

○ Results (water)

Location			FY2012 Spring Survey												
		Latitude	Longitude	pH	BOD (mg/L)	COD (mg/L)	DO (mg/L)	Electrical 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)	37.6206	140.5220	7.3	2.7	5.9	9.1	16.3	0.12	3.1	28	18.8	0.28	0.40	0.0018
	B-2	37.8119	140.5056	8.3	1.1	3.0	10.8	11.3	0.06	1.4	6	4.1	0.023	0.032	—
Niida River	C-1	37.6615	140.9113	7.5	0.6	2.6	10.1	5.8	0.03	1.0	3	1.5	0.21	0.30	0.0032
	C-3	37.6442	140.9998	6.6	<0.5	2.7	8.3	22.1	0.11	0.9	2	1.1	0.078	0.11	—
Manogawa River	D-1	37.7332	140.9254	7.4	<0.5	3.1	10.3	7.2	0.04	1.5	1	0.8	0.086	0.13	0.0031
	D-2	37.7095	140.9566	7.4	0.6	3.0	10.1	7.5	0.04	1.4	2	1.0	0.071	0.11	—
Lake Hayama (Mano Dam)	E-1 (Surface layer)	37.7342	140.8094	7.6	0.8	3.6	9.6	6.0	0.04	1.9	1	1.2	0.098	0.14	—
	E-1 (Deep layer)			7.3	1.0	4.5	9.0	6.8	0.03	1.9	5	2.3	0.15	0.22	0.0029
Lake Akimoto	F-3 (Surface layer)	37.6651	140.1329	7.0	0.6	2.7	9.9	4.1	0.02	1.2	<1	0.6	0.011	0.017	—
	F-3 (Deep layer)			7.1	2.0	4.3	9.8	4.7	0.03	2.1	6	1.6	0.0098	0.018	0.0015
Lake Inawashiro	G-1 (Surface layer)	37.5054	140.1138	4.3	<0.5	1.4	9.0	17.6	0.09	0.5	<1	0.3	0.018	0.026	—
	G-1 (Deep layer)			6.5	<0.5	1.4	11.4	11.3	0.05	0.6	1	0.6	0.028	0.044	0.0013
Off Iwaki City (Hisanohama)	I-2 (Surface layer)	37.1998	141.0850	8.1	<0.5	1.5	9.3	5,220	33.59	1.1	<1	0.4	0.0063	0.011	—
	I-2 (Deep layer)			8.0	<0.5	1.4	8.4	5,270	34.14	1.1	<1	0.4	0.013	0.023	0.0018
Off Soma City (Matsukawaura)	J-2	37.8156	140.9762	8.1	1.3	3.4	7.6	4,330	27.83	1.8	9	7.0	0.074	0.11	0.0069
	J-3	37.8207	140.9768	8.1	0.8	4.1	7.7	4,460	27.21	1.7	6	4.3	0.070	0.10	—
Off the mouth of the Abukuma River (Off Watari Town)	K-2 (Surface layer)	38.0455	140.9400	8.1	1.0	3.1	9.6	4,690	29.59	1.3	2	1.3	0.014	0.020	—
	K-2 (Deep layer)			7.9	0.6	2.2	6.1	5,140	32.85	1.1	4	4.3	0.034	0.049	0.0052

○ Results (sediment)

