

○ Results (water)

Location				FY2012 Winter 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)	37.621000°	140.521783°	7.5	2.0	3.8	13.1	19.9	0.10	1.4	3	2.5	0.066	0.11	0.0013
	A-1 (Deep layer)			7.5	2.1	4.2	12.9	20.2	0.10	1.4	4	2.4	0.017	0.036	-
	A-2	37.567333°	140.394567°	7.5	0.6	2.3	12.9	10.4	0.05	0.6	1	0.8	0.011	0.020	-
	B-1	37.784333°	140.492417°	8.1	1.6	3.7	15.0	21.6	0.11	1.4	4	2.5	0.023	0.039	-
	B-2	37.812100°	140.505783°	8.2	1.3	3.6	14.6	20.1	0.10	1.3	6	3.2	0.023	0.041	-
Uda River	B-3	37.818200°	140.467883°	8.6	0.9	3.5	12.9	10.9	0.05	1.0	1	0.9	0.0056	0.0093	-
	C-1	37.795333°	140.745917°	7.3	0.7	2.0	12.0	10.4	0.05	0.5	<1	<0.1	0.020	0.036	-
	C-2	37.771750°	140.729033°	7.3	0.8	3.3	10.7	9.0	0.04	1.2	4	0.2	0.048	0.079	-
	C-3	37.779183°	140.803967°	7.5	0.9	2.8	12.2	9.9	0.05	0.9	<1	0.1	0.066	0.11	-
	C-4	37.768667°	140.844283°	7.6	0.8	3.7	11.8	10.2	0.05	1.2	31	40.2	0.084	0.14	0.0011
	C-5	37.764600°	140.860300°	7.6	0.7	3.0	12.4	9.4	0.04	0.8	1	0.1	0.016	0.028	-
Mano River	C-6	37.776383°	140.887717°	7.7	0.8	2.3	12.2	9.8	0.05	0.9	<1	<0.1	0.022	0.039	-
	D-1	37.733100°	140.925400°	7.5	<0.5	2.7	12.3	9.8	0.05	1.0	<1	0.7	0.041	0.066	0.0014
	D-2	37.709450°	140.956583°	7.2	<0.5	2.6	12.0	11.6	0.06	1.0	1	0.8	0.022	0.040	-
	D-3	37.705100°	140.962250°	7.1	<0.5	2.8	11.9	12.3	0.06	0.9	2	1.4	0.027	0.045	-
	D-4 a	37.730833°	140.908050°	7.4	0.6	2.8	10.6	9.8	0.05	0.9	<1	0.8	0.050	0.080	-
	D-4 b	37.731217°	140.909633°	7.4	<0.5	2.6	11.2	9.8	0.05	0.9	<1	0.8	0.050	0.086	-
Niida River	D-5	37.721383°	140.888883°	7.5	<0.5	3.1	11.8	8.8	0.04	1.1	<1	0.8	0.078	0.13	-
	E-1	37.660933°	140.911450°	7.4	<0.5	4.0	12.5	7.3	0.03	0.8	2	0.7	0.083	0.14	0.0029
	E-2 a	37.664000°	140.944717°	7.3	<0.5	4.7	12.5	7.7	0.04	1.1	1	1.3	0.11	0.19	-
	E-2 b	37.663450°	140.945150°	7.4	<0.5	4.4	12.4	7.7	0.04	1.4	<1	1.2	0.096	0.16	-
	E-3	37.644400°	141.001783°	7.3	1.2	3.6	11.3	9.8	0.05	1.3	5	1.3	0.097	0.16	-
Ota River	E-4	37.648467°	140.962950°	7.5	<0.5	4.3	12.4	8.1	0.04	1.1	2	1.1	0.089	0.15	-
	E-5	37.665233°	140.916883°	7.5	<0.5	2.7	13.0	7.3	0.03	1.1	<1	0.7	0.081	0.14	-
	F-1	37.597533°	140.925167°	7.4	0.5	2.4	12.3	6.3	0.03	0.7	<1	0.6	0.21	0.36	-
	F-2	37.601617°	140.942283°	7.1	<0.5	2.7	11.7	7.1	0.03	0.6	<1	0.4	0.17	0.29	0.0048
	F-3	37.604517°	140.963617°	7.4	<0.5	1.7	12.0	7.2	0.03	0.6	<1	0.3	0.21	0.36	-
	F-4	37.606967°	140.971983°	6.7	<0.5	1.2	9.7	7.8	0.04	0.3	<1	0.2	0.093	0.16	-
Lake Hayama (Mano Dam)	F-5	37.602183°	140.986750°	7.0	0.6	1.9	10.6	8.9	0.04	0.6	2	1.5	0.16	0.29	-
	F-6	37.595333°	141.012300°	7.0	0.6	1.9	11.1	419.0	2.06	1.0	3	2.5	0.14	0.25	-
	G-1 (Surface layer)	37.732050°	140.812717°	7.2	<0.5	3.5	10.4	7.0	0.04	1.5	2	1.4	0.064	0.11	-
	G-1 (Deep layer)			7.3	<0.5	3.8	10.4	7.1	0.03	1.5	2	1.6	0.070	0.12	0.0025
	G-3 (Surface layer)	37.730167°	140.830667°	7.3	0.6	3.8	9.8	9.0	0.04	1.6	2	1.5	0.069	0.12	-
	G-3 (Deep layer)			7.3	<0.5	4.1	10.0	7.6	0.04	1.7	2	1.6	0.073	0.13	-
G-5 (Surface layer)	37.734117°	140.808833°	7.4	<0.5	3.9	10.3	7.1	0.03	1.6	2	1.6	0.091	0.16	-	
G-5 (Deep layer)			7.4	<0.5	3.6	9.7	7.2	0.03	1.5	2	1.9	0.092	0.16	-	
Lake Akimoto	H-1 (Surface layer)	37.657533°	140.126433°	7.0	0.9	3.4	10.8	5.0	0.03	1.3	3	1.9	0.019	0.031	-
	H-1 (Deep layer)			7.2	0.6	3.4	11.0	5.1	0.03	1.3	2	0.8	0.019	0.032	-
	H-3 (Surface layer)	37.665333°	140.132933°	7.1	0.9	3.5	10.6	5.2	0.03	1.4	2	0.6	0.018	0.029	-
	H-3 (Deep layer)			7.1	0.7	3.6	10.1	5.2	0.03	1.3	2	0.5	0.026	0.046	0.0012
	H-5 (Surface layer)	37.652333°	140.156833°	7.1	1.4	3.7	11.0	5.2	0.03	1.8	3	0.3	0.027	0.041	-
H-5 (Deep layer)	7.1			1.0	4.0	11.2	5.2	0.03	1.6	3	0.3	0.047	0.080	-	
Lake Inawashiro	I-1 (Surface layer)	37.504683°	140.114333°	6.6	0.6	1.6	10.9	11.5	0.05	1.0	3	1.4	0.023	0.036	-
	I-1 (Deep layer)			6.5	<0.5	1.5	11.5	11.4	0.05	0.6	4	0.7	0.021	0.037	0.00095
	I-3 (Surface layer)	37.507700°	140.026250°	6.6	0.7	1.2	11.3	11.4	0.05	0.6	<1	1.2	0.020	0.035	-
	I-3 (Deep layer)			6.6	0.5	1.2	10.8	11.5	0.06	0.5	2	0.6	0.022	0.043	-
	J-1 (Surface layer)	37.420333°	140.100833°	6.6	1.2	2.1	11.0	11.5	0.06	0.4	<1	0.7	0.023	0.041	-
	J-1 (Deep layer)			6.6	0.7	1.9	11.1	11.6	0.06	0.7	1	0.5	0.019	0.035	-
Off the mouth of the Abukuma River (Off Watari Town)	K-2 (Surface layer)	38.045517°	140.940133°	8.1	0.6	1.8	8.8	4,440	31.64	0.8	2	1.5	0.012	0.019	-
	K-2 (Deep layer)			8.1	0.5	2.0	8.8	5,000	33.53	0.9	1	0.9	0.019	0.035	0.0016
Off Soma City (Matsukawaura)	L-2	37.815517°	140.976333°	8.0	0.6	1.9	9.2	4,870	32.57	0.5	4	1.2	0.017	0.029	0.0016
	L-3	37.821683°	140.976500°	8.1	<0.5	2.6	9.1	4,930	32.84	0.8	5	1.2	0.019	0.030	-
Off Iwaki City (Hisanohama)	M-2 (Surface layer)	37.199600°	141.085300°	8.1	<0.5	0.8	8.3	5,020	34.04	0.8	<1	0.4	0.079	0.017	-
	M-2 (Deep layer)			8.1	<0.5	1.4	8.3	5,030	33.82	0.9	4	1.3	0.025	0.044	0.0180

