○ Results (water)

Location				2013 October-November 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)	37.620583°	140.521950°	7.8	1.1	3.5	9.4	19.0	0.09	1.6	3	2.4	0.011	0.027	0.0012
	A-1 (Deep layer)			7.7	1.3	3.5	9.5	22.1	0.09	1.7	3	2.3	0.0081	0.018	—
	A-2	37.565700°	140.394250°	7.9	<0.5	2.3	10.0	11.7	0.06	1.1	2	1.7	0.016	0.036	—
	B-1	37.784217°	140.492017°	8.3	0.6	3.2	11.5	19.0	0.10	1.7	3	2.4	0.012	0.024	—
	B-2	37.811983°	140.505817°	8.1	1.0	3.1	11.0	16.8	0.09	1.6	2	2.2	0.018	0.037	—
	B-3	37.816400°	140.471933°	7.7	0.6	3.1	10.4	8.8	0.05	1.5	3	2.1	0.0051	0.0099	—
Uda River	C-1	37.795533°	140.745700°	7.4	<0.5	2.0	9.3	10.9	0.06	0.7	2	1.4	0.016	0.036	—
	C-2	37.771083°	140.727767°	7.2	0.6	4.0	7.6	9.6	0.05	1.6	10	4.1	0.065	0.14	—
	C-3	37.779100°	140.804100°	8.0	<0.5	2.5	9.0	10.0	0.06	1.1	2	1.7	0.063	0.14	—
	C-4	37.769233°	140.844217°	7.7	<0.5	2.0	10.0	9.4	0.05	1.0	<1	0.7	0.017	0.035	0.0011
	C-5	37.764433°	140.860283°	7.9	<0.5	2.2	9.7	9.5	0.05	0.9	1	0.9	0.013	0.034	—
	C-6	37.776467°	140.887567°	8.0	<0.5	2.2	10.4	10.5	0.06	1.0	<1	0.6	0.013	0.025	—
Mano River	D-1	37.733150°	140.925417°	7.8	0.6	2.6	11.3	10.6	0.06	1.3	<1	1.0	0.023	0.057	0.0016
	D-2	37.709333°	140.956517°	7.5	0.5	2.8	10.5	12.0	0.07	1.3	1	1.4	0.024	0.051	—
	D-3	37.704983°	140.962150°	7.1	0.5	2.6	10.3	12.9	0.07	1.1	2	1.5	0.017	0.039	—
	D-4 a	37.730867°	140.907933°	7.4	<0.5	2.9	9.5	10.5	0.06	1.3	<1	1.1	0.030	0.064	—
	D-4 b	37.731083°	140.909550°	7.6	0.5	2.8	10.2	10.4	0.06	1.3	<1	1.0	0.036	0.083	—
	D-5	37.721717°	140.889883°	7.7	<0.5	3.0	10.0	9.2	0.05	1.5	2	1.3	0.042	0.091	—
Niida River	E-1	37.661400°	140.911533°	7.5	0.6	2.6	9.6	7.3	0.04	1.0	1	0.6	0.081	0.18	0.0025
	E-2 a	37.664350°	140.945250°	7.3	<0.5	2.5	9.8	8.0	0.05	1.0	2	1.0	0.066	0.14	—
	E-2 b	37.664050°	140.945900°	7.4	<0.5	2.4	9.7	7.9	0.05	0.9	1	0.9	0.075	0.16	—
	E-3	37.644700°	141.001333°	7.4	0.9	2.8	9.6	10.7	0.06	1.2	2	1.0	0.052	0.11	—
	E-4	37.646300°	140.965800°	7.8	<0.5	2.2	10.4	8.8	0.05	1.0	2	1.1	0.046	0.11	—
	E-5	37.665050°	140.917500°	7.6	<0.5	2.4	10.9	7.6	0.04	1.1	2	1.1	0.068	0.15	—
Ota River	F-1	37.597467°	140.924950°	7.4	<0.5	2.5	9.8	6.3	0.04	1.5	<1	0.7	0.23	0.52	—
	F-2	37.601533°	140.943600°	7.2	<0.5	2.3	9.5	7.4	0.04	1.0	<1	0.4	0.20	0.43	0.0051
	F-3	37.604500°	140.963700°	7.4	<0.5	2.7	9.4	7.5	0.04	1.2	2	1.1	0.17	0.38	—
	F-4	37.606883°	140.972017°	6.8	<0.5	1.1	9.4	8.7	0.05	0.6	<1	0.3	0.079	0.17	—
	F-5	37.602183°	140.987383°	7.2	<0.5	2.0	9.3	9.5	0.05	0.9	3	1.2	0.11	0.24	—
	F-6	37.595333°	141.012633°	7.0	<0.5	4.0	8.7	45.9	0.23	1.7	4	3.0	0.13	0.27	—
Lake Hayama (Mano Dam)	G-1 (Surface layer)	37.734290°	140.809630°	7.3	0.8	4.4	7.9	7.4	0.04	2.6	<1	1.3	0.030	0.065	—
	G-1 (Deep layer)			7.4	1.0	4.7	7.8	7.5	0.04	2.4	2	1.8	0.041	0.089	0.0019
	G-3 (Surface layer)	37.729433°	140.831667°	7.3	0.9	4.4	7.4	7.5	0.04	2.3	1	1.3	0.030	0.067	—
	G-3 (Deep layer)			7.3	<0.5	4.4	7.0	7.4	0.04	2.3	2	1.2	0.036	0.077	—
	G-5 (Surface layer)	37.733880°	140.807920°	7.4	0.6	4.3	7.7	7.4	0.04	2.1	1	1.2	0.049	0.11	—
	G-5 (Deep layer)			7.4	0.9	4.7	7.8	7.4	0.04	2.4	2	1.4	0.036	0.079	—
Lake Akimoto	H-1 (Surface layer)	37.657533°	140.126433°	7.2	0.8	4.0	9.8	5.4	0.04	1.7	1	1.1	0.0089	0.020	—
	H-1 (Deep layer)			7.0	0.6	3.5	7.7	5.4	0.03	1.6	2	1.8	0.019	0.043	—
	H-3 (Surface layer)	37.665333°	140.132933°	7.3	0.8	5.3	9.3	5.4	0.03	2.0	4	1.2	0.0075	0.020	—
	H-3 (Deep layer)			7.2	0.7	3.7	9.4	5.5	0.03	1.4	2	1.2	0.0081	0.019	0.0012
	H-5 (Surface layer)	37.652333°	140.156833°	7.2	1.3	4.1	9.2	5.6	0.04	1.8	2	1.1	0.010	0.025	—
	H-5 (Deep layer)			7.1	0.8	3.5	8.4	5.6	0.03	1.7	2	1.5	0.011	0.024	—
Lake Inawashiro	I-1 (Surface layer)	37.504683°	140.114333°	5.4	<0.5	1.3	8.3	13.6	0.07	0.5	<1	0.4	0.0080	0.021	—
	I-1 (Deep layer)			6.7	<0.5	1.5	9.3	11.2	0.06	0.7	2	1.1	0.011	0.022	0.0011
	I-3 (Surface layer)	37.507700°	140.026250°	6.9	0.7	1.7	8.8	11.3	0.06	0.7	<1	0.6	0.0096	0.018	—
	I-3 (Deep layer)			6.9	0.9	1.9	9.2	11.2	0.06	0.7	2	1.4	0.011	0.021	—
	J-1 (Surface layer)	37.420333°	140.100833°	6.8	1.0	2.1	9.3	11.3	0.06	1.1	<1	0.7	0.0098	0.021	—
	J-1 (Deep layer)			6.8	1.0	2.3	9.2	11.2	0.06	1.0	4	1.4	0.012	0.025	—
Off the mouth of the Abukuma River (Off Watari Town)	K-2 (Surface layer)	38.045517°	140.940300°	8.0	<0.5	5.2	8.6	3,080	18.11	2.3	25	16.6	0.0098	0.029	—
	K-2 (Deep layer)			8.1	<0.5	2.0	7.0	5,130	33.00	1.2	4	5.0	0.012	0.025	0.00098
Off Soma City (Matsukawaura)	L-2	37.815467°	140.976333°	8.0	<0.5	2.5	10.9	3,820	25.10	1.7	4	2.4	0.017	0.043	0.0012
	L-3	37.821600°	140.976300°	8.0	<0.5	2.4	12.3	4,180	25.73	1.6	4	2.5	0.016	0.035	—
Off Iwaki City (Hisanohama)	M-2 (Surface layer)	37.199467°	141.085133°	8.1	0.6	1.0	8.5	4,960	32.40	1.0	1	1.3	0.011	0.030	—
	M-2 (Deep layer)			8.1	0.7	1.2	7.7	5,250	33.46	1.1	3	1.3	0.0059	0.013	0.00089

