoida	Ostreidae	*Crassostrea gigas*	Oyster	9	0.16	Imago	-	Molluscous part	1.5	N.D.(0.41)	1.5	-
				Mollusca	Bivalvia	Veneroida	Veneridae	*Ruditapes philippinarum*	Japanese littleneck	30	0.14	Imago	-	Molluscous part	0.51	N.D.(0.43)	0.51	-
			2018/10/20	Vertebrata	Osteichthyes	Scorpaeniformes	Hexagrammidae	*Hexagrammos otakii*	Fat greenling	1	0.066	Immature fish	Shellfish	Viscera removed	N.D.	N.D.(1.5)	N.D.(1.4)	-
				Vertebrata	Osteichthyes	Scorpaeniformes	Hexagrammidae	*Hexagrammos agrammus*	Hexagrammos agrammus	1	0.046	Immature fish	Empty stomach	Viscera removed	N.D.	N.D.(1.6)	N.D.(1.6)	-
				Vertebrata	Osteichthyes	Scorpaeniformes	Scorpaenidae	*Sebastes cheni*	Rockfish	2	0.11	Immature fish	Empty stomach	Viscera removed	1.2	N.D.(1.1)	1.2	-
			2018/10/21	Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	*Kareius bicoloratus*	Stone flounder	2	0.016	Immature fish	-	-	1.9	N.D.(1.8)	1.9	-
				Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Acanthogobius flavimanus*	Yellowfin Goby	58	0.47	Immature fish,Mature fish	-	-	1.5	N.D.(1.4)	1.5	0.027
				Vertebrata	Osteichthyes	Perciformes	Mugilidae	*Chelon affinis*	Chelon affinis	2	0.079	Immature fish	-	-	3.5	N.D.(0.99)	3.5	-
				Vertebrata	Osteichthyes	Perciformes	Mugilidae	*Mugil cephalus cephalus*	Flathead mullet	12	0.27	Immature fish	-	-	10.93	0.93	10	-
Off Iwaki City	M-1 M-2 M-3	Offshore of Hisanohama	2018/10/16	Vertebrata	Chondrichthyes	Squatiniformes	Squatinidae	*Squatina japonica*	Japanese angelshark	2	3.9	Immature fish	Fish	Viscera removed	2.0	N.D.(0.31)	2.0	0.026
	M-4	Hisanohama Coastal areas	2018/10/16	Mollusca	Gastropoda	Archaeogastropoda	Haliotidae	*Haliotis sp.*	Abalone	3	0.40	Imago	-	Molluscous part	0.39	N.D.(0.30)	0.39	-
				Echinodermata	Echinoidea	Echinoida	Strongylocentrotidae	*Strongylocentrotus nudus*	Northern sea urchin	7	0.48	Imago	-	-	0.41	N.D.(0.28)	0.41	-

*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.