Note) N.D. Shows that it is less than the detection limit.

o Results (sediments)

	Location		FY2012 Winter 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								Cs-134 (Bq/kg-dry)	Cs-137 (Bq/kg-dry)	Sr-90 (Bq/kg-dry)	
									Gravel (2-75mm)	Coarse sand (0.85-2mm)	Medium sand (0.25-0.85mm)	Fine sand (0.075-0.25mm)	Silt (0.005-0.075mm)	Clay (Less than 0.005mm)	Median grain diameter (mm)	Maximum grain diameter (mm)				
Abukuma River System	A-1	37.621000°	140.521783°	7.6	68	48.7	5.8	12	2.647	-	0.1	26.2	40.8	18.9	14.0	0.170	2.00	590	1,100	-
	A-2	37.567333°	140.394567°	7.0	106	31.7	4.5	6	2.722	17.1	15.5	40.9	9.6	6.3	10.6	0.520	26.50	590	1,100	-
	B-1	37.784333°	140.492417°	7.6	169	35.4	2.7	3	2.707	10.2	4.3	29.8	36.0	9.8	9.9	0.230	19.00	500	810	-
	B-2	37.812100°	140.505783°	7.4	238	29.8	1.7	1	2.671	0.8	4.7	73.3	18.2	1.5	1.5	0.370	9.50	240	460	-
	B-3	37.818200°	140.467883°	7.2	267	16.4	1.0	<1	2.645	52.6	26.1	16.8	2.0	0.8	1.7	2.200	19.00	78	130	-
Uda River	C-1	37.795333°	140.745917°	6.9	250	30.1	4.0	1	2.734	38.8	33.5	24.4	2.2	1.1	1.1	1.500	19.00	580	1,000	-
	C-2	37.771750°	140.729033°	6.6	159	37.0	7.0	7	2.669	25.7	17.2	13.7	4.8	15.6	23.0	0.550	19.00	180	350	-
	C-4	37.768667°	140.844283°	7.2	259	17.2	1.5	<1	2.705	61.1	23.0	14.4	1.0	0.5	0.5	2.800	19.00	480	860	0.90
	C-5	37.764600°	140.860300°	7.0	318	23.0	1.9	1	2.695	14.7	57.2	57.2	4.9	2.4	2.4	1.200	19.00	370	680	-
	C-6	37.776383°	140.887717°	7.2	366	28.0	2.0	1	2.737	6.0	18.9	56.0	15.4	3.7	3.7	0.490	19.00	420	730	-
Mano River	D-1	37.733100°	140.925400°	7.3	328	26.4	2.4	2	2.703	14.2	12.1	60.1	8.9	0.5	4.2	0.510	19.00	770	1,300	2.1
	D-2	37.709450°	140.956583°	7.2	306	16.8	1.4	1	2.698	49.3	29.0	17.5	2.9	0.9	0.9	2.000	26.50	490	810	-
	D-3	37.705100°	140.962250°	7.1	326	15.7	1.6	1	2.679	44.8	14.0	30.9	7.3	0.5	2.5	1.300	19.00	140	230	-
	D-4 a	37.730833°	140.908050°	7.2	352	20.4	2.1	1	2.701	38.6	25.8	24.9	5.4	1.0	4.3	1.400	19.00	810	1,400	-
	D-5	37.721383°	140.888883°	7.4	324	29.5	2.2	1	2.689	0.8	6.9	71.8	2.2	9.4	6.3	0.440	4.75	700	1,200	-
Niida River	E-1	37.660933°	140.911450°	7.3	352	17.5	0.9	1	2.660	55.0	32.5	10.5	0.9	0.6	0.5	2.300	19.00	930	1,700	0.32
	E-2 a	37.664000°	140.944717°	7.1	358	46.3	7.7	18	2.578	36.4	6.2	12.4	16.0	12.6	16.4	0.320	19.00	3,500	6,000	-
	E-3	37.644400°	141.001783°	7.2	338	19.0	1.9	2	2.655	29.4	36.9	17.7	5.2	5.3	5.5	1.300	19.00	1,000	1,800	-
	E-4	37.648467°	140.962950°	7.0	254	28.0	2.7	8	2.649	32.7	7.4	29.5	19.4	5.6	5.4	0.520	19.00	1,800	3,000	-
	E-5	37.665233°	140.916883°	7.1	344	23.5	1.2	1	2.647	11.7	43.4	40.4	2.6	0.9	1.0	0.920	19.00	1,700	2,900	-
Ota River	F-1	37.597533°	140.925167°	6.7	362	24.8	2.4	2	2.642	22.3	34.3	26.6	8.2	3.8	4.8	1.000	19.00	5,600	10,000	-
	F-2	37.601617°	140.942283°	6.5	363	18.4	2.0	1	2.622	55.1	24.3	13.5	1.7	2.1	3.3	2.500	19.00	5,300	9,300	0.45
	F-3	37.604517°	140.963617°	7.0	364	19.9	1.2	2	2.626	61.3	21.1	11.1	2.5	1.9	1.9	3.200	26.50	4,200	7,300	-