Note) N.D. means to be below the detection limit.

○ Results (sediments)

Location				2013 October-November Survey																	
											Grain size distribution										
		Latitude	Longitude	pH	Redox potential $E_{N.H.E}$	Water content	IL	TOC	Soil particle density	Gravel	Coarse sand	Medium sand	Fine sand	Silt	Clay	Median grain diameter	Maximum grain diameter	Cs-134	Cs-137	Sr-90
										(2-75mm)	(0.85-2mm)	(0.25-0.85mm)	(0.075-0.25mm)	(0.005-0.075mm)	(Less than 0.005mm)					
					(mV)	(%)	(%)	(mg/g-dry)	(g/cm3)	(%)	(%)	(%)	(%)	(%)	(%)	(mm)	(mm)	(Bq/kg-dry)	(Bq/kg-dry)	(Bq/kg-dry)
Abukuma River System	A-1	37.620583°	140.521950°	6.9	333	24.5	1.8	1	2.700	3.6	33.1	44.0	14.8	1.1	3.4	0.65	9.5	120	230	0.19
	A-2	37.565700°	140.394250°	7.0	352	38.6	6.1	9	2.668	1.3	24.3	39.2	7.9	7.5	19.8	0.51	4.75	380	810	—
	B-1	37.784217°	140.492017°	7.2	335	29.3	2.4	3	2.723	19.2	15.4	13.0	26.5	11.4	14.5	0.23	19	260	580	—
	B-2	37.811983°	140.505817°	7.0	340	32.7	2.1	1	2.727	0	0.8	45.8	49.2	1.1	3.1	0.24	2	160	340	—
	B-3	37.816400°	140.471933°	6.9	352	16.7	1.6	1	2.701	29.2	38.9	28.8	2.3	0.3	0.5	1.3	19	74	190	—
Uda River	C-1	37.795533°	140.745700°	7.1	383	18.6	1.9	1	2.810	46.8	33.5	15.6	2.7	0.4	1.0	1.9	19	250	530	—
	C-2	37.771083°	140.727767°	6.8	255	35.7	6.4	5	2.783	16.7	20.9	30.3	11.5	5.9	14.7	0.54	19	590	1,400	—
	C-4	37.769233°	140.844217°	7.2	240	25.5	2.3	1	2.742	4.9	27.0	55.9	8.2	1.2	2.8	0.60	9.5	450	1,000	1.1
	C-5	37.764433°	140.860283°	7.0	355	26.1	2.2	1	2.723	5.9	23.5	62.2	4.6	1.6	2.2	0.63	9.5	280	650	—
	C-6	37.776467°	140.887567°	7.4	385	23.0	2.0	<1	2.733	2.5	31.0	56.4	6.6	1.3	2.2	0.64	4.75	250	540	—
Mano River	D-1	37.733150°	140.925417°	6.7	390	27.7	2.5	3	2.720	9.0	9.6	58.9	16.8	2.7	3.0	0.42	19	640	1,500	1.9
	D-2	37.709333°	140.956517°	6.6	397	24.5	2.1	2	2.679	14.0	19.3	47.8	11.1	2.9	4.9	0.58	19	210	500	—
	D-3	37.704983°	140.962150°	7.0	391	19.5	1.6	<1	2.689	2.9	39.8	50.5	3.8	1.4	1.6	0.77	9.5	68	130	—
	D-4 a	37.730867°	140.907933°	6.9	397	33.3	4.0	6	2.724	12.1	8.3	30.0	28.2	7.1	14.3	0.25	19	810	1,900	—
	D-5	37.721717°	140.889883°	7.0	404	24.5	2.2	1	2.706	13.0	23.8	52.2	6.2	2.1	2.7	0.68	19	570	1,300	—
Niida River	E-1	37.661400°	140.911533°	7.0	368	15.1	0.8	<1	2.668	32.6	59.3	6.9	0.1	0.3	0.8	1.6	19	430	1,100	0.25
	E-2 a	37.664350°	140.945250°	6.7	352	55.4	6.4	12	2.590	1.7	4.6	21.9	33.5	15.7	22.6	0.14	4.75	4,000	9,000	—
	E-3	37.644700°	141.001333°	7.0	350	16.1	0.8	<1	2.662	6.8	52.4	36.6	2.3	0.6	1.3	0.96	9.5	250	560	—
	E-4	37.646300°	140.965800°	6.6	374	25.8	1.5	1	2.673	0	3.3	79.0	12.8	1.5	3.4	0.42	2	410	900	—
	E-5	37.665050°	140.917500°	6.9	382	17.8	0.9	1	2.669	16.4	47.2	29.9	3.2	0.9	2.4	1.0	19	620	1,400	—
Ota River	F-1	37.597467°	140.924950°	6.7	290	74.9	12.3	25	2.492	0	0.5	8.6	32.6	19.0	39.3	0.031	2	16,000	37,000	—
	F-2	37.601533°	140.943600°	6.8	262	12.6	0.6	<1	2.649	55.8	33.6	9.2	0.4	0.3	0.7	2.3	19	1,900	4,400	0.39