Location				FY2012 Spring Survey																	
	Latitude	Longitude	pH	Redox potential E _{NHLE} (mV)	Water content (%)	IL (%)	TOC mg/g,dry	Soil particle density (g/cm ³)	Grain size distribution								Radioactive materials				
									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)		
									(%)	(%)	(%)	(%)	(%)	(%)	(mm)	(mm)	(Bq/kg-dry)	(Bq/kg-dry)	(Bq/kg-dry)		
Abukuma River System	A-1	37.6206	140.5220	7.1	80	36.8	3.7	9	2.688	0.7	6.1	41.4	18.4	19.0	14.4	0.23	4.75	730	1,100	0.46	
	B-1	37.7845	140.4923	7.0	87	30.9	2.8	7	2.705	10.9	14.2	27.1	23.7	9.2	14.9	0.27	9.5	340	600	—	
	B-2	37.8119	140.5056	7.1	448	27.3	1.5	<1	2.687	13.9	6.2	59.8	18.1	0.5	1.5	0.42	19	120	150	—	
Niida River	C-1	37.6615	140.9113	7.2	450	6.4	0.7	<1	2.661	38.2	54.1	7.5	0.0	0.0	0.2	1.7	19	750	1,100	0.36	
	C-2	37.6644	140.9452	6.9	279	64.5	14.0	37	2.504	3.4	1.9	6.0	14.7	44.2	29.8	0.025	9.5	22,000	32,000	—	
	C-3	37.6442	140.9998	6.9	432	29.8	1.7	2	2.686	6.0	3.1	59.2	22.3	3.6	5.8	0.33	19	1,200	1,900	—	
Manogawa River	D-1	37.7332	140.9254	7.0	463	26.5	1.9	1	2.691	7.5	16.9	68.4	5.1	1.0	1.1	0.62	19	1,200	1,800	1.9	
	D-2	37.7095	140.9566	7.0	471	19.4	1.4	<1	2.687	40.4	37.5	19.3	2.0	0.3	0.5	1.6	19	1,000	1,400	—	
	D-3	37.7053	140.9621	6.9	438	25.3	2.4	1	3.677	16.5	16.4	42.0	18.1	2.9	4.1	0.52	19	410	650	—	
Ota River	J-1	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	J-2	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	J-3	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	J-4	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	J-5	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	J-6	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Udagawa River	K-1	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	K-2	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	K-3	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	K-4	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	K-5	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	91	120	—
