

○ Results (water)

Location		FY2012 Summer 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	7.6	1.4	4.2	7.7	17.8	0.09	1.1	5	4.5	0.084	0.13	0.0017
	B-2	37.8119	140.5056	8.0	1.2	3.7	9.6	16.7	0.08	1.1	6	4.3	0.072	0.11	—
Niida River	C-1	37.6615	140.9113	7.8	<0.5	2.5	9.5	7.2	0.04	1.2	3	1.5	0.20	0.31	0.0031
	C-3	37.6442	140.9998	7.4	<0.5	2.6	9.2	9.4	0.05	1.7	4	2.1	0.15	0.23	—
Mano River	D-1	37.7332	140.9254	7.6	<0.5	2.5	9.6	10.2	0.05	2.1	2	1.2	0.12	0.19	0.0026
	D-2	37.7095	140.9566	7.2	<0.5	2.9	8.1	11.7	0.06	1.8	4	2.2	0.078	0.13	—
Lake Hayama (Mano Dam)	E-1 (Surface layer)	37.7342	140.8094	7.8	1.6	4.6	8.4	6.8	0.03	2.1	2	1.9	0.056	0.090	—
	E-1 (Deep layer)			7.5	1.6	4.5	8.3	7.1	0.04	2.0	3	2.7	0.078	0.12	0.0019
Lake Akimoto	F-3 (Surface layer)	37.6652	140.1329	7.4	0.9	2.9	7.8	6.0	0.03	1.2	<1	0.6	0.022	0.032	—
	F-3 (Deep layer)			6.8	0.8	3.7	5.2	5.0	0.03	1.3	2	1.3	0.018	0.028	0.0018
Lake Inawashiro	G-1 (Surface layer)	37.5054	140.1138	6.0	<0.5	0.9	7.7	12.5	0.06	0.5	1	0.3	0.018	0.029	—
	G-1 (Deep layer)			4.8	1.1	1.0	8.0	15.4	0.08	0.5	<1	0.3	0.018	0.032	0.0011
Off Iwaki City (Hisanohama)	I-2 (Surface layer)	37.1998	141.0850	8.1	1.1	0.8	8.0	4,700	33.65	1.1	<1	0.8	0.024	0.041	—
	I-2 (Deep layer)			8.1	0.8	0.9	8.0	4,730	33.89	1.0	3	0.7	0.0089	0.016	0.0017
Off Soma City (Matsukawaura)	J-2	37.8156	140.9762	7.8	2.5	4.3	4.8	4,460	31.42	2.6	12	7.6	0.076	0.13	0.0024
	J-3	37.8207	140.9768	8.0	1.4	3.1	5.8	4,460	31.70	2.0	10	5.9	0.091	0.14	—
Off the mouth of the Abukuma River (Off Watari Town)	K-2 (Surface layer)	38.0455	140.9400	8.1	1.3	4.9	7.3	3,050	22.51	2.2	3	2.8	0.022	0.034	—
	K-2 (Deep layer)			8.1	0.9	2.6	7.0	4,670	33.55	1.5	2	0.9	0.0078	0.015	0.0017

○ Results (sediment)