	F-4	37.606967°	140.971983°	6.9	377	18.0	0.6	<1	2.632	27.0	31.0	35.2	5.6	1.2	1.2	1.000	19.00	1,600	2,800	-
	F-5	37.602183°	140.986750°	6.5	416	15.6	0.6	<1	2.658	43.4	27.1	26.7	1.7	1.1	1.1	1.600	26.50	460	840	-
Lake Hayama (Mano Dam)	G-1	37.732050°	140.812717°	6.8	117	48.7	20.6	62	2.577	1.5	0.7	5.9	36.6	25.3	30.0	0.051	4.75	7,700	14,000	7.7
	G-2	37.726733°	140.822333°	6.8	22	73.9	15.7	44	2.511	2.3	1.0	1.8	1.7	43.4	49.8	0.005	4.75	4,700	8,000	-
	G-3	37.730167°	140.830667°	6.9	43	42.6	6.1	16	2.636	12.7	11.7	23.4	16.8	15.3	20.1	0.220	9.50	1,600	2,900	-
	G-4	37.738200°	140.803450°	7.1	189	25.5	2.6	2	2.670	15.8	24.7	39.1	10.7	4.7	5.0	0.670	19.00	2,000	3,400	-
	G-5	37.734117°	140.808833°	6.9	53	75.4	20.0	71	2.389	-	0.1	0.2	5.2	42.7	51.8	0.004	2.00	16,000	28,000	-
Lake Akimoto	H-1	37.657533°	140.126433°	6.6	220	66.5	8.0	19	2.582	-	0.0	0.1	0.1	56.9	42.9	0.007	2.00	360	630	-
	H-2	37.661550°	140.122550°	6.5	216	76.7	13.4	52	2.441	0.2	0.5	1.3	2.4	65.6	30.0	0.013	4.75	660	1,100	-
	H-3	37.665333°	140.132933°	6.4	108	72.0	14.0	51	2.461	-	0.1	0.2	6.8	73.1	19.8	0.015	2.00	1,200	2,100	2.0
	H-4	37.655067°	140.118050°	6.6	87	71.0	7.9	18	2.584	-	0.2	0.3	0.2	61.6	37.7	0.009	2.00	77	150	-
	H-5	37.652333°	140.156833°	6.4	158	52.4	7.0	23	2.636	-	0.4	11.6	36.8	29.9	21.3	0.070	2.00	620	1,100	-
Lake Inawashiro	I-1	37.504683°	140.114333°	6.7	13	78.5	11.3	30	2.571	-	0.4	5.9	50.4	25.0	18.3	0.110	2.00	2,200	3,800	0.50
	I-2	37.499467°	140.140883°	6.6	32	46.9	3.9	10	2.638	2.6	10.9	8.8	44.5	15.1	18.1	0.120	9.50	610	1,100	-
	I-3	37.507700°	140.026250°	6.7	103	73.1	10.9	28	2.568	-	0.0	0.8	15.5	41.1	42.6	0.009	2.00	52	95	-
	I-4	37.515967°	140.109167°	6.3	324	22.2	1.9	1	2.674	15.2	20.4	56.7	5.9	1.8	1.8	0.660	19.00	42	77	-
	J-1	37.420333°	140.100833°	6.6	181	33.1	1.9	2	2.647	0.4	3.1	82.1	11.5	2.9	2.9	0.340	9.50	66	100	-
Off the mouth of the Abukuma River (Off Watari Town)	K-1	38.045683°	140.928233°	7.4	242	26.2	1.7	<1	2.716	-	0.7	42.3	54.0	1.4	1.6	0.230	2.00	51	86	-
	K-2	38.045517°	140.940133°	7.7	28	40.8	4.4	3	2.711	-	0.1	0.4	54.9	25.1	19.5	0.086	2.00	120	220	N.D.(<0.20)
	K-3	38.045833°	140.951800°	7.6	-1	51.0	8.0	12	2.656	-	0.4	0.3	10.4	56.3	32.6	0.014	2.00	200	340	-
Off Soma City (Matsukawaura)	L-1	37.820983°	140.960950°	7.6	53	43.2	5.9	12	2.641	0.0	0.3	10.3	42.7	19.7	27.0	0.110	4.75	340	550	-
	L-2	37.815517°	140.976333°	7.8	59	25.9	1.9	<1	2.687	-	0.1	8.0	86.5	1.8	3.6	0.170	2.00	25	41	N.D.(<0.21)
	L-3	37.821683°	140.976500°	7.5	120	27.6	1.4	<1	2.698	-	0.2	22.9	67.6	3.5	5.8	0.190	2.00	23	40	-
Off Iwaki City (Hisanojima)	M-1	37.173617°	141.078800°	8.0	133	27.0	2.2	1	2.761	-	1.8	4.4	0.0	0.0	2.5	0.160	2.00	210	360	-
	M-2	37.199600°	141.085300°	8.0	170	24.8	2.1	1	2.778	-	0.9	3.9	89.600	2.4	0.0	0.160	2.00	140	240	N.D.(<0.21)
	M-3	37.232417°	141.093517°	8.0	152	23.9	2.5	1	2.765	-	1.4	17.8	79.4	1.400	1.4	0.190	2.00	120	210	-