	F-3	37.604500°	140.963700°	6.8	283	16.8	0.6	<1	2.666	39.3	37.6	17.2	4.7	0.4	0.8	1.6	9.5	930	2,200	—
	F-4	37.606883°	140.972017°	6.9	317	17.2	0.5	<1	2.653	27.4	38.9	29.1	3.7	0.2	0.7	1.2	9.5	660	1,500	—
	F-5	37.602183°	140.987383°	6.5	335	21.3	0.9	1	2.662	30.3	30.8	32.3	4.4	0.6	1.6	1.1	9.5	470	1,100	—
Lake Hayama (Mano Dam)	G-1	37.734290°	140.809630°	6.6	107	89.6	47.1	300	2.130	0	0.2	0.5	9.5	16.9	72.9	—	2	3,900	8,900	6.0
	G-2	37.725833°	140.821383°	6.6	-32	74.8	17.4	49	2.459	2.7	3.1	3.4	2.7	18.0	70.1	—	4.75	1,700	3,900	—
	G-3	37.729433°	140.831667°	6.6	128	43.1	5.2	9	2.658	19.5	17.8	21.6	11.2	11.4	18.5	0.45	19	1,100	2,500	—
	G-4	37.738200°	140.803450°	7.2	233	28.6	2.8	2	2.708	8.0	23.2	43.0	16.4	4.0	5.4	0.50	9.5	1,500	3,400	—
	G-5	37.733880°	140.807920°	6.5	52	77.4	21.4	62	2.409	0	0	0.9	10.9	46.4	41.8	0.012	2	8,800	19,000	—
Lake Akimoto	H-1	37.657533°	140.126433°	6.8	108	64.2	8.3	22	2.640	0	0.1	0.1	0.2	35.2	64.4	—	2	110	310	—
	H-2	37.661550°	140.122550°	6.7	53	77.6	13.7	37	2.431	0	0.1	0.1	0.1	32.6	67.1	—	2	180	500	—
	H-3	37.665333°	140.132933°	6.6	56	63.5	11.3	34	2.488	0	0.1	0.1	5.1	52.5	42.2	0.0081	2	430	940	1.9
	H-4	37.655067°	140.118050°	6.7	49	67.1	8.4	25	2.528	3.0	1.2	2.5	4.3	27.0	62.0	—	19	220	560	—
	H-5	37.652333°	140.156833°	6.5	50	64.4	8.6	25	2.594	0	0.3	0.3	14.7	51.1	33.6	0.015	2	470	1,000	—
Lake Inawashiro	I-1	37.504683°	140.114333°	6.7	69	31.4	4.4	7	2.719	65.7	4.6	10.6	13.2	2.3	3.6	7.7	26.5	88	200	N.D.(<0.17)
	I-2	37.499467°	140.140883°	6.8	409	60.5	6.8	17	2.644	0.3	2.2	4.2	49.1	18.5	25.7	0.088	4.75	330	740	—
	I-3	37.507700°	140.026250°	6.4	238	68.4	9.0	21	2.630	0	0.1	4.8	33.3	31.2	30.6	0.033	2	16	40	—
	I-4	37.515967°	140.109167°	6.6	194	27.6	1.6	1	2.831	28.5	13.3	42.3	13.8	1.1	1.0	0.63	19	23	55	—
	J-1	37.420333°	140.100833°	6.8	169	33.0	1.9	2	2.664	0.5	3.9	61.0	31.2	1.7	1.7	0.29	4.75	59	150	—
Off the mouth of the Abukuma River (Off Watari Town)	K-1	38.045717°	140.928567°	8.0	224	20.2	1.4	<1	2.731	0	2.1	34.5	59.5	1.5	2.4	0.20	2	26	55	—
	K-2	38.045517°	140.940300°	7.7	196	36.8	3.8	4	2.712	0	0.1	0.7	52.8	25.8	20.6	0.086	2	140	330	N.D.(<0.15)
	K-3	38.045950°	140.951850°	7.7	198	52.4	8.0	12	2.660	0	0.3	0.2	12.8	53.3	33.4	0.016	2	220	440	—
Off Soma City (Matsukawaura)	L-1	37.820917°	140.960983°	7.7	241	22.8	2.1	2	2.717	9.2	13.3	43.7	20.2	6.7	6.9	0.41	19	45	98	—
	L-2	37.815467°	140.976333°	7.9	206	34.1	2.8	2	2.698	0	0.2	24.5	62.5	6.2	6.6	0.19	2	65	150	N.D.(<0.14)
	L-3	37.821600°	140.976300°	8.1	231	20.6	1.0	<1	2.778	0	0.9	60.1	36.4	0.7	1.9	0.29	2	11	24	—
Off Iwaki City (Hisanohama)	M-1	37.173483°	141.078583°	7.9	264	25.0	1.6	<1	2.815	0	0.2	1.7	92.9	2.7	2.5	0.15	2	140	290	—
	M-2	37.199467°	141.085133°	8.1	266	27.5	2.1	2	2.781	0.5	0.5	2.4	86.9	5.3	4.4	0.15	4.75	45	120	N.D.(<0.15)
	M-3	37.232133°	141.093083°	8.1	268	24.7	2.0	<1	2.775	1.5	0.9	3.3	88.4	3.1	2.8	0.17	4.75	35	99	—