Location				FY2012 Summer 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						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)
										(%)	(%)	(%)	(%)	(%)	(%)					
Abukuma River System	A-1	37.6206	140.5220	7.4	-6	43.3	5.1	7	2.665	2.6	10.0	43.7	9.9	13.8	20.0	0.29	9.5	1,800	2,900	0.53
	B-1	37.7845	140.4923	7.2	145	29.0	1.9	1	2.742	27.7	5.7	18.4	30.6	7.4	10.2	0.26	19	260	420	—
	B-2	37.8119	140.5056	7.4	198	27.5	1.5	<1	2.698	2.5	4.5	63.5	26.1	0.2	3.2	0.33	9.5	190	310	—
Niida River	C-1	37.6615	140.9113	7.2	372	19.7	1.0	<1	2.658	36.4	48.1	14.2	0.7	0.6		1.6	19	970	1,600	0.34
	C-2	37.6644	140.9452	6.8	191	61.4	11.6	44	2.550	10.9	2.5	8.9	23.0	24.0	30.7	0.049	19	12,000	19,000	—
	C-3	37.6442	140.9998	7.0	345	28.6	2.2	2	2.691	2.7	7.1	43.8	31.4	4.0	11.0	0.27	4.75	230	350	—
Mano River	D-1	37.7332	140.9254	7.1	345	31.1	2.9	1	2.718	6.6	8.9	68.0	12.7	1.5	2.3	0.42	19	820	1,300	2.1
	D-2	37.7095	140.9566	7.1	398	20.5	1.5	<1	2.690	30.1	40.1	27.1	1.5	1.2	1.2	1.3	19	570	840	—
	D-3	37.7053	140.9621	6.9	388	25.1	1.9	1	2.693	25.5	15.6	40.7	13.5	1.0	3.7	0.66	19	390	680	—
Lake Hayama (Mano Dam)	E-1	37.7342	140.8094	6.7	141	77.3	27.7	91	2.320	—	0.0	0.1	6.9	48.4	44.6	0.0078	2	19,000	30,000	14
	E-2	37.7261	140.8213	6.6	157	46.3	8.0	46	2.611	21.4	15.2	14.9	13.2	17.5	17.8	0.28	19	2,400	3,800	—
	E-3	37.7293	140.8309	6.5	131	54.6	8.6	17	2.609	13.7	8.5	11.8	13.6	28.8	23.6	0.058	19	3,000	4,700	—
Lake Akimoto	F-1	37.6568	140.1296	7.2	82	64.6	8.4	17	2.634	—	0.1	0.0	0.1	46.9	52.9	0.0041	2	1,100	1,700	—
	F-2	37.6615	140.1222	6.9	27	76.0	12.0	31	2.559	—	0.1	1.2	0.9	40.7	57.1	0.0025	2	400	720	—
	F-3	37.6652	140.1329	6.6	52	68.4	15.2	41	2.609	4.2	1.1	13.3	27.2	29.5	24.7	0.056	19	360	560	1.9
Lake Inawashiro	G-1	37.5054	140.1138	6.9	6	75.7	7.3	20	2.568	2.5	2.1	10.4	29.5	22.3	33.2	0.032	9.5	2,000	3,200	0.47
	G-2	37.5005	140.1401	6.9	75	51.1	6.0	16	2.626	2.4	3.1	4.0	24.7	45.9	19.9	0.035	4.75	1,200	1,900	—
	H-1	37.4205	140.1011	6.8	160	30.2	1.8	1	2.697	1.0	6.4	65.8	23.7	0.5	2.6	0.31	4.75	66	110	—
Off Iwaki City (Hisanohama)	I-1	37.1738	141.0788	7.7	90	28.4	2.5	1	2.771	—	—	2.3	89.5	4.0	4.2	0.15	0.850	190	290	—
	I-2	37.1998	141.0850	7.9	125	27.8	2.1	1	2.768	—	—	2.5	84.8	6.6	6.1	0.15	0.850	400	590	ND(<0.16)
	I-3	37.2328	141.0939	7.9	146	27.0	2.0	<1	2.804	—	—	2.8	92.6	2.0	2.6	0.16	0.850	220	400	—
Off Soma City (Matsukawaura)	J-1	37.8210	140.9612	7.7	106	34.1	3.5	3	2.691	2.7	7.1	21.9	44.1	8.3	15.9	0.17	9.5	170	300	—
	J-2	37.8156	140.9762	7.9	0	29.9	2.7	1	2.696	—	0.0	20.0	62.8	5.5	11.7	0.17	2	200	300	ND(<0.16)
	J-3	37.8207	140.9768	7.9	121	27.0	1.9	<1	2.718	—	0.6	17.5	76.2	1.1	4.6	0.18	2	26	38	—
Off the mouth of the Abukuma River (Off Watari Town)	K-1	38.0383	140.9282	7.8	214	27.9	2.2	<1	2.695	0.1	1.9	60.0	36.4	0.3	1.3	0.29	4.75	45	62	—
	K-2	38.0455	140.9400	7.7	181	30.9	2.8	1	2.744	—	0.1	2.1	72.2	11.2	14.4	0.13	2	89	150	ND(<0.16)
	K-3	38.0461	140.9520	7.6	12	42.1	5.7	9	2.701	—	0.1	0.2	14.2	42.6	42.9	0.013	2	660	1,000	—

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

○ Results (aquatic organisms)