	K-6	0.0000	140.0000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	210	390	—
Lake Hayama (Mano Dam)	E-1	37.7342	140.8094	6.8	63	74.8	21.5	78	2.449	—	0.1	41.8	47.2	4.9	6.0	0.22	2	22,000	33,000	14	
	E-2	37.7261	140.8213	6.6	103	33.2	4.5	7	2.653	32.8	11.2	17.8	13.9	10.5	13.8	0.55	19	2,700	4,100	—	
	E-3	37.7293	140.8309	6.7	74	77.1	23.1	86	2.371	—	0.1	0.2	1.8	51.5	46.4	0.0069	2	8,500	13,000	—	
Lake Akimoto	F-1	37.6568	140.1296	6.8	79	65.7	8.0	17	2.617	—	0.1	0.2	0.2	43.8	55.7	0.0041	2	91	120	—	
	F-2	37.6615	140.1222	6.6	52	76.2	12.3	33	2.499	—	0.8	0.9	1.2	34.4	62.7	0.0027	2	210	390	—	
	F-3	37.6651	140.1329	6.4	73	60.9	10.8	44	2.568	0.0	0.3	11.3	40.8	29.8	17.8	0.083	4.75	1,300	1,900	2.0	
Lake Inawashiro	G-1	37.5054	140.1138	6.6	31	68.9	6.5	28	2.614	3.8	0.7	10.4	52.5	16.3	16.3	0.14	9.5	4,200	6,300	0.42	
	G-2	37.5005	140.1401	6.8	350	58.8	6.2	15	2.574	0.2	1.0	1.8	44.4	24.4	28.2	0.065	4.75	3,000	4,500	—	
	H-1	37.4205	140.1011	6.6	19	41.2	3.9	4	2.617	0.1	2.3	58.6	31.3	3.8	3.9	0.28	4.75	79	130	—	
Off Iwaki City (Hisanohama)	I-1	37.1738	141.0788	8.0	1	28.9	2.4	1	2.758	0.4	0.2	1.6	78.4	6.7	12.7	0.15	9.5	640	1,100	—	
	I-2	37.1998	141.0850	8.0	-78	26.3	2.1	<1	2.767	—	0.5	1.8	86.8	1.6	9.3	0.15	2	310	470	ND(<0.17)	
	I-3	37.2328	141.0939	8.1	-80	26.1	2.6	1	2.745	—	0.8	3.2	83.5	1.6	10.9	0.16	2	150	230	—	
Off Soma City (Matsukawaura)	J-1	37.8210	140.9612	7.7	-102	31.8	3.0	4	2.697	2.2	5.9	26.3	41.7	12.0	11.9	0.18	9.5	370	540	—	
	J-2	37.8156	140.9762	7.8	-128	25.3	1.4	<1	2.734	0.2	0.2	45.9	48.1	2.4	3.2	0.24	9.5	48	48	ND(<0.19)	
	J-3	37.8207	140.9768	7.9	-122	27.8	1.7	<1	2.702	0.1	0.1	10.2	82.3	3.7	3.6	0.17	9.5	22	20	—	
Off the mouth of the Abukuma River (Off Watari Town)	K-1	38.0383	140.9282	7.5	236	30.9	2.4	<1	2.722	—	0.1	2.2	80.2	8.3	9.2	0.14	2	110	160	—	
	K-2	38.0455	140.9400	7.7	-95	30.1	2.1	<1	2.745	—	0.1	3.7	72.8	12.4	11.0	0.13	2	53	64	ND(<0.22)	
	K-3	38.0461	140.9520	7.7	-94	52.8	7.3	11	2.657	—	0.1	0.4	5.6	53.7	40.2	0.015	2	1,000	1,400	—	