Note) N.D. means to be below the detection limit.

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2013 October-November Survey)

Location		Sampling Date	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)	2013/10/11	Algae/plant	–	–	–	–	Attached algae	–	0.10	–	–	340	100	240	–
			Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii	131	0.10	Larva	–	26	7.8	18	–
			Arthropod	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops								
			Arthropod	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae								
			Arthropod	Malacostraca	Malacostraca	Atyidae	*Neocaridina sp.*	Neocaridina sp.	656	0.075	Imago	–	157	47	110	–
			Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	59	0.087	Imago	–	19	6.2	13	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	26	0.24	3-year-old fish	Some (details unknown)	36	12	24	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	7	0.12	3-year-old fish	Some (details unknown)	41	13	28	–
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	86	0.077	Mature fish	–	19	5.5	13	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout	2	0.12	1-year-old fish	Insects, fish eggs	34	11	23	–
			Vertebrata	Amphibia	Anura	Ranidae	*Rana porosa porosa*	Daruma pond frog	9	0.041	Imago	–	32	10	22	–
			Vertebrata	Amphibia	Anura	–	–	Tadpole	47	0.036	Larva	–	278	88	190	–
			Vertebrata	Amphibia	Caudata	Salamandridae	*Cynops pyrrhogaster*	Cynops pyrrhogaster	12	0.080	Imago	–	20	5.5	14	–
	B-2	2013/10/25	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	1	1.5	5-year-old fish	Some (details unknown)	50	15	35	0.32
		2013/11/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	1.5	8-year-old fish	Some (details unknown)	12	3.3	8.6	0.065
	B-3 (Surikami River)	2013/10/8	Algae/plant	–	–	–	–	Attached algae	–	0.039	–	–	144	44	100	–
			Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	358	0.038	Larva	–	118	37	81	–
			Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche sauteri*	Parastenopsyche sauteri								
			Arthropod	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	145	0.13	Larva	–	7.8	2.4	5.4	–
			Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	154	0.061	Larva	–	17	5.3	12	–
			Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii								
			Arthropod	Insecta	Odonata	Gomphidae	*Anisogomphus maacki*	Anisogomphus maacki								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius								
			Arthropod	Insecta	Odonata	Gomphidae	*Onychogomphus viridicostus*	Onychogomphus viridicostus								
			Arthropod	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae								
			Arthropod	Arachnida	Araneae	Nephilidae	*Nephila clavata*	Nephila clavata	56	0.047	Imago	–	146	46	100	–
			Arthropod	Malacostraca	Decapoda	Procambarus	*Procambarus clarkii*	Red swamp crawfish	4	0.030	Imago	–	33	10	23	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Phoxinus lagowskii steindachneri*	Amur Minnow	13	0.063	2-year-old fish	Some (details unknown)	34	10	24	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	11	0.13	1-year-old fish	Some (details unknown)	49	15	34	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Zacco platypus*	Zacco platypus	12	0.11	2-year-old fish	Some (details unknown)	23	6.3	17	–
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	37	0.042	Mature fish	–	18	6.1	12	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus keta*	Salmon	1	2.3	4-year-old fish	None	5.9	1.5	4.4	N.D.(<0.021)
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout (small)	17	0.46	1-year-old fish	Small shrimps	11	3.6	7.0	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout (medium)	3	0.61	2-year-old fish	Insects, fish eggs	55	16	39	–
			Vertebrata	Amphibia	Anura	Ranidae	*Rana rugosa*	Wrinkled Frog	6	0.033	Imago	–	40	13	27	–
			Vertebrata	Amphibia	Anura	–	–	Tadpole	112	0.057	Larva	–	302	92	210	–
			coarse particulate organic matters (CPOMs)	–	–	–	–	CPOMs(fallen leaves)	–	0.20	–	–	157	47	110	–

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2013 October-November Survey)

Location		Sampling Date	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	
Uda River	C-6	2013/10/12	Algae/plant	–	–	–	–	Attached algae	–	0.050	–	–	307	97	210	–
			Arthropod	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	25	0.012	Larva	–	30	9.4	21	–
			Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	112	0.041	Larva	–	25	8.1	17	–
			Arthropod	Malacostraca	Decapoda	Procambarus	*Procambarus clarkii*	Red swamp crawfish	5	0.085	Imago	–	37	11	26	–
			Arthropod	Malacostraca	Decapoda	Atyidae	Atyidae	Freshwater shrimp	894	0.14	Imago	–	50	16	34	–
			Arthropod	Malacostraca	Decapoda	Grapsidae	*Eriocheir japonica*	Japanese mitten crab	9	0.29	Imago	–	51	15	36	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus*	Pseudogobio esocinus	12	0.081	2-year-old fish	Some (details unknown)	16	4.9	11	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Nipponocypris temminckii*	Dark chub	45	0.24	3-year-old fish	Some (details unknown)	23	6.8	16	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	1	0.029	2-year-old fish	None	63	18	45	–
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius fluviatilis*	R. fluviatilis	13	0.084	Mature fish	Some (details unknown)	143	43	100	–
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius sp.*	R. sp. CB	34	0.094	Mature fish	Some (details unknown)	64	19	45	–
			Vertebrata	Amphibia	Anura	Ranidae	*Rana japonica*	Japanese Brown Frog	4	0.032	Imago	–	18	5.7	12	–
			coarse particulate organic matters	–	–	–	–	CPOMs(fallen leaves)	–	1.6	–	–	520	160	360	–