Location	Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	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)	2012/8/8	Vertebrata	Amphibia	Anura	Hylidae	Hyla japonica	Japanese tree frog	18	0.11	Imago	—	104	41	63	—								
			Vertebrata	Amphibia	Anura	Ranidae	Rana rugosa	Wrinkled Frog																
			Vertebrata	Amphibia	Anura	Ranidae	Rana porosa porosa	Daruma pond frog																
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Phoxinus lagowskii steindachneri	Amur Minnow	36	0.081	Mature fish	—	51	19	32	—								
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	Misgurnus anguillicaudatus	Oriental weatherfish	36	0.054	Mature fish	—	70	27	43	—								
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	Noemacheilus barbatulus	Stone loach	8	0.085	Mature fish	—	34	14	20	—								
			Arthropod	Malacostraca	Decapoda	Potamidae	Geothelphusa dehaani	Japanese Freshwater Cr	6	0.011	Imago	—	107	44	63	—								
			Arthropod	Malacostraca	Decapoda	Atyidae	Atyidae	Freshwater shrimp	511	0.12	Imago	—	156	62	94	—								
			Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	Semisulcospira libertina	Semisulcospira libertina	41	0.049	Imago	—	39	15	24	—								
			Arthropod	Insecta	Odonata	Calopterygidae	Calopteryx cornelia	Calopteryx cornelia	157	0.073	Non-adult	—	199	79	120	—								
			Arthropod	Insecta	Odonata	Gomphidae	Onychogomphus viridicostus	Onychogomphus viridicostus																
			Arthropod	Insecta	Odonata	Gomphidae	Sieboldius albardae	Sieboldius albardae																
			Arthropod	Insecta	Odonata	Gomphidae	Sinogomphus flavolimbat	Sinogomphus flavolimbat																
			Arthropod	Insecta	Odonata	Cordulegastridae	Anotogaster sieboldii	Anotogaster sieboldii																
			Arthropod	Insecta	Odonata	Cordulidae	Macromia amphigena amphigena	Macromia amphigena																
			Arthropod	Insecta	Trichoptera	Stenopsychidae	Stenopsyche marmorata	Stenopsyche marmorata																
			Arthropod	Insecta	Hemiptera	Belostomatidae	Appasus sp.	Ferocious water bug																
			Streptophyta	Zygnematales	Zygnematales	Zygnematales	Spirogyra sp.	Spirogyra									—	0.03	—	—	94	38	56	—
			—	—	—	—	—	CPOM (litter)									—	1.2	—	—	1,330	520	810	—
			B-3 (Surikami River)	2012/8/7	Vertebrata	Amphibia	Anura	Ranidae	Rana rugosa	Wrinkled Frog	3	0.036	Imago	—	87	34	53	—						
	Vertebrata	Amphibia			Anura	—	—	—	34	0.026	Non-adult	—	750	300	450	—								
	Vertebrata	Osteichthyes			Cypriniformes	Cyprinidae	Nipponocypris temminckii	Dark chub	5	0.066	Mature fish	—	79	32	47	—								
	Vertebrata	Osteichthyes			Siluriformes	Bagridae	Pseudobagrus tokiensis	Cut-tailed bullhead	6	0.17	Mature fish	—	66	25	41	—								
	Vertebrata	Osteichthyes			Cypriniformes	Cobitidae	Misgurnus anguillicaudatus	Oriental weatherfish	16	0.075	Mature fish	—	80	32	48	—								
	Vertebrata	Osteichthyes			Cypriniformes	Cobitidae	Noemacheilus barbatulus	Stone loach	16	0.30	Mature fish	—	56	21	35	—								
	Arthropod	Malacostraca			Decapoda	Procambarus	Procambarus clarkii	Red swamp crawfish	6	0.14	Imago	—	139	56	83	—								
	Arthropod	Insecta			Odonata	Gomphidae	Onychogomphus viridicostus	Onychogomphus viridicostus	146	0.059	Non-adult	—	139	52	87	—								
	Arthropod	Insecta			Odonata	Gomphidae	Sieboldius albardae	Sieboldius albardae																
	Arthropod	Insecta			Odonata	Cordulegastridae	Anotogaster sieboldii	Anotogaster sieboldii																
	Arthropod	Insecta			Odonata	Cordulidae	Macromia amphigena amphigena	Macromia amphigena																
	Arthropoda	Insecta			Neuroptera	Corydalidae	Parachauliodes japonicus	Parachauliodes japonicus																
	Arthropod	Insecta			Megaloptera	Corydalidae	Protohermes grandis	Protohermes grandis																
	Arthropod	Insecta			Trichoptera	Stenopsychidae	Stenopsyche marmorata	Stenopsyche marmorata																
	Arthropod	Insecta			Hemiptera	Belostomatidae	Appasus sp.	Ferocious water bug																
	Streptophyta	Zygnematales	Zygnematales	Zygnematales	Spirogyra sp.	Spirogyra	—	0.16									—	—	360	140	220	—		
	—	—	—	—	—	CPOM (litter)	—	0.60									—	—	270	100	170	—		
	B-2 (Abukuma River)	2012/8/29	Vertebrata	Osteichthyes	Siluriformes	Ictaluridae	Ictalurus punctatus	Channel catfish	3	2.8	Mature fish	Some (details unknown)	151	57	94	—								
			Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	Anguilla japonica	Eel	2	0.89	Mature fish	Some (details unknown)	223	83	140	—								
		2012/8/9	Vertebrata	Osteichthyes	Siluriformes	Siluridae	Silurus asotus	Amur catfish	3	2.0	Mature fish	Some (details unknown)	600	230	370	—								
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	10	3.2	Mature fish	Some (details unknown)	540	210	330	0.34								
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Cyprinus carpio	Common carp	2	4.6	Mature fish	Some (details unknown)	135	55	80	—								
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	5	4.7	Mature fish	Some (details unknown)	270	110	160	—								
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Carassius sp.	Carassius sp.	2	1.4	Mature fish	Some (details unknown)	240	90	150	—								
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon sp.	Tribolodon	2	0.72	Mature fish	Some (details unknown)	242	92	150	—								
	Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	Plecoglossus altivelis	Sweetfish (natural upstr	60	2.1	Mature fish	—	85	34	51	0.21										