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

Results of Radionuclide Analysis of Aquatic Organisms, Radioactive
Material Monitoring in the Water Environment (2012 Winter 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					
Abukuma River System	A-2 (Harase River)	2012/12/5	Streptophyta	Zygnematomyceae	Zygnematales	Zygnematales	<i>Spirogyra sp.</i>	Spirogyra	-	0.27	-	-	N.D.	N.D.<(-0.83)	N.D.<(-0.77)	-			
			Arthropod	Insecta	Odonata	Odonata		<i>Macromia amphigena amphigena</i>	Macromia amphigena										
			Arthropod	Insecta	Odonata	Odonata		<i>Anotogaster sieboldii</i>	Anotogaster sieboldii										
			Arthropod	Insecta	Odonata	Odonata		<i>Calopteryx atrata</i>	Calopteryx atrata										
			Arthropoda	Insecta	Odonata	Calopterygidae		<i>Calopteryx sp.</i>	Calopteryx										
			Arthropod	Insecta	Odonata	Odonata		<i>Mnais costalis</i>	Mnais costalis										
			Arthropod	Insecta	Odonata	Odonata		<i>Asiagomphus melaenops</i>	Asiagomphus melaenops										
			Arthropod	Insecta	Odonata	Odonata		<i>Davidius nanus</i>	Davidius nanus										
			Arthropod	Insecta	Odonata	Odonata		<i>Davidius sp.</i>	Davidius										
			Arthropod	Insecta	Odonata	Odonata		<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus										
			Arthropod	Insecta	Odonata	Odonata		<i>Sieboldius albardae</i>	Sieboldius albardae										
			Arthropod	Insecta	Trichoptera	Trichoptera		<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	405	0.076	Larva	-		170	60	110	-	
			Arthropod	Malacostraca	Decapoda	Decapoda		Atyidae	Freshwater shrimp	1,760	0.16	Adult	-		58	22	36	-	
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes		<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	37	0.14	Mature fish	-		44	16	28	-	
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes		<i>Nipponocypris temminckii</i>	Dark chub	35	0.65	Mature fish	-		88	32	56	-	
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes		<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	20	0.041	Mature fish	-		52	19	33	-	
			Vertebrata	Osteichthyes	Salmoniformes	Salmoniformes		<i>Oncorhynchus masou</i>	Yamame trout	8	0.26	Mature fish	-		78	28	50	-	
			Vertebrata	Amphibia	Anura	Anura		-	Tadpole	20	0.015	Larva	-		140	48	92	-	
			Vertebrata	Amphibia	Caudata	Caudata		<i>Cynops pyrrhogaster</i>	Cynops pyrrhogaster	19	0.12	Adult	-		58	21	37	-	
			-	-	-	-	-	-	CPOM (litter)	-	0.76	-	-		380	140	240	-	