Location		Sampling Date	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	
Manoa River	D-1 D-2	2013/10/30	Arthropod	Malacostraca	Decapoda	Grapsidae	*Eriocheir japonica*	Japanese mitten crab	18	2.0	Imago	–	57	17	40	5.6
			Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	*Plecoglossus altivelis*	Sweetfish (natural upstream)	61	1.2	Mature fish	Some (details unknown)	61	19	42	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	12	0.56	1-year-old fish	Some (details unknown)	50	16	34	–
			Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	3	2.6	Mature fish	Some (details unknown)	1,860	560	1,300	0.72
	D-4a D-4b	2013/10/29	Algae/plant	–	–	–	–	Attached algae	–	0.016	–	–	460	150	310	–
			Streptophyta	Zygnematophyc	Zygnematales	Zygnemataceae	*Spirogyra sp.*	Spirogyra	–	0.099	–	–	N.D.	N.D.(<1.1)	N.D.(<0.86)	–
			Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	124	0.010	Larva	–	410	130	280	–
			Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche sauteri*	Parastenopsyche sauteri								
			Arthropod	Insecta	Megaloptera	Corydalidae	*Parachauliodes continentalis*	Parachauliodes continentalis Weele	70	0.036	Larva	–	67	19	48	–
			Arthropod	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis								
			Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii	38	0.023	Larva	–	85	25	60	–
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius nanus*	Davidius nanus								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius								
			Arthropod	Insecta	Odonata	Gomphidae	*Onychogomphus viridicostus*	Onychogomphus viridicostus								
			Arthropod	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae								
			Arthropod	Insecta	Odonata	Gomphidae	*Sinogomphus flavolimbatus*	Sinogomphus flavolimbatus								
			Arthropod	Insecta	Odonata	Gomphidae	*Stylogomphus suzukii*	Stylogomphus suzukii								
			Arthropod	Insecta	Odonata	Libellulidae	*Crocothemis servilia mariannae*	Scarlet Skimmer								
			Arthropod	Insecta	Odonata	Aeshnidae	*Anax nigrofasciatus nigrofasciatus*	Anax nigrofasciatus nigrofasciatus								
			Arthropod	Insecta	Odonata	Aeshnidae	*Anax parthenope julius*	Anax parthenope								
			Arthropod	Malacostraca	Decapoda	Procambarus	*Procambarus clarkii*	Red swamp crawfish	7	0.15	Imago	–	340	100	240	–
			Arthropod	Malacostraca	Decapoda	Atyidae	Atyidae	Freshwater shrimp	404	0.037	Imago	–	172	52	120	–
			Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	36	0.064	Imago	–	69	22	47	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Zacco platypus*	Zacco platypus	15	0.16	2-year-old fish	Some (details unknown)	70	21	49	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus keta*	Salmon	1	2.5	4-year-old fish	None	N.D.	N.D.(<0.66)	N.D.(<0.64)	N.D.(<0.019)
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius sp.*	R. sp. CB	11	0.029	Mature fish	–	204	64	140	–
			Vertebrata	Amphibia	Anura	–	–	Tadpole	7	0.011	Larva	–	460	140	320	–

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2013 October-November Survey)

Location		Sampling Date	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	**E-1 E-2a E-2b**	**2013/10/14**	Algae/plant	–	–	–	–	Attached algae	–	0.053	–	–	1,740	540	1,200	–
			Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	109	0.018	Larva	–	1,100	330	770	–
			Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche sauteri*	Parastenopsyche sauteri								
			Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	157	0.057	Larva	–	221	71	150	–
			Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii								
			Arthropod	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius nanus*	Davidius nanus								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius								
			Arthropod	Insecta	Odonata	Gomphidae	*Onychogomphus viridicostus*	Onychogomphus viridicostus								
			Arthropod	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae								
			Arthropod	Insecta	Odonata	Libellulidae	*Orthetrum albistylum speciosum*	Common skimmer								
			Arthropod	Insecta	Odonata	Aeshnidae	*Anax parthenope julius*	Anax parthenope								
			Arthropod	Malacostraca	Decapoda	Procambarus	*Procambarus clarkii*	Red swamp crawfish	3	0.077	Imago	–	330	100	230	–
			Arthropod	Malacostraca	Decapoda	Atyidae	Atyidae	Freshwater shrimp	408	0.072	Imago	–	430	130	300	–
			Arthropod	Malacostraca	Decapoda	Grapsidae	*Eriocheir japonica*	Japanese mitten crab	10	0.30	Imago	–	301	91	210	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	20	0.070	Yearling fish	Some (details unknown)	159	49	110	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus*	Pseudogobio esocinus	4	0.065	1-year-old fish	Some (details unknown)	138	42	96	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	13	0.062	Yearling fish	Some (details unknown)	238	68	170	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Zacco platypus*	Zacco platypus	32	0.21	2-year-old fish	Some (details unknown)	203	63	140	–
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius fluviatilis*	R. fluviatilis	28	0.18	Mature fish	–	660	200	460	–
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius sp.*	R. sp. CB	21	0.077	Mature fish	–	370	110	260	–
			Amphibia	Amphibia	Anura	Ranidae	*Rana catesbeiana*	American Bullfrog (tadpole)	5	0.042	Larva	–	1,600	500	1,100	–
		2013/11/5	Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	*Anguilla japonica*	Japanese eel	2	0.50	Mature fish	Crustacean fragments	400	120	280	–
		2013/11/6	Vertebrata	Osteichthyes	Siluriformes	Siluridae	*Silurus asotus*	Amur catfish	3	1.9	Mature fish	None	450	140	310	0.77