* 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 Summer Survey)

Location	Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Growth stage	Note Stomach contents	Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)	
												Total	Cs-134	Cs-137		
Nida River	C-1 C-2	2012/9/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	1	1.1	Mature fish	Some (details unknown)	1,620	630	990	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon sp.	Tribolodon	21	0.070	Immature fish	—	199	79	120	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Zacco platypus	Zacco platypus	3	0.18	Mature fish	Some (details unknown)	870	340	530	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Pseudogobio esocinus	Pseudogobio esocinus	25	0.22	Mature fish	—	580	220	360	—
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	Rhinogobius sp.	Rhinogobius	13	0.18	Mature fish	—	390	150	240	—
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	Rhinogobius sp.	Rhinogobius	34	0.10	Mature fish	—	1,320	510	810	—
			Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	Plecoglossus altivelis	Sweetfish (natural upstr)	8	0.35	Mature fish	—	1,030	400	630	—
			Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	Plecoglossus altivelis	Sweetfish (natural upstr)	8	0.49	Mature fish	Some (details unknown)	600	240	360	—

Location	Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Growth stage	Note Stomach contents	Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)			
												Total	Cs-134	Cs-137				
Mano River	D-4	2012/8/22	Vertebrata	Osteichthyes	Perciformes	Gobiidae	Rhinogobius sp.	Rhinogobius	98	0.20	Mature fish	—	760	300	460	—		
			Arthropod	Malacostraca	Decapoda	Procambarus	Procambarus clarkii	Red swamp crawfish	10	0.30	Imago	—	660	250	410	—		
			Arthropod	Malacostraca	Decapoda	Atyidae	Atyidae	Freshwater shrimp	419	0.10	Imago	—	147	59	88	—		
			Arthropod	Malacostraca	Decapoda	Grapsidae	Eriocheir japonica	Japanese mitten crab	4	0.10	Imago	—	360	150	210	—		
			Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	Semisulcospira libertina	Semisulcospira libertina	44	0.040	Imago	—	480	190	290	—		
			Arthropod	Insecta	Ephemeroptera	Isonychiidae	Isonychia japonica	Isonychia japonica										
			Arthropod	Insecta	Odonata	Gomphidae	Sieboldius albardae	Sieboldius albardae										
			Arthropod	Insecta	Odonata	Gomphidae	Stylogomphus suzukii	Stylogomphus suzukii										
			Arthropod	Insecta	Odonata	Gomphidae	Gomphidae	Gomphidae										
			Arthropod	Insecta	Odonata	Corduliidae	Macromia amphigena amphigena	Macromia amphigena										
			Arthropod	Insecta	Plecoptera	Perlidae	Kamimuraj sp.	Kamimuraj tibialis										
			Arthropod	Insecta	Hemiptera	Belostomatidae	Appasus sp.	Ferocious water bug										
			Arthropoda	Insecta	Neuroptera	Corydalidae	Parachauliodes japonicus	Parachauliodes japonicus										
			Arthropod	Insecta	Megaloptera	Corydalidae	Protohermes grandis	Protohermes grandis										
			Arthropod	Insecta	Trichoptera	Stenopsychidae	Stenopsyche marmorata	Stenopsyche marmorata										
			Magnoliophyta	Monocotyledoneae	Alismatales	Potamogetonaceae	Potamogeton oxyphyllus	Potamogeton oxyphyllus	—	0.44	—	—	—	—	102	40	62	—
			Bryophyta	—	—	—	Bryophyta	Bryophyte	—	0.086	—	—	—	—	570	230	340	—
			Streptophyta	Zygnematales	Zygnematales	Zygnematales	Spirogyra sp.	Spirogyra	—	0.37	—	—	—	—	23	9.0	14	—
			—	—	—	—	—	CPOM (litter)	—	0.50	—	—	—	—	420	160	260	—
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Oncorhynchus masou	Yamame trout	7	0.10	Immature fish	—	—	—	235	95	140	—
Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon sp.	Tribolodon	60	0.40	Mature fish	—	—	—	229	89	140	—			
Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Zacco platypus	Zacco platypus	11	0.047	Mature fish	—	—	—	116	48	68	—			
Vertebrata	Osteichthyes	Perciformes	Gobiidae	Gobiidae	Gobiidae	93	0.20	Mature fish	—	—	—	111	44	67	—			
Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	Plecoglossus altivelis	Sweetfish (stock)	2	0.20	Mature fish	Some (details unknown)	—	—	135	51	84	—			
Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	Plecoglossus altivelis	Sweetfish (natural upstr)	24	0.60	Mature fish	—	—	—	290	120	170	—			