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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	B-2 (Abukuma River)	2012/12/14	Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Cyprinus carpio</i>	Common carp	1	3.1	Mature fish	Some (details unknown)	97	36	61	0.29	
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Hemibarbus barbus</i>	Hemibarbus barbus	4	5.6	Mature fish	Some (details unknown)	170	60	110	0.41	
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	3	0.97	Mature fish	Some (details unknown)	109	40	69	-	
	B-3 (Surikami River)	2012/12/6	Streptophyta	Zygnematoiphyceae	Zygnematales	Zygnematales	<i>Spirogyra sp.</i>	Spirogyra	-	0.056	-	-	19	7.2	12	-	
			Arthropod	Insecta	Odonata	Odonata	<i>Macromia amphigena amphigena</i>	Macromia amphigena									
			Arthropod	Insecta	Odonata	Odonata	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii									
			Arthropod	Insecta	Odonata	Odonata	<i>Calopteryx atrata</i>	Calopteryx atrata									
			Arthropoda	Insecta	Odonata	Calopterygidae	<i>Calopteryx sp.</i>	Calopteryx									
			Arthropod	Insecta	Odonata	Odonata	<i>Anisogomphus maacki</i>	Anisogomphus maacki	134	0.027	Larva	-	-	38	13	25	-
			Arthropod	Insecta	Odonata	Odonata	<i>Davidius nanus</i>	Davidius nanus									
			Arthropod	Insecta	Odonata	Odonata	<i>Davidius sp.</i>	Davidius									
			Arthropod	Insecta	Odonata	Odonata	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus									
			Arthropod	Insecta	Odonata	Odonata	<i>Sieboldius albardae</i>	Sieboldius albardae									
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	554	0.15	Larva	-	-	132	48	84	-
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche sauteri</i>	Parastenopsyche sauteri									
			Arthropod	Insecta	Megaloptera	Megaloptera	<i>Protohermes grandis</i>	Protohermes grandis	53	0.019	Larva	-	-	26	9.8	16	-
			Mollusca	Gastropoda	Sorbeoconcha	Sorbeoconcha	<i>Semisulcospira libertina</i>	Semisulcospira libertina	246	0.13	Adult / non-adult	-	-	63	23	40	-
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Phoxinus lagowskii steindachneri</i>	Amur Minnow	20	0.066	Mature fish	-	-	35	14	21	-
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Nipponocypris temminckii</i>	Dark chub	10	0.10	Mature fish	-	-	56	20	36	-
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Tribolodon hakonensis</i>	Japanese dace	21	0.074	Immature fish	-	-	56	20	36	-
	Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Noemacheilus barbatulus</i>	Stone loach	18	0.18	Mature fish	-	-	40	14	26	-		
	Vertebrata	Amphibia	Anura	Anura	<i>Rana rugosa</i>	Wrinkled Frog	12	0.085	Adult	-	-	82	30	52	-		
	-	-	-	-	-	-	-	-	1.0	-	-	235	85	150	-		