Location		Sampling Date	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	
Ota River	F-1	2013/10/13	Algae/plant	–	–	–	–	Attached algae	–	0.055	–	–	8,700	2,700	6,000	–
			Streptophyta	Zygnematophyc	Zygnematales	Zygnemataceae	*Spirogyra sp.*	Spirogyra	–	0.036	–	–	229	69	160	–
			Bryopsida	Sphagnopsida	Sphagnales	Sphagnaceae	*Sphagnum sp.*	Sphagnum	–	0.044	–	–	1,750	550	1,200	–
			Angiospermae	Monocotyledoneae	Najadales	Potamogetonacea	*Potamogeton pusillus*	Small pondweed	–	0.034	–	–	73	23	50	–
			Arthropod	Insecta	Megaloptera	Corydalidae	*Parachauliodes continentalis*	Parachauliodes continentalis Weele	54	0.026	Larva	–	308	98	210	–
			Arthropod	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis								
			Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	109	0.027	Larva	–	660	220	440	–
			Arthropod	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius nanus*	Davidius nanus								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius								
			Arthropod	Insecta	Odonata	Gomphidae	*Nihonogomphus viridis*	Nihonogomphus viridis								
			Arthropod	Insecta	Odonata	Gomphidae	*Onychogomphus viridicostus*	Onychogomphus viridicostus								
			Arthropod	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae								
			Arthropod	Insecta	Odonata	Gomphidae	*Stylogomphus suzukii*	Stylogomphus suzukii								
			Arthropod	Insecta	Odonata	Aeshnidae	*Boyeria maclachlani*	Boyeria maclachlani								
			Arthropod	Insecta	Odonata	Aeshnidae	*Planaeschna milnei*	Planaeschna milnei								
			Arthropod	Malacostraca	Decapoda	Atyidae	Atyidae	Freshwater shrimp	414	0.078	Imago	–	1,580	480	1,100	–
			Arthropod	Malacostraca	Decapoda	Grapsidae	*Eriocheir japonica*	Japanese mitten crab	4	0.095	Imago	–	1,390	420	970	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	3	0.083	5-year-old fish	Some (details unknown)	910	270	640	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	23	0.043	1-year-old fish	Some (details unknown)	690	200	490	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Zacco platypus*	Zacco platypus	6	0.038	2-year-old fish	–	980	300	680	–
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius fluviatilis*	R. fluviatilis	23	0.073	Mature fish	Some (details unknown)	2,870	870	2,000	–
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius sp.*	R. sp. CB	11	0.021	Mature fish	Some (details unknown)	1,770	570	1,200	–
		2013/11/21	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	5.8	8-year-old fish	Some (details unknown)	500	150	350	1.1
	F-5 Lower Reaches	2013/11/12	Vertebrata	Osteichthyes	Anguilliformes	Anguillidae	*Anguilla japonica*	Japanese eel	4	0.97	Mature fish	Crustacean fragments	630	190	440	–

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2013 October-November Survey)

Location		Sampling Date	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	G-1 G-2 G-3	2013/10/30	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	1	1.1	5-year-old fish	Some (details unknown)	328	98	230	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	3	0.63	3-year-old fish	Some (details unknown)	650	200	450	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Seema	1	0.73	3-year-old fish	Insects	490	150	340	–
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	2	1.2	5-year-old fish	Small fish	1,580	480	1,100	–
	G-4	2013/10/15	Algae/plant	–	–	–	–	Attached algae	–	0.082	–	–	1,830	530	1,300	–
			Algae/plant	–	–	–	–	Floating algae	–	0.044	–	–	38	11	27	–
			Arthropod	Insecta	Megaloptera	Corydalidae	*Protohermes grandis*	Protohermes grandis	94	0.064	Larva	–	80	24	56	–
			Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	376	0.11	Larva	–	99	31	68	–
			Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii								
			Arthropod	Insecta	Odonata	Gomphidae	*Asiagomphus melaenops*	Asiagomphus melaenops								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius fujiama*	Davidius fujiama								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius nanus*	Davidius nanus								
			Arthropod	Insecta	Odonata	Gomphidae	*Davidius sp.*	Davidius								
			Arthropod	Insecta	Odonata	Gomphidae	*Nihonogomphus viridis*	Nihonogomphus viridis								
			Arthropod	Insecta	Odonata	Gomphidae	*Sieboldius albardae*	Sieboldius albardae								
			Arthropod	Insecta	Odonata	Gomphidae	*Sinogomphus flavolimbatus*	Sinogomphus flavolimbatus								
			Arthropod	Insecta	Odonata	Gomphidae	*Stylogomphus suzukii*	Stylogomphus suzukii								
			Arthropod	Insecta	Odonata	Aeshnidae	*Boyeria maclachlani*	Boyeria maclachlani								
			Arthropod	Insecta	Odonata	Aeshnidae	*Planaeschna milnei*	Planaeschna milnei								
			Arthropod	Insecta	Odonata	Libellulidae	*Epiophlebia superstes*	Epiophlebia superstes								
			Arthropod	Malacostraca	Decapoda	Atyidae	Atyidae	Freshwater shrimp	165	0.036	Imago	–	216	66	150	–
			Mollusca	Gastropoda	Sorbeoconcha	Pleuroceridae	*Semisulcospira libertina*	Semisulcospira libertina	47	0.047	Imago	–	70	22	48	–
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Rhinogobius sp.*	Rhinogobius	37	0.069	1-year-old fish	–	145	45	100	–
			coarse particulate organic matters (CPOMs)	–	–	–	–	CPOMs(fallen leaves)	–	0.38	–	–	500	160	340	–