* 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 Summer Survey)

Location	Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)	
										Growth stage	Stomach contents	Total	Cs-134	Cs-137		
Lake Aknomo	F-1 F-2 F-3	2012/8/20	Vertebrata	Amphibia	Caudata	Salamandridae	Cynops pyrrhogaster	Cynops pyrrhogaster	6	0.030	Imago	—	90	36	54	—
			Vertebrata	Amphibia	Anura	Ranidae	Rana ornativentris	Montane brown frog	4	0.050	Imago	—	71	28	43	—
			Vertebrata	Amphibia	Anura	Ranidae	Rana rugosa	Wrinkled Frog								
			Vertebrata	Amphibia	Anura	Ranidae	Buergeria buergeri	Kajika frog (tadpole)	293	0.12	Non-adult	—	136	55	81	—
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	Micropterus salmoides	Largemouth bass	4	1.0	Mature fish	Some (details unknown)	187	77	110	—
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	15	7.7	Mature fish	Some (details unknown)	310	120	190	1.2
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Salvelinus leucomaenis	Char	3	0.80	Mature fish	Some (details unknown)	204	84	120	—
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	Lepomis macrochirus	Bluegill	6	0.90	Mature fish	Some (details unknown)	229	89	140	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Cyprinus carpio	Common carp	1	3.7	Mature fish	Some (details unknown)	85	35	50	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	3	4.2	Mature fish	Some (details unknown)	63	24	39	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsd	24	8.6	Mature fish	Some (details unknown)	128	51	77	1.6
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	9	1.5	Mature fish	Some (details unknown)	300	120	180	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Zacco platypus	Zacco platypus	53	0.70	Mature fish	—	93	38	55	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Phoxinus lagowskii steindachneri	Amur Minnow	23	0.090	Mature fish	—	72	29	43	—
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	Misgurnus anguillicaudatus	Oriental weatherfish	2	0.050	Mature fish	—	184	74	110	—
			Vertebrata	Osteichthyes	Oseriformes	Oseridae	Hypomesus nipponensis	Japanese smelt	46	0.30	Mature fish	—	85	32	53	—
			Arthropod	Malacostraca	Decapoda	Astacidae	Pacifastacus leniusculus trowbridgii	Signal crayfish	131	5.4	Imago	—	156	63	93	10
			Magnoliophyta	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	Vallisneria denseserrulata	Vallisneria denseserrulata	—	0.40	—	—	14	5.1	8.5	—
			Angiospermae	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	Elodea nuttallii	Western Waterweed	—	0.70	—	—	7.1	2.6	4.5	—
			Streptophyta	Zygnemataphyceae	Zygnematales	Zygnemataceae	Spirogyra sp.	Spirogyra	—	0.29	—	—	44	17	27	—
—	—	—	—	—	—	—	0.80	—	—	156	60	96	—			