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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		
Uda River	C-5	2012/12/18	-	-	-	-	CPOM (litter)	-	0.70	-	-	92	33	59	-	
	C-6	2012/12/18	Arthropod	Insecta	Odonata	Odonata	<i>Anotogaster sieboldii</i>	<i>Anotogaster sieboldii</i>	109	0.025	Larva	-	61	22	39	-
	Arthropod	Insecta	Odonata	Odonata	<i>Calopteryx cornelia</i>	<i>Calopteryx cornelia</i>										
	Arthropoda	Insecta	Odonata	Calopterygidae	<i>Calopteryx sp.</i>	<i>Calopteryx</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Mnais costalis</i>	<i>Mnais costalis</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Asiagomphus melaenops</i>	<i>Asiagomphus melaenops</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Davidius fujiana</i>	<i>Davidius fujiana</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Davidius nanus</i>	<i>Davidius nanus</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Davidius sp.</i>	<i>Davidius</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Onychogomphus viridicostus</i>	<i>Onychogomphus viridicostus</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Sieboldius albardae</i>	<i>Sieboldius albardae</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Sinogomphus flavolimbatus</i>	<i>Sinogomphus flavolimbatus</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Stylogomphus suzukii</i>	<i>Stylogomphus suzukii</i>										
	Arthropod	Insecta	Odonata	Odonata	<i>Planaeschna milnei</i>	<i>Planaeschna milnei</i>										
	Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>										
	Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche sauteri</i>	<i>Parastenopsyche sauteri</i>										
	Arthropod	Malacostraca	Decapoda	Decapoda	Atyidae	Freshwater shrimp										
	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	<i>Tribolodon</i>										
	Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Nipponocypris temminckii</i>	Dark chub										
	Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Rhinogobius sp.</i>	<i>Rhinogobius</i>										
							219	0.035	Larva	-	182	62	120	-		
							611	0.11	Adult	-	65	24	41	-		
							16	0.14	Mature fish	-	94	35	59	-		
						42	0.13	Mature fish/Immature fish	-	65	24	41	-			
						8	0.036	Mature fish	-	242	92	150	-			

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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		
Muro River	D-1	2012/12/12	Vertebrata	Osteichthyes	Osmeriformes	Osmeriformes	<i>Plecoglossus altivelis</i>	Sweetfish (natural upstream)	80	1.4	Mature fish	-	193	73	120	0.54
	D-2	2013/1/18	Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	21	0.18	Immature fish	-	77	29	48	-
	D-3		Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Zacco platypus</i>	Zacco platypus	27	0.20	Mature fish	-	51	18	33	-
	D-4a D-4b	2012/12/13	Streptophyta	Zygnematomyxaceae	Zygnematales	Zygnematales	<i>Spirogyra sp.</i>	Spirogyra	-	0.079	-	-	0.97	N.D.(<0.95)	0.97	-
			Arthropoda	Insecta	Plecoptera	Plecoptera	<i>Kamimura tibialis</i>	Kamimura tibialis	370	0.018	Larva	-	61	23	38	-
			Arthropod	Insecta	Plecoptera	Plecoptera	<i>Kamimura uenoi</i>	Kamimura uenoi Kohno								
			Arthropod	Insecta	Plecoptera	Plecoptera	<i>Neoperla sp.</i>	Neoperla geniculata								
			Arthropoda	Insecta	Plecoptera	Plecoptera	<i>Ovamia sp.</i>	Ovamia sp.								
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata	495	0.13	Larva	-	470	170	300	-
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche sauteri</i>	Parastenopsyche sauteri	69	0.019	Larva	-	116	45	71	-
			Arthropod	Insecta	Odonata	Odonata	<i>Macromia amphigena amphigena</i>	Macromia amphigena								
			Arthropod	Insecta	Odonata	Odonata	<i>Calopteryx atrata</i>	Calopteryx atrata								
			Arthropod	Insecta	Odonata	Odonata	<i>Calopteryx cornelia</i>	Calopteryx cornelia								
			Arthropod	Insecta	Odonata	Odonata	<i>Davidius nanus</i>	Davidius nanus								
			Arthropod	Insecta	Odonata	Odonata	<i>Davidius sp.</i>	Davidius								
			Arthropod	Insecta	Odonata	Odonata	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus								
			Arthropod	Insecta	Odonata	Odonata	<i>Sieboldius albardae</i>	Sieboldius albardae								
			Arthropod	Insecta	Odonata	Odonata	<i>Sinogomphus flavolimbatus</i>	Sinogomphus flavolimbatus								
			Arthropod	Insecta	Odonata	Odonata	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii								
			Arthropod	Insecta	Odonata	Odonata	<i>Boyeria maclachlani</i>	Boyeria maclachlani								
			Arthropod	Insecta	Odonata	Odonata	<i>Planaeschna milnei</i>	Planaeschna milnei								
			Arthropod	Insecta	Megaloptera	Megaloptera	<i>Parachauliodes continentalis</i>	Parachauliodes continentalis Wee								
			Arthropod	Insecta	Megaloptera	Megaloptera	<i>Protohermes grandis</i>	Protohermes grandis								
	Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Rhinogobius sp.</i>	Rhinogobius	44	0.12	Mature fish	-	590	220	370	-		
	Vertebrata	Amphibia	Anura	Anura	-	Tadpole	8	0.0085	Larva	-	790	310	480	-		
	-	-	-	-	-	-	-	-	1.2	-	-	231	81	150	-	