Location		Sampling Date	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 Akimoto	H-1 H-2 H-3	2013/10/9	Algae/plant	–	–	–	–	Floating algae	–	0.046	–	–	22	6.0	16	–
			Angiospermae	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	*Elodea nuttallii*	Western Waterweed	–	0.15	–	–	12	3.8	7.7	–
			Arthropod	Insecta	Trichoptera	Stenopsychidae	*Stenopsyche marmorata*	Stenopsyche marmorata	87	0.014	Larva	–	15	4.3	11	–
			Arthropod	Insecta	Plecoptera	Perlidae	*Acroneuria sp.*	Acroneuria	145	0.0099	Larva	–	N.D.	N.D.(<4.8)	N.D.(<5.5)	–
			Arthropod	Insecta	Plecoptera	Perlidae	*Calineuria sp.*	Calineuria								
			Arthropod	Insecta	Plecoptera	Perlidae	*Kamimuria quadrata*	Kamimuria quadrata								
			Vertebrata	Osteichthyes	Scorpaeniformes	Cottidae	*Cottus pollux*	Japanese fluvial sculpin	39	0.11	1-year-old fish	Some (details unknown)	28	8.9	19	–
			Vertebrata	Osteichthyes	Osmeriformes	Osmeridae	*Hypomesus nipponensis*	Japanese smelt	133	0.62	Mature fish	None	41	13	28	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii	9	1.8	5-year-old fish	Some (details unknown)	89	27	62	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	33	2.0	4-year-old fish	Some (details unknown)	65	19	46	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Yamame trout	1	0.026	1-year-old fish	Insects	61	18	43	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Oncorhynchus masou*	Seema	2	1.5	3-year-old fish	Some (details unknown)	77	23	54	0.33
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	2	0.50	Mature fish	Some (details unknown)	55	15	40	–
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	15	3.6	2-year-old fish	Small fish	93	27	66	1.0
			Vertebrata	Amphibia	Anura	Ranidae	*Rana ornativentris*	Montane brown frog	5	0.061	Imago	–	58	17	41	–
			coarse particulate organic matters (CPOMs)	–	–	–	–	CPOMs(fallen leaves)	–	0.61	–	–	19	6.3	13	–
		2013/11/20	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Cyprinus carpio*	Common carp	1	2.2	7-year-old fish	Some (details unknown)	35	10	25	1.0
	H-4 (Near the dam)	2013/10/9	Arthropod	Malacostraca	Decapoda	Astacidae	*Pacifastacus leniusculus trowbridgii*	Signal crayfish	55	2.5	Imago	–	55	17	38	12

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2013 October-November Survey)

Location		Sampling Date	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 Inawashiro	I-1 I-2 (north lakeside)	2013/11/20	Arthropod	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	168	0.12	Imago	–	13	3.8	9.5	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii(medium)	136	0.87	2-year-old fish	–	25	8.0	17	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii(large)	Many	2.4	5-year-old fish	Some (details unknown)	35	10	25	0.51
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	2	1.5	4-year-old fish	Some (details unknown)	34	11	23	0.43
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	30	1.5	3-year-old fish	Some (details unknown)	86	27	59	–
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	393	0.84	Mature fish	–	2.6	0.81	1.8	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	3	2.6	3-year-old fish	None	170	50	120	0.14
			Vertebrata	Osteichthyes	Perciformes	Centrarchidae	*Micropterus dolomieu*	Small mouth bass	3	1.4	3-year-old fish	None	74	22	52	0.27
		2013/10/10	coarse particulate organic matters (CPOMs)	–	–	–	–	CPOMs(fallen leaves)	–	0.30	–	–	62	20	42	–
	J-1 (south lakeside)	2013/10/5	Arthropod	Malacostraca	Decapoda	Palaemonidae	*Palaemon paucidens*	Common prawn	355	0.054	Imago	–	6.2	2.2	4.0	–
		2013/10/10	Algae/plant	–	–	–	–	Floating algae	–	0.045	–	–	48	15	33	–
			Angiospermae	Monocotyledoneae	Hydrocharitales	Hydrocharitaceae	*Elodea nuttallii*	Western Waterweed	–	0.073	–	–	1.1	N.D.(<0.91)	1.1	–
			Angiospermae	Dicotyledoneae	Nymphaeales	Nymphaeaceae	*Nuphar japonicum*	Cow lily	–	0.35	–	–	2.7	N.D.(<0.92)	2.7	–
			Arthropod	Insecta	Odonata	Corduliidae	*Macromia amphigena amphigena*	Macromia amphigena	14	0.016	Larva	–	N.D.	N.D.(<2.7)	N.D.(<2.3)	–
			Arthropod	Insecta	Odonata	Cordulegastridae	*Anotogaster sieboldii*	Anotogester sieboldii								
			Arthropod	Insecta	Odonata	Aeshnidae	*Anax nigrofasciatus nigrofasciatus*	Anax nigrofasciatus nigrofasciatus								
			Arthropod	Insecta	Odonata	Aeshnidae	*Anax parthenope julius*	Anax parthenope								
			Mollusca	Gastropoda	Architaenioglos	Viviparidae	*Bellamya chinensis laeta*	Bellamya chinensis laeta	59	0.37	Imago	–	4.2	1.1	3.1	–
			Vertebrata	Osteichthyes	Cypriniformes	Cobitidae	*Misgurnus anguillicaudatus*	Oriental weatherfish	212	0.18	Immature fish	–	1.7	N.D.(<1.0)	1.7	–
			Vertebrata	Amphibia	Anura	Ranidae	*Rana rugosa*	Wrinkled Frog	14	0.090	Imago	–	5.7	1.8	3.9	–
			Vertebrata	Amphibia	Anura	–	–	Tadpole	71	0.046	Larva	–	30	9.9	20	–
		2013/10/20	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii(small)	70	0.46	Yearling fish	Some (details unknown)	24	7.8	16	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Carassius auratus*	Carassius auratus langsdorfii(large)	5	1.7	3-year-old fish	Some (details unknown)	40	12	28	0.51
		2013/10/25	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Pseudogobio esocinus*	Pseudogobio esocinus	57	0.89	2-year-old fish	Some (details unknown)	23	7.3	16	–
			Vertebrata	Osteichthyes	Salmoniformes	Salmonidae	*Salvelinus leucomaenis*	Char	2	1.9	3-year-old fish	None	215	65	150	0.11
		2013/10/26	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Hemibarbus barbus*	Hemibarbus barbus	Many	1.0	1-year-old fish	Some (details unknown)	44	13	31	–
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	*Tribolodon hakonensis*	Japanese dace	37	1.8	5-year-old fish	Some (details unknown)	124	37	87	–