Location	Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)	
										Growth stage	Stomach contents	Total	Cs-134	Cs-137		
Lake Inawashiro	G-1 G-2 (north lakeside)	2012/8/10	Vertebrata	Osteichthyes	Siluriformes	Siluridae	Silurus asotus	Amur catfish	1	0.8	Mature fish	Some (details unknown)	107	44	63	—
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Salvelinus leucomaenis	Char	6	1.8	Mature fish	Some (details unknown)	250	100	150	—
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Oncorhynchus masou	Yamame trout	1	0.30	Mature fish	Some (details unknown)	330	130	200	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	3	2.5	Mature fish	Some (details unknown)	125	50	75	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsd	2	1.3	Mature fish	Some (details unknown)	45	18	27	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	Many	6.0	Mature fish	—	159	64	95	0.29
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	Cobitidae	Cobitidae	Many	1.7	Mature fish	—	9.1	3.4	5.7	—
			Streptophyta	Zygnemataphyceae	Zygnematales	Zygnemataceae	Spirogyra sp.	Spirogyra	—	0.27	—	—	42	16	26	—
			—	—	—	—	—	—	—	0.77	—	—	172	62	110	—
			—	—	—	—	—	—	—	0.11	—	—	68	27	41	—
	H-1 (south lakeside)	2012/8/21	Vertebrata	Amphibia	Anura	Ranidae	Rana porosa porosa	Daruma pond frog	10	0.11	Imago	—	68	27	41	—
			Vertebrata	Osteichthyes	Siluriformes	Siluridae	Silurus asotus	Amur catfish	2	1.3	Mature fish	Some (details unknown)	138	52	86	—
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	4	2.1	Mature fish	Some (details unknown)	178	68	110	0.43
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Oncorhynchus masou	Yamame trout	36	0.50	Immature fish	—	11	4.3	6.3	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Hemibarbus barbus	Hemibarbus barbus	15	2.5	Mature fish	Some (details unknown)	77	29	48	0.40
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsd	10	1.5	Mature fish	Some (details unknown)	51	20	31	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	17	0.60	Mature fish	Some (details unknown)	100	38	62	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Pseudogobio esocinus	Pseudogobio esocinus	5	0.10	Mature fish	—	24	9.3	15	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Zacco platypus	Zacco platypus	11	0.40	Mature fish	—	53	22	31	—
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	Gymnogobius urotaenia	Goby	21	0.10	Mature fish	—	38	15	23	—
Mollusca	Gastropoda	Architaenioglossa	Viviparidae	Bellamyia japonica	Japanese mysterysnail	9	0.060	Imago	—	62	25	37	—			
Angiospermae	Dicotyledoneae	Nymphaeales	Nymphaeaceae	Nuphar japonicum	Cow lily	—	1.0	—	—	7.8	3.2	4.6	—			
Magnoliophyta	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	Hydrocharis dubia	Hydrocharis dubia	—	0.50	—	—	4.8	1.9	2.9	—			
Angiospermae	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	Elodea nuttallii	Western Waterweed	—	0.30	—	—	12	4.8	7.6	—			

* 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 Summer Survey)

Location	Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)		
										Growth stage	Stomach contents	Total	Cs-134	Cs-137			
Lake Hazama (Mano River System)	2012/8/29	Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Oncorhynchus masou	Yamame trout	4	0.030	Immature fish	—	232	92	140	—		
			Osteichthyes	Perciformes	Gobiidae	Rhinogobius flumineus	Rhinogobius flumineus	261	0.10	Mature fish	—	260	100	160	—		
		E-4	2012/8/22	Arthropod	Insecta	Ephemeroptera	Isonychiidae	Isonychia japonica	Isonychia japonica	192	0.045	Non-adult	—	450	180	270	—
					Insecta	Odonata	Calopterygidae	Calopteryx cornelia	Calopteryx cornelia								
				Insecta	Odonata	Gomphidae	Onychogomphus viridicostus	Onychogomphus viridicostus									
				Insecta	Odonata	Gomphidae	Sieboldius albardae	Sieboldius albardae									
				Insecta	Odonata	Gomphidae	Gomphidae	Gomphidae									
				Insecta	Odonata	Cordulidae	Macromia amphigena amphigena	Macromia amphigena									
				Insecta	Neuroptera	Corydalidae	Parachauliodes japonicus	Parachauliodes japonicus									
				Insecta	Megaloptera	Corydalidae	Protohermes grandis	Protohermes grandis									
	Insecta	Trichoptera		Stenopsychidae	Stenopsyche marmorata	Stenopsyche marmorata											
	Insecta	Trichoptera		Stenopsychidae	Stenopsyche sauteri	Parastenopsyche sauteri											
	Streptophyta	Zygnematales	Zygnematales	Zygnematales	Spirogyra sp.	Spirogyra	—	0.55	—	—	132	52	80	—			
	—	—	—	—	—	—	—	0.51	—	—	740	290	450	—			
	E-1 E-2 E-3	2012/8/29	Vertebrata	Osteichthyes	Siluriformes	Siluridae	Silurus asotus	Amur catfish	2	2.4	Mature fish	Some (details unknown)	1,980	780	1,200	0.49	
				Osteichthyes	Perciformes	Centrarchidae	Micropterus salmoides	Largemouth bass	2	1.3	Mature fish	Some (details unknown)	1,490	590	900	—	
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	Micropterus dolomieu	Small mouth bass	5	3.0	Mature fish	Some (details unknown)	4,300	1,700	2,600	2.1	
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	Salvelinus leucomaenis	Char	1	0.30	Mature fish	Some (details unknown)	1,590	620	970	—	
Vertebrata			Osteichthyes	Cypriniformes	Cyprinidae	Cyprinus carpio	Common carp	1	0.40	Mature fish	Some (details unknown)	380	150	230	—		
Vertebrata			Osteichthyes	Cypriniformes	Cyprinidae	Carassius auratus	Carassius auratus langsd.	2	2.2	Mature fish	Some (details unknown)	840	330	510	1.2		
Vertebrata			Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon hakonensis	Japanese dace	Many	0.60	Mature fish	—	540	210	330	—		