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2012 Spring Survey)

○ Results (aquatic organisms)

Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)	
												Growth stage	Stomach contents	Total	Cs-134	Cs-137		
Abukuma River System	A-2 (Harase River)	2012/6/20	37.5667	140.3947	Vertebrata	Caudata	Caudata	Salamandridae	Cynops pyrrhogaster	Cynops pyrrhogaster	5	0.030	—	—	420	170	250	—
					Vertebrata	Anura	Anura	Hylidae	Hyla japonica	Japanese tree frog	54	0.28	Imago	—	290	120	170	—
					Vertebrata	Anura	Anura	Ranidae	Rana rugosa	Wrinkled Frog								
					Vertebrata	Anura	Anura	Ranidae	Rana porosa	Daruma pond frog								
					Vertebrata	Anura	Anura	—	—	113	0.15	Non-adult	—	320	130	190	—	
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Phoxinus lagowskii	Amur Minnow	8	0.020	Mature fish	Some (details unknown)	73	30	43	—
					Vertebrata	Cypriniformes	Cypriniformes	Cobitidae	Misgurnus anguillicaudatus	Oriental weatherfish	43	0.080	Mature fish	Some (details unknown)	74	29	45	—
					Arthropoda	Decapoda	Decapoda	Atyidae	Neocaridina denticulata	Freshwater shrimp	694	0.11	Imago	—	181	71	110	—
					Mollusca	Sorbeoconcha	Sorbeoconcha	Pleuroceridae	Semisulcospira libertina	Semisulcospira libertina	15	0.03	Adult / non-adult	—	170	70	100	—
					Arthropod	Odonata	Odonata	Aeshnidae	Boyeria maclachlani	Boyeria maclachlani	100	0.11	Non-adult	—	52	20	32	—
	Arthropod	Odonata	Odonata	Gomphidae	Sieboldius albardae	Sieboldius albardae												
	Arthropod	Odonata	Odonata	Cordulegastridae	Anotogaster sieboldii	Anotogaster sieboldii												
	Arthropod	Insecta	Hemiptera	Belostomatidae	Appasus sp.	Ferocious water bug												
	Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	Spirogyra sp.	Spirogyra	—	0.12	—	—	740	300	440	—				
	A-1 (Abukuma River)	2012/7/11	37.6206	140.5220	Vertebrata	Siluriformes	Siluriformes	Ictaluridae	Ictalurus punctatus	Channel catfish	11	0.22	Immature fish	—	67	28	39	—
					Vertebrata	Perciformes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	2	1.5	Mature fish	Some (details unknown)	167	67	100	—
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	37	1.6	Immature fish	—	40	16	24	—
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsdorffii	2	2.7	Mature fish	Some (details unknown)	102	40	62	—
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	5	0.12	Immature fish	—	50	20	30	—
	B-3 (Surikami River)	2012/6/19	37.8182	140.4679	Amphibia	Anura	Anura	Ranidae	Rana catesbeiana	American Bullfrog	1	0.43	Imago	—	370	150	220	—
Vertebrata					Anura	Anura	Ranidae	Rana rugosa	Wrinkled Frog	3	0.020	Imago	—	280	110	170	—	
Vertebrata					Cypriniformes	Cypriniformes	Cobitidae	Noemacheilus barbatus	Stone loach	5	0.050	Mature fish	—	76	29	47	—	
Vertebrata	Cypriniformes	Cypriniformes	Cobitidae	Misgurnus anguillicaudatus	Oriental weatherfish	31	0.13	Mature fish	—	113	45	68	—					
Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	Spirogyra sp.	Spirogyra	—	0.070	—	—	550	220	330	—					
B-2 (Abukuma River)	2012/6/19	37.8119	140.5056	Vertebrata	Siluriformes	Siluriformes	Siluridae	Silurus asotus	Amur catfish	2	2.8	Mature fish	Some (details unknown)	650	260	390	—	
				Chordata	Actinopterygii	Siluriformes	Ictaluridae	Ictalurus punctatus	Channel catfish	1	2.2	Mature fish	Some (details unknown)	600	240	360	0.27	
	Chordata			Actinopterygii	Anguilliformes	Anguillidae	Anguilla japonica	eel	2	0.42	Mature fish	Some (details unknown)	320	130	190	—		
	Vertebrata			Perciformes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	2	1.6	Mature fish	Some (details unknown)	490	190	300	—		
	Vertebrata			Cypriniformes	Cypriniformes	Cyprinidae	Cyprinus carpio	Common carp	1	3.7	Mature fish	Some (details unknown)	280	110	170	—		
	Vertebrata			Cypriniformes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	1	1.4	Mature fish	Some (details unknown)	530	220	310	—		
	Vertebrata			Cypriniformes	Cypriniformes	Cyprinidae	Tribolodon sp.	Tribolodon	4	1.6	Mature fish	Some (details unknown)	340	140	200	—		
	Vertebrata			Osmeriformes	Osmeriformes	Osmeridae	Plecoglossus altivelis	Sweetfish (natural upstream)	(Many)	1.9	Immature fish	—	147	60	87	0.16		

* In this monitoring survey, multiple individuals of collected aquatic organisms were prepared as analysis samples and all those samples were analyzed basically.

* For species with stomach content as indicated in the table, all that remained after removing stomach content were prepared as analysis samples.

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2012 Spring Survey)

Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)					
												Growth stage	Stomach contents	Total	Cs-134	Cs-137						
Nida River	C-1 C-2	2012/6/8	37.6615 37.6644	140.9113 140.9452	Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Salvelinus leucomaenis	Char	2	0.17	Mature fish/immature fish	Some (details unknown)	11,400	4,700	6,700	—				
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Tribolodon sp.	Tribolodon	16	0.49	Mature fish	—	620	250	370	—				
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Zacco platypus	Zacco platypus	9	0.090	Mature fish	—	440	180	260	—				
					Vertebrata	Osmeriformes	Osmeriformes	Osmeridae	Plecoglossus altivelis	Sweetfish (natural upstream)	(Many)	3.1	Immature fish	—	740	290	450	0.89				
					Chordata	Actinopterygii	Perciformes		Rhinogobius sp.	freshwater goby	5	0.015	Mature fish/immature fish	—	460	190	270	—				
Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Growth stage	Stomach contents	Total	Cs-134	Cs-137	Sr-90 (Bq/kg-wet)					
Manogawa River	D-4	2012/6/6	37.7312	140.9090	Chordata	Actinopterygii	Perciformes	Gobiidae	Rhinogobius sp.	freshwater goby	35	0.14	Mature fish	—	970	390	580	—				
					Arthropoda	Decapoda	Decapoda	Atyidae	Neocaridina denticulata	Freshwater shrimp	411	0.12	Imago	—	223	93	130	—				
					Mollusca	Sorbeoconcha	Sorbeoconcha	Pleuroceridae	Semisulcospira libertina	Semisulcospira libertina	104	0.19	Adult / non-adult	—	182	72	110	—				
					Arthropoda	Insecta	Ephemeropteroidea	Ephemeroptera	Isonychia japonica	Isonychiidae												
					Arthropod	Odonata	Odonata	Calopterygidae	Calopteryx cornelia	Calopteryx cornelia												
					Arthropod	Odonata	Odonata	Aeshnidae	Boyeria maclachlani	Boyeria maclachlani												
					Arthropod	Odonata	Odonata	Aeshnidae	Planaeschna milnei	Planaeschna milnei												
					Arthropod	Odonata	Odonata	Gomphidae	Davidius sp.	Davidius												
					Arthropod	Odonata	Odonata	Gomphidae	Onychogomphus viridicostus	Onychogomphus viridicostus												
					Arthropod	Odonata	Odonata	Gomphidae	Sieboldius albardae	Sieboldius albardae												
					Arthropod	Odonata	Odonata	Gomphidae	Sinogomphus flavolimbatus	Sinogomphus flavolimbatus												
					Arthropod	Odonata	Odonata	Gomphidae	Stylogomphus suzukii	Stylogomphus suzukii												
					Arthropod	Odonata	Odonata	Corduliidae	Macromia amphigena	Macromia amphigena												
					Arthropod	Megaloptera	Megaloptera	Corydalidae	Protohermes grandis	Protohermes grandis												
					Arthropod	Megaloptera	Megaloptera	Sialis japonica	Sialis japonica	Sialis japonica												
					Arthropod	Trichoptera	Trichoptera	Stenopsychidae	Stenopsyche marmorata	Stenopsyche marmorata												
					Arthropoda	Diptera	Diptera	Tipulidae	Tipula sp.	Tipula												
					Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	Spirogyra sp.	Spirogyra									260	100	160	—
					—	—	—	—	—	—									1,410	580	830	—
					D-1 D-2	2012/6/7 2012/6/8	37.7332 37.7095	140.9254 140.9566	Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsdorffii	1	1.2	Mature fish	Some (details unknown)	470	190	280	—
Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Tribolodon sp.					Tribolodon	3	4.0	Mature fish	Some (details unknown)	226	86	140	0.22					
Vertebrata	Osmeriformes	Osmeriformes	Osmeridae	Plecoglossus altivelis					Sweetfish (natural upstream)	(Many)	1.6	Immature fish	—	202	82	120	1.8					

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Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2012 Spring Survey)

Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)	
												Growth stage	Stomach contents	Total	Cs-134	Cs-137		
Lake Hayama (Mano Dam)	E-4	2012/6/6	37.7370	140.8056	Arthropod	Odonata	Ephemeroptera	Ephemereillidae	Isonychia japonica	Isonychia japonica	193	0.079	Non-adult	-	510	210	300	-
					Arthropod	Odonata	Odonata	Gomphidae	Onychogomphus viridicostus	Onychogomphus viridicostus								
					Arthropod	Odonata	Odonata	Gomphidae	Sieboldius albardae	Sieboldius albardae								
					Arthropod	Megaloptera	Megaloptera	Corydalidae	Protohermes grandis	Protohermes grandis								
					Arthropod	Trichoptera	Trichoptera	Stenopsychidae	Stenopsyche marmorata	Stenopsyche marmorata								
					Arthropod	Trichoptera	Trichoptera	Stenopsychidae	Stenopsyche sauteri	Parastenopsyche sauteri								
					Arthropod	Trichoptera	Trichoptera	Stenopsychidae	Stenopsyche sp.	Caddisfly								
					Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	Spirogyra sp.	Spirogyra								
										CPOM (litter)								
E-1	2012/6/7	37.7342	140.8094	Vertebrata	Perciformes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	4	2.7	Mature fish	Some (details unknown)	4,400	1,800	2,600	1.0	
				Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Oncorhynchus mykiss	Rainbow trout	4	1.5	Mature fish	Small fish	280	110	170	-	
				Vertebrata	Siluriformes	Siluriformes	Siluridae	Silurus asotus	Amur catfish	2	1.8	Mature fish	Some (details unknown)	3,000	1,200	1,800	-	
				Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsdorffii	10	12	Mature fish	Some (details unknown)	1,250	500	750	-	
E-2	2012/6/28	37.7261	140.8213															
E-3		37.7293	140.8309															
Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)	
												Growth stage	Stomach contents	Total	Cs-134	Cs-137		
Lake Akmono	F-1 F-2 F-3	2012/6/4	37.6568 37.6615 37.6651	140.1296 140.1222 140.1329						CPOM (litter)		2.5			250	100	150	-
					Vertebrata	Amphibia		Ranidae	Rana ornativentris	Rana ornativentris	(Many)	0.75	Non-adult		540	220	320	-
					Vertebrata	Perciformes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	13	4.6	Mature fish	Shrimps, small fish	410	160	250	1.1
					Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Salvelinus leucomaenis	Char	7	3.8	Mature fish	Some (details unknown)	470	190	280	0.36
					Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Oncorhynchus masou	Yamame trout	5	0.50	Mature fish	Small fish	153	61	92	-
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Cyprinus carpio	Common carp	2	7.0	Mature fish	Some (details unknown)	94	37	57	-
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	5	1.6	Mature fish	Some (details unknown)	178	68	110	-
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsdorffii	17	5.6	Mature fish	Some (details unknown)	186	76	110	1.0
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	24	3.3	Mature fish	Some (details unknown)	300	120	180	-
					Arthropod	Decapoda	Decapoda	Astacidae	Pacifastacus leniusculus	Signal crayfish	12	0.75	Imago		183	73	110	-
					Angiospermae	Hydrocharitales	Hydrocharitales	Hydrocharitaceae	Elodea nuttallii	Western Waterweed	-	2.0			46	19	27	-
					Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note	
												Growth stage	Stomach contents	Total	Cs-134	Cs-137		
Lake Inawashiro	G-1 G-2 (north lakeside)	2012/6/5	37.5054 37.5005	140.1138 140.1401	Vertebrata	Siluriformes	Siluriformes	Siluridae	Silurus asotus	Amur catfish	1	2.3	Mature fish	Japanese dace	95	38	57	-
					Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Salvelinus leucomaenis	Char	7	4.8	Mature fish	Lake smelt, small fish	380	150	230	0.12
					Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Oncorhynchus masou	Seema	6	5.0	Mature fish	Small fish	350	140	210	-
					Vertebrata	Perciformes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	4	3.0	Mature fish	Small fish	170	70	100	0.30
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsdorffii	6	2.1	Mature fish	Some (details unknown)	77	31	46	-
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	10	0.29	Immature fish		149	60	89	-
	H-1 (south lakeside)	2012/6/4 2012/6/5	37.4205	140.1011	Streptophyta	Zygnematales	Zygnematales	Zygnemataceae	Spirogyra sp.	Spirogyra	-	0.20			500	200	300	-
					Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Salvelinus leucomaenis	Char	8	2.4	Mature fish	Small fish	380	150	230	-
					Vertebrata	Salmoniformes	Salmoniformes	Salmonidae	Oncorhynchus masou	Seema	6	1.7	Mature fish	Small fish	430	180	250	-
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	18	2.6	Mature fish	Some (details unknown)	140	56	84	-
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsdorffii	(Many)	2.2	Immature fish		98	38	60	-
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	8	2.2	Mature fish	Some (details unknown)	46	19	27	0.30
					Vertebrata	Cypriniformes	Cypriniformes	Cyprinidae	Pseudogobio esocinus	Pseudogobio esocinus	12	0.30	Mature fish		49	20	29	-
					Angiospermae	Nymphaeales	Nymphaeales	Nymphaeaceae	Nuphar japonicum	Cow lily	-	2.7			9.0	3.5	5.5	-