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive Material Monitoring in the Water Environment (2013 October-November Survey)

Location		Sampling Date	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 Abukuma River	Surrounding water area off the mouth of the Abukuma River	2013/10/29	Arthropod	Malacostraca	Malacostraca	Penaeidae	*Trachysalambria curvirostris*	Southern rough shrimp	32	0.30	Imago	—	1.3	0.47	0.87	—
			Arthropod	Malacostraca	Decapoda	Portunidae	*Ovalipes punctatus*	Ovalipes punctatus	5	1.0	Imago	—	0.66	N.D.(<0.40)	0.66	—
			Vertebrata	Osteichthyes	Pleuronectiform	Paralichthyidae	*Paralichthys olivaceus*	Bastard halibut	6	1.7	3-year-old fish	Small fish	1.8	0.59	1.2	N.D.(<0.019)
			Vertebrata	Osteichthyes	Pleuronectiform	Pleuronectidae	*Pleuronectes yokohamae*	Marbled sole	5	2.1	3-year-old fish	Hairy rope	3.3	0.80	2.5	N.D.(<0.019)
			Vertebrata	Osteichthyes	Scorpaeniforme	Triglidae	*Chelidonichthys spinosus*	Gurnard	9	2.1	2-year-old fish	Small shrimps	1.9	0.48	1.4	N.D.(<0.018)
			Vertebrata	Osteichthyes	Perciformes	Sparidae	*Evynnis japonica*	Crimson sea-bream	7	1.9	4-year-old fish	Small shrimps, small fish	2.0	0.59	1.4	N.D.(<0.020)

Location		Sampling Date	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	L-1 L-2 L-3 (Matsukawaura)	2013/10/30	Algae/plant	—	—	—	—	Floating algae	—	0.043	—	—	33	9.8	23	—
			Chlorophyta	Ulvophyceae	Ulvales	Ulvaceae	*Ulva pertusa*	Ulva pertusa	—	0.16	—	—	1.5	N.D.(<0.68)	1.5	—
			Angiospermae	Monocotyledoneae	Najadales	Zosteraceae	*Zostera marina*	eel grass	—	0.24	—	—	3.3	1.1	2.2	—
			Arthropod	Malacostraca	Mysida	Mysidae	Mysidae	Mysidae	Many	0.032	Imago	—	1.7	N.D.(<1.4)	1.7	—
			Arthropod	Malacostraca	Decapoda	Palaemonidae	*Palaemon sp.*	Palaemon	92	0.028	Imago	—	6.5	2.4	4.1	—
			Arthropod	Malacostraca	Malacostraca	Varunidae	*Hemigrapsus sp.*	Hemigrapsus	70	0.040	Imago	—	22	6.9	15	—
			Annelida	Polychaeta	—	—	Polychaeta	polychaetes	41	0.0082	Imago	—	16	6.9	8.7	—
			Mollusca	Bivalvia	Pterioida	Ostreidae	*Crassostrea gigas*	Japanese oyster (molluscous part)	16	0.22	Imago	—	3.4	0.91	2.5	—
			Mollusca	Bivalvia	Veneroida	Veneridae	*Ruditapes philippinarum*	Japanese littleneck (molluscous part)	45	0.26	Imago	—	5.2	1.5	3.7	—
			Vertebrata	Osteichthyes	Perciformes	Gobiidae	*Acanthogobius flavimanus*	Yellowfin Goby	10	0.088	Yearling fish	Small crustaceans	5.7	1.8	3.9	—
			Vertebrata	Osteichthyes	Mugiliformes	Mugilidae	*Mugil cephalus*	Flathead mullet	15	0.23	Yearling fish	None	15	4.3	11	—

Location		Sampling Date	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 Iwaki City	M-1 M-2 M-3 (Hisanohama)	2013/10/31	Vertebrata	Osteichthyes	Marbled rockfis	Gurnard	*Lepidotrigla microptera*	Searobin	23	1.9	Mature fish	Small shrimps	4.4	1.4	3.0	—
			Vertebrata	Osteichthyes	Pleuronectiform	Paralichthyidae	*Paralichthys olivaceus*	Bastard halibut	2	1.4	3-year-old fish	None	8.1	2.4	5.7	—
			Vertebrata	Osteichthyes	Pleuronectiform	Pleuronectidae	*Pleuronectes yokohamae*	Marbled sole	2	1.4	4-year-old fish	None	21	6.4	15	—
			Vertebrata	Cartilage fish	Rajiformes	Rajidae	*Okamejei kenojei*	Skate	5	3.1	Mature fish	Small shrimps	55	16	39	0.29
			Vertebrata	Osteichthyes	Perciformes	Sparidae	*Evynnis japonica*	Crimson sea-bream	5	1.1	4-year-old fish	Crustacean fragments	8.4	3.0	5.4	—
			Vertebrata	Osteichthyes	Zeiformes	Zeidae	*Zeus faber*	John dory	4	1.5	Mature fish	Small fish	2.1	0.55	1.5	—
	M-4 (Hisanohama)		Brown algae	Phaeophyceae	Laminariales	Lessoniaceae	*Eisenia bicyclis*	Eisenia bicyclis	—	0.55	—	—	1.8	0.60	1.2	—
			Echinoderm	Sea Urchin	Loxechinus	Strongylocentrotus	*Strongylocentrotus nudus*	Northern sea urchin	10	0.97	Imago	—	5.1	1.5	3.6	8.5
			Mollusca	Gastropoda	Archaeogastrop	Haliotis asinina	*Haliotis discus*	abalone(molluscan body)	5	0.49	Imago	—	2.4	0.71	1.7	—

Note) N.D. means to be below the detection limit.

＊ However, for certain described for the gastric contents in the Notices, on the removal of the stomach contents, were subjected to analyze the entire amount.