Location	Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)		
										Growth stage	Stomach contents	Total	Cs-134	Cs-137			
ODI Iwaki City	2012/8/31	Vertebrata	Osteichthyes	Perciformes	Polyprionidae	Stereolepis doederleini	Striped jewfish	1	0.40	Mature fish	Empty stomach	15	5.5	9.0	—		
			Osteichthyes	John dory	John dory	Zenopsis nebulosa	John Dorey	4	0.40	Mature fish	Empty stomach	14	5.2	8.5	—		
			Osteichthyes	Righteye flounder	Flounder	Paralichthys olivaceus	Flounder	4	4.2	Mature fish	Some (details unknown)	26	9.9	16	0.17		
			Osteichthyes	Righteye flounder	Righteye flounder	Pleuronectes yokohamae	Marbled sole	7	3.1	Mature fish	Empty stomach	52	20	32	0.25		
			Osteichthyes	Righteye flounder	Righteye flounder	Eopsetta grigorjewi	Round-nose flounder	4	0.90	Mature fish	Shrimps, crabs	25	10	15	—		
			Osteichthyes	Pleuronectiformes	Pleuronectidae	Pleuronichthys japonicus	Finespotted flounder	4	0.30	Mature fish	Sandworms, shrimps	25	10	15	—		
			Osteichthyes	Scorpaeniformes	Triglidae	Lepidotrigla microptera	Searobin	10	1.0	Mature fish	shrimp	29	12	17	—		
			Osteichthyes	Puffer	Takifugu poecilonotus	Takifugu poecilonotus	Pufferfish	7	0.90	Mature fish	Shrimps, crabs	47	19	28	—		
			Cartilage fish	Sandbar shark	Banded houndsh	Mustelus manazo	Starspotted smooth-hou	2	3.0	Mature fish	Crabs	39	16	23	—		
			Cartilage fish	Ray	Skate	Okamejei kenoei	Common Skete	4	1.5	Mature fish	Shrimps, crabs	126	50	76	—		
			Mollusca	Cephalopoda	Decapodiformes	Sepiidae	Sepia sp.	Sepia	23	0.30	Imago	—	7.4	2.6	4.8	—	
			Echinoderm	Sea Urchin	Sea urchin	Sea urchin	Glyptocidaris crenularis	tugaruuni	30	1.0	Imago	—	50	20	30	—	
			I-4 (Hisanojima)	Mollusca	Gastropoda	Archaeogastropoda	Haliotis asinina	Haliotis discus	abalone(shell)	16	0.60	Imago	—	49	20.0	29.0	—
			Echinoderm	Sea Urchin	Loxechinus	Strongylocentrotus	Strongylocentrotus nudus	Northern sea urchin	27	3.1	Imago	—	26	9.7	16	—	
		Brown algae	Phaeophyceae	Sea cabbage	Sea cabbage	Eisenia bicyclis	Eisenia bicyclis	—	1.5	—	—	—	25	9.9	15	—	

* 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 Summer Survey)