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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										
Ota River	F-1 F-2 F-3	2012/12/20	Arthropod	Insecta	Odonata	Odonata	<i>Macromia amphigena amphigena</i>	Macromia amphigena	101	0.028	Larva	-	1,220	460	760	-								
			Arthropod	Insecta	Odonata	Odonata	<i>Anotogaster sieboldii</i>	Anotogaster sieboldii																
			Arthropod	Insecta	Odonata	Odonata	<i>Calopteryx atrata</i>	Calopteryx atrata																
			Arthropod	Insecta	Odonata	Odonata	<i>Mnais costalis</i>	Mnais costalis																
			Arthropod	Insecta	Odonata	Odonata	<i>Asiagomphus melaenops</i>	Asiagomphus melaenops																
			Arthropod	Insecta	Odonata	Odonata	<i>Davidius nanus</i>	Davidius nanus																
			Arthropod	Insecta	Odonata	Odonata	<i>Davidius sp.</i>	Davidius																
			Arthropod	Insecta	Odonata	Odonata	<i>Onychogomphus viridicostus</i>	Onychogomphus viridicostus																
			Arthropod	Insecta	Odonata	Odonata	<i>Sieboldius albardae</i>	Sieboldius albardae																
			Arthropod	Insecta	Odonata	Odonata	<i>Stylogomphus suzukii</i>	Stylogomphus suzukii																
			Arthropod	Insecta	Odonata	Odonata	<i>Boyeria maclachlani</i>	Boyeria maclachlani																
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche marmorata</i>	Stenopsyche marmorata									124	0.022	Larva	-	1,510	560	950	-
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche sauteri</i>	Parastenopsyche sauteri																
			Arthropod	Insecta	Megaloptera	Megaloptera	<i>Parachauliodes continentalis</i>	Parachauliodes continentalis Wee	60	0.021	Larva	-	550	200	350	-								
			Arthropod	Insecta	Megaloptera	Megaloptera	<i>Protohermes grandis</i>	Protohermes grandis																
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius sp.</i>	Carassius	2	0.072	Immature fish	Some (details unknown)	2,020	720	1,300	-								
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	19	0.13	Mature fish/Immature fish	-	2,070	770	1,300	-								
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Cobitis biwae</i>	Cobitis biwae	27	0.030	Mature fish/Immature fish	-	1,880	680	1,200	-								
			Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Rhinogobius fluviatilis</i>	R. fluviatilis	4	0.018	Mature fish	-	9,800	3,600	6,200	-								
			-	-	-	-	-	-	-	0.80	-	-	1,550	560	990	-								

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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 Hayama (Mano River System)	G-1	2013/1/18	Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Carassius auratus</i>	Carassius auratus langsdorfii	1	0.89	Mature fish	Some (details unknown)	820	290	530	-
	G-2		Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	3	1.5	Mature fish	Some (details unknown)	1,010	370	640	0.54
	G-3		Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Micropterus dolomieu</i>	Small mouth bass	1	1.3	Mature fish	Some (details unknown)	2,600	900	1,700	-
	G-4	2012/12/10	Sreptophyta	Zygnemataphyceae	Zygnematales	Zygnematales	<i>Spirogyra sp.</i>	Spirogyra	-	0.081	-	-	94	35	59	-
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche marmorata</i>	<i>Stenopsyche marmorata</i>	261	0.037	Larva	-	580	210	370	-
			Arthropod	Insecta	Trichoptera	Trichoptera	<i>Stenopsyche sauteri</i>	<i>Parastenopsyche sauteri</i>					480	180	300	-
			Vertebrata	Osteichthyes	Salmoniformes	Salmoniformes	<i>Oncorhynchus masou</i>	Yamame trout	4	0.080	Immature fish	-	480	180	300	-
	-	-	-	-	-	-	-	CPOM (litter)	-	1.1	-	-	206	76	130	-

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 Akimoro	H-1 H-2 H-3 H-4	2012/12/4	Angiospermae	Monocotyledoneae	Hydrocharitales	Hydrocharitales	<i>Elodea nuttallii</i>	Western Waterweed	-	0.50	-	-	4.7	1.6	3.1	-
			Arthropod	Malacostraca	Decapoda	Decapoda	<i>Pacifastacus leniusculus trowbridgii</i>	Signal crayfish	43	2.4	Adult	-	120	41	79	8.5
			Vertebrata	Osteichthyes	Osmeriformes	Osmeriformes	<i>Hypomesus nipponensis</i>	Japanese smelt	46	0.21	Mature fish	-	58	22	36	-
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Carassius sp.</i>	Carassius	5	0.71	Mature fish	Some (details unknown)	119	42	77	-
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Hemibarbus barbus</i>	Hemibarbus barbus	1	1.1	Mature fish	Some (details unknown)	105	37	68	-
			Vertebrata	Osteichthyes	Cypriniformes	Cyprinidae	<i>Tribolodon sp.</i>	Tribolodon	11	1.4	Mature fish	Some (details unknown)	167	57	110	0.85
			Vertebrata	Osteichthyes	Salmoniformes	Salmoniformes	<i>Salvelinus leucomaenis</i>	Char	9	2.5	Mature fish	Some (details unknown)	154	54	100	0.35
			Vertebrata	Osteichthyes	Salmoniformes	Salmoniformes	<i>Oncorhynchus masou</i>	Seema	1	1.3	Mature fish	Some (details unknown)	146	52	94	0.18
			Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Micropterus salmoides</i>	Largemouth bass	9	3.2	Mature fish	Some (details unknown)	197	67	130	1.3
			-	-	-	-	-	-	-	CPOM (litter)	-	1.2	-	-	59	21