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Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2012 Spring Survey)

Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)
												Growth stage	Stomach contents	Total	Cs-134	Cs-137	
Off Watarai City (Hisanohama)	2012/7/6	37.1738 37.1998 37.2328	141.0788 141.0850 141.0939	Vertebrata	Perciformes	Perciformes	Sparidae	Evynnis japonica	Crimson sea-bream	2	1.1	Mature fish	Crabs	10	4.0	6.3	—
				Vertebrata	Osteichthyes	John dory	John dory	Zeus faber	John dory	2	1.6	Mature fish	Small fish	11	4.3	6.6	—
				Vertebrata	Osteichthyes	Marbled rockfish	Fat greenling	Hexagrammos otakii	Fat greenling	7	4.3	Mature fish	Crabs, hermit crabs	290	120	170	0.36
				Vertebrata	Osteichthyes	Righteye flounder	Flounder	Paralichthys olivaceus	Flounder	5	3.5	Mature fish	Loliginid, small fish	7.6	3.0	4.6	0.022
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	Pleuronectes yokohamae	Marbled sole	5	3.1	Mature fish	Crabs, sandworms	66	26	40	—
				Vertebrata	Osteichthyes	Marbled rockfish	Gurnard	Chelidonichthys spinosus	Gurnard	1	0.60	Mature fish	Crabs, small fish	35	14	21	—
				Vertebrata	Cartilage fish	Sandbar shark	Banded houndshark	Mustelus manazo	Star-spotted smooth-hound	2	2.5	Mature fish	Crabs, echiurid	51	19	32	—
				Vertebrata	Cartilage fish	Ray	Skate	Okamejei kenojei	Common Skate	4	3.2	Mature fish	Crabs, shrimps	216	86	130	—
				—	—	—	—	—	—	—	0.30	—	—	35	14	21	—
				Echinoderm	Sea Urchin	Sea urchin	Sea urchin	Glyptocidarid	tugarumi	60	2.4	Imago	—	97	39	58	—
				Mollusca	Gastropoda	Archaeogastropoda	Haliotis asinina	Haliotis discus	abalone(shell)	8	1.3	Imago	—	24	10	14	—
				Mollusca	Gastropoda	Archaeogastropoda	Haliotis asinina	Haliotis discus	abalone(molluscan body)	8	0.40	Imago	—	13	5.0	7.7	—
				Echinoderm	Sea Urchin	Loxechinus	Strongylocentrotus	Strongylocentrotus nudus	Northern sea urchin	18	2.9	Imago	—	21	8.3	13	—
				Brown algae	Phaeophyceae	—	—	Sargassum fulvellum	Sargassum horneri	—	3.5	—	—	33	13	20	—
Brown algae	Phaeophyceae	Sea cabbage	Sea cabbage	Eisenia bicyclis	Eisenia bicyclis	—	2.8	—	—	22	8.6	13	—				
0																	
Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)
												Growth stage	Stomach contents	Total	Cs-134	Cs-137	
Off Soma City (Matsukawaura)	2012/6/19	37.8210 37.8156 37.8207	140.9612 140.9762 140.9768	Vertebrata	Pleuronectiformes	Pleuronectiformes	Pleuronectidae	Pleuronectidae	Pleuronectidae	14	0.040	Immature fish	—	26	9.8	16	—
				Vertebrata	Mugiliformes	Mugiliformes	Mugilidae	Mugil cephalus	Flathead mullet	14	0.030	Immature fish	—	166	69	97	—
				Vertebrata	Perciformes	Perciformes	Gobiidae	Acanthogobius flavimanus	Yellowfin Goby	6	0.080	Mature fish	—	25	10	15	—