Location		Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)		
											Growth stage	Stomach contents	Total	Cs-134	Cs-137			
Off Soma City	J-1 J-2 J-3 (Matsukawaura)	2012/8/28	Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	Pleuronectidae	Pleuronectidae	30	0.18	Immature fish	—	—	5.9	2.3	3.6	—	
			Vertebrata	Osteichthyes	Mugiliformes	Mugilidae	Mugil cephalus	Flathead mullet	14	0.41	Immature fish	—	—	36	15	21	—	
			Vertebrata	Osteichthyes	Pacific herring	Pacific herring	Konosirus punctatus	Dotted gizzard shad	82	0.37	Immature fish	—	—	22	8.9	13	—	
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	Gobiidae	Gobiidae	Gobiidae	32	0.10	Mature fish	—	—	8.5	3.2	5.3	—
			Vertebrata	Osteichthyes	Atheriniformes	Atherinidae	Atherinidae	Atherinidae	Atherinidae	10	0.15	Mature fish	—	—	6.2	2.4	3.8	—
			Vertebrata	Osteichthyes	Tetraodontiformes	Tetraodontidae	Takifugu niphobles	Takifugu niphobles	Takifugu niphobles	8	0.27	Immature fish	—	—	15	5.9	9.2	—
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	Tribolodon sp.	Tribolodon	Tribolodon	10	0.56	Immature fish	—	—	7.7	2.9	4.8	—
			Arthropod	Malacostraca	Decapoda	Portunidae	Portunus trituberculatus	Japanese blue crab	Japanese blue crab	3	0.17	Imago	—	—	3.0	1.2	1.8	—
			Arthropod	Malacostraca	Decapoda	Varunidae	Hemigrapsus penicillatus	Hemigrapsus penicillatus	Hemigrapsus penicillatus	215	0.18	Imago	—	—	300	120	180	—
			Arthropod	Malacostraca	Decapoda	Alpheus	Alpheus sp.	Alpheus	Alpheus	66	0.11	Imago	—	—	9.0	3.6	5.4	—
			Arthropod	Malacostraca	Mysida	Mysidae	Mysidae	Mysidae	Mysidae	Many	0.17	Imago	—	—	18	7.4	11	—
			Annelida	Polychaeta	—	—	Polychaeta	Class Polychaeta	Class Polychaeta	786	0.52	Imago	—	—	107	41	66	—
			Mollusca	Bivalvia	Pterioida	Ostreidae	Crassostrea gigas	Japanese oyster (shell)	Japanese oyster (shell)	Many	4.3	Imago	—	—	29	11	18	0.74
			Mollusca	Bivalvia	Veneroidea	Veneridae	Ruditapes philippinarum	Japanese littleneck (shell)	Japanese littleneck (shell)	Many	0.73	Imago	—	—	8.9	3.5	5.4	—
			Mollusca	Bivalvia	Veneroidea	Veneridae	Ruditapes philippinarum	Japanese littleneck (shell)	Japanese littleneck (shell)	Many	1.8	Imago	—	—	4.7	1.9	2.8	3.1
			Angiospermae	Monocotyledoneae	Najadales	Zosteraceae	Zostera marina	Eel grass	Eel grass	—	1.7	—	—	—	2.9	1.1	1.8	—
Chlorophyta	Ulvophyceae	Ulvaales	Ulvaceae	Ulva pertusa	Ulva pertusa	Ulva pertusa	—	0.46	—	—	—	3.1	1.2	1.9	—			

Location		Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight	Note		Radioactive cesium (Bq/kg-wet)			Sr-90 (Bq/kg-wet)		
											Growth stage	Stomach contents	Total	Cs-134	Cs-137			
Off Wakari Town	K-1 K-2 K-3 (Off the mouth of the Abukuma River)	2012/8/29	Vertebrata	Osteichthyes	Perciformes	Carangidae	Seriola quinqueradiata	Japanese amberjack	2	2.1	Mature fish	Small fish	Small fish	12	4.4	7.2	0.020	
			Vertebrata	Osteichthyes	Perciformes	Scombridae	Scomber australasicus	Blue mackerel	2	1.0	Mature fish	Some (details unknown)	Some (details unknown)	ND	ND(<1.0)	ND(<0.82)	—	
			Vertebrata	Osteichthyes	Perciformes	Carangidae	Trachurus japonicus	Japanese jack mackerel	3	1.3	Mature fish	Small fish	Small fish	14	5.6	8.7	—	
			Vertebrata	Osteichthyes	Scorpaeniformes	Sebastidae	Sebastes sp.	Sebastes	4	0.9	Mature fish	shrimp	shrimp	19	7.1	12	—	
			Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	Paralichthys olivaceus	Flounder	Flounder	2	3.0	Mature fish	Empty stomach	Empty stomach	16	6.1	9.6	0.055
			Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectidae	Pleuronichthys cornutus	Ridged-eye flounder	Ridged-eye flounder	3	1.0	Mature fish	Sandworm	Sandworm	9	3.3	5.6	—
			Vertebrata	Osteichthyes	Tetraodontiformes	Tetraodontidae	Takifugu pardalis	Globefish	Globefish	3	0.9	Mature fish	Empty stomach	Empty stomach	6	2.1	3.9	—
Arthropod	Malacostraca	Decapoda	Portunidae	Portunus trituberculatus	Japanese blue crab	Japanese blue crab	5	1.8	Imago	—	—	0.95	ND(<0.77)	0.95	—			

* 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.