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	J-1 (south lakeside)	2012/12/7	Angiospermae	Dicotyledoneae	Nymphaeales	Nymphaeales	<i>Nuphar japonicum</i>	Cow lily	-	0.63	-	-	6.3	2.3	4.0	-
			Mollusca	Gastropoda	Architaenioglossa	Architaenioglossa	<i>Bellamyia japonica</i>	Japanese mysterysnail	5	0.052	Adult	-	1.7	N.D.(<1.2)	1.7	-
			Vertebrata	Osteichthyes	Cypriniformes	Cypriniformes	<i>Misgurnus anguillicaudatus</i>	Oriental weatherfish	21	0.033	Mature fish	-	4.7	1.5	3.2	-
			Vertebrata	Amphibia	Anura	Anura	-	Tadpole	14	0.018	Larva	-	N.D.	N.D.(<2.9)	N.D.(<2.4)	-

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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 Wakani Town	Surrounding water area off the mouth of the Abukuma River	2012/12/11	Vertebrata	Osteichthyes	Marbled rockfish	Fat greenling	<i>Hexagrammos otakii</i>	Fat greenling	1	0.50	Mature fish	Shrimps,squids	9.3	3.6	5.7	-
			Vertebrata	Osteichthyes	Righteye flounder	Flounder	<i>Paralichthys olivaceus</i>	Flounder	4	3.0	Mature fish	Small fish,shrimps,squids	6.3	2.4	3.9	0.020
			Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Lateolabrax japonicus</i>	Japanese sea bass	3	3.9	Mature fish	Empty stomach	19	6.7	12	0.061
			Vertebrata	Osteichthyes	Puffer	Puffer	<i>Takifugu pardalis</i>	Globefish	3	0.72	Mature fish	Empty stomach	5.1	1.8	3.3	-
Off Senma City	L-1 L-2 L-3 (Matsukawaura)	2012/12/10	Angiospermae	Monocotyledoneae	Najadales	Najadales	<i>Zostera marina</i>	eel grass	-	0.25	-	-	N.D.	N.D.(<0.48)	N.D.(<0.42)	-
			Chlorophyta	Ulvophyceae	Ulvaes	Ulvaes	<i>Ulva pertusa</i>	Ulva pertusa	-	0.55	-	-	N.D.	N.D.(<0.90)	N.D.(<0.92)	-
			Chlorophyta	Ulvophyceae	Ultrichales	Monostrumataceae	<i>Monostruma nitidum</i>	Monostruma nitidum Wittrock	-	1.2	-	-	1.6	N.D.(<0.90)	1.6	-
			Arthropod	Malacostraca	Decapoda	Decapoda	<i>Hemigrapsus penicillatus</i>	Hemigrapsus penicillatus	120	0.17	Adult	-	15	5.5	9.1	-
			Mollusca	Bilvalvia	Pterioida	Ostreidae	<i>Crassostrea gigas</i>	Japanese oyster (shell)	Many	2.3	Adult	-	63	23	40	0.58
			Mollusca	Bilvalvia	Veneroidea	Veneridae	<i>Ruditapes philippinarum</i>	Japanese littleneck (shell)	Many	1.4	Adult	-	3.7	1.4	2.3	2.2
			Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Acanthogobius flavimanus</i>	Yellowfin Goby	5	0.092	Mature fish	-	8.6	3.0	5.6	-
Off Inaki City	M-1 M-2 M-3 (Hisanohama)	2012/12/14	Echinoderm	Sea Urchin	Sea urchin	Sea urchin	<i>Glypocidaris crenularis</i>	tugaruuni	78	2.3	Adult	-	73	26	47	8.7
			Vertebrata	Osteichthyes	Marbled rockfish	Fat greenling	<i>Hexagrammos otakii</i>	Fat greenling	3	1.7	Mature fish	Empty stomach	87	32	55	0.24
			Vertebrata	Osteichthyes	Marbled rockfish	Gurnard	<i>Chelidonichthys spinosus</i>	Gurnard	4	1.5	Mature fish	Empty stomach	13	5.4	7.1	-
			Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	<i>Pleuronectes yokohamae</i>	Marbled sole	3	2.3	Mature fish	Empty stomach	54	20	34	0.11
			Vertebrata	Chondrichthyes	Rajiformes	Rajidae	<i>Paralichthys olivaceus</i>	Flounder	6	4.5	Mature fish	Small fish	20.5	7.5	13	0.15
			Vertebrata	Osteichthyes	Perciformes	Perciformes	<i>Lateolabrax japonicus</i>	Japanese sea bass	2	5.0	Mature fish	Empty stomach	15	5.1	9.4	0.040
			M-4 (Hisanohama)	2012/12/24	Brown algae	Phaeophyceae	Sea cabbage	Sea cabbage	<i>Eisenia bicyclis</i>	Eisenia bicyclis	-	1.3	-	-	7.9	3.0
	Echinoderm	Sea Urchin			Loxechinus	Strongylocentrotus	<i>Strongylocentrotus nudus</i>	Northern sea urchin	20	2.0	Adult	-	5.6	2.2	3.4	3.3
	Mollusca	Gastropoda			Archaeogastropoda	Haliotis asinina	<i>Haliotis discus</i>	abalone(shell)	12	0.70	Adult	-	23	8.2	15	14

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.