				Vertebrata	Actinopterygii	Perciformes	Kremeriidae	Acanthogobius lactipes	Whitelimbed goby	94	0.16	Mature fish	—	13	5.3	8.0	—
				Vertebrata	Actinopterygii	Perciformes	Pholidae	Pholis nebulosa	tidpool gummel	24	0.040	Mature fish/immature fish	—	11	4.2	6.5	—
				Arthropod	Decapoda	Decapoda	Grapsidae	Eriocheir japonica	Japanese mitten crab	7	0.59	Imago	—	87	34	53	—
				Arthropod	Decapoda	Decapoda	Varunidae	Hemigrapsus penicillatus	Hemigrapsus penicillatus	232	0.40	Imago	—	40	16	24	—
				Arthropod	Decapoda	Decapoda	Palaemonidae	Palaemon paucidens	Common prawn	359	0.28	Imago	—	12	4.9	6.9	—
				Arthropod	Decapoda	Mysida	Mysida	Mysidae	Mysid shrimp	(Many)	0.64	Imago	—	24	9.7	14	—
				Mollusca	Pterioidea	Pterioidea	Ostreidae	Crassostrea gigas	Japanese oyster (shell)	(Many)	4.0	Imago	—	56	23	33	0.55
				Mollusca	Pterioidea	Pterioidea	Ostreidae	Crassostrea gigas	Japanese oyster (molluscous)	(Many)	1.2	Imago	—	4.1	1.6	2.5	—
				Mollusca	Veneroidea	Veneroidea	Veneridae	Ruditapes philippinarum	Japanese littleneck (shell)	(Many)	1.4	Imago	—	9	3.8	5.5	2.3
				Mollusca	Veneroidea	Veneroidea	Veneridae	Ruditapes philippinarum	7#1(molluscan body)	(Many)	0.90	Imago	—	5.7	2.3	3.4	—
				Angiospermae	Najadales	Najadales	Zosteraceae	Zostera marina	eel grass	—	1.6	—	—	14	5.4	8.5	—
Chlorophyta	Ulotrichales	Ulotrichales	Monostromataceae	Monostroma nitidum	Monostroma nitidum	—	2.6	—	—	102	40	62	—				
Chlorophyta	Ulvaales	Ulvaales	Ulvaaceae	Ulva pertusa	Ulva pertusa	—	2.6	—	—	13	5.1	7.6	—				
Location	Sampling Date	Latitude	Longitude	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)
												Growth stage	Stomach contents	Total	Cs-134	Cs-137	
Off the mouth of the Aihara River	2012/6/28	38.0383 38.0455 38.0461	140.9282 140.9400 140.9520	Vertebrata	Perciformes	Perciformes	Lateolabracidae	Lateolabrax japonicus	Japanese sea bass	1	2.4	Mature fish	Small fish	42	16	26	0.041
				Vertebrata	Osteichthyes	Righteye flounder	Flounder	Paralichthys olivaceus	Flounder	3	2.5	Mature fish	Shrimps, small fish	38	15	23	—
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	Pleuronectes yokohamae	Marbled sole	3	1.4	Mature fish	Shrimps, sandworms	11	4.5	6.7	—
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	Kareius bicoloratus	Stone flounder	3	1.4	Mature fish	Small fish, sandworms	40	15	25	—
				Vertebrata	Pleuronectiformes	Perciformes	Sciaenidae	Pennahia argentata	White croaker	7	2.3	Mature fish	Shrimps, small fish	31	12	19	—
				Vertebrata	Rajiformes	Rajiformes	Rajidae	—	—	—	0.11	—	—	16	6.6	9.5	—
				Arthropod	Decapoda	Decapoda	Portunidae	Portunus trituberculatus	Japanese blue crab	8	2.8	Imago	—	21	8.4	13	0.18
				Arthropod	Decapoda	Decapoda	Portunidae	Ovalipes punctatus	Ovalipes punctatus	9	1.8	Imago	—	8.4	3.4	5.0	—

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