

○ Results of Radioactive Material Monitoring of Aquatic Organisms (Location M off Iwaki City)

<Location M off Iwaki City (Hisanohama): Samples collected>

Items Locations	General items		Radioactive materials			
	Water	Sediment	Water (Cs)	Water (Sr)	Sediment (Cs)	Sediment (Sr)
M-1	—	○	—	—	○	—
M-2	○	○	—	—	○	—
M-3	—	○	—	—	○	—
M-4	—	—	—	—	—	—

<Location M off Iwaki City (Hisanohama): Site measurement item>

Items Locations	Latitude and longitude of the location		Survey date and time			Water		Sediment				Other		
	Latitude	Longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Odor	Contaminants	Water depth (m)	Secchi disk depth (m)	
M-1	37.173567°	141.078833°	2013/12/5	—	8:22	—	15.0	Sand	10Y3/1	None	Shell fragments	—	—	
M-2	37.199467°	141.085667°		8:48	9:26	14.6	15.0	Sand	7.5Y4/1	None	Shell fragments	41.8	10.5	
M-3	37.232550°	141.093717°		—	—	9:55	—	15.0	Sand	7.5Y4/2	None	Shell fragments	—	—
M-4	37.154650°	141.001550°		—	—	—	—	—	—	—	—	—	—	

<Location M off Iwaki City (Hisanohama): General survey items/Analysis of radioactive materials Water>

Items Locations	Latitude and longitude of the location		Survey date and time		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)
	Latitude	Longitude	Date	Time												
M-2 (Surface layer)	37.199467°	141.085667°	2013/12/5	8:48	8.1	<0.5	1.0	8.1	5,280	33.79	0.8	1	0.4	N.D.(<0.0022)	0.0094	—
M-2 (Deep layer)				8:48	8.1	0.6	1.2	8.5	5,240	33.79	0.9	4	0.6	0.0035	0.0086	0.0012

<Location M off Iwaki City (Hisanohama): General survey items/Analysis of radioactive materials Sediment>

Items Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential E _{NHE} (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)		
	Latitude	Longitude	Date	Time							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)
											(%)	(%)	(%)	(%)	(%)	(%)				(mm)	(mm)
M-1	37.173567°	141.078833°	2013/12/5	8:22	7.9	182	28.3	1.7	<1	2,787	0	0.4	1.9	89.9	4.9	2.9	0.16	2	56	140	—
M-2	37.199467°	141.085667°		9:26	7.8	168	27.2	1.8	<1	2,781	0	0.8	3.9	91.8	0.8	2.7	0.16	2	64	170	N.D.(<0.19)
M-3	37.232550°	141.093717°		9:55	7.9	172	23.6	2.1	<1	2,784	0	1.1	4.8	87.8	3.4	2.9	0.17	2	48	120	—

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

<Location M off Iwaki City (Hisanohama): Survey items Aquatic organisms>

Location	Latitude and longitude of the location		Sampling Date	Division	Class	Order	Family	Species name	English name	Population	Sample weight (kg-wet)	Note		Cs-134 (Bq/kg-wet)	Cs-137 (Bq/kg-wet)	Sr-90 (Bq/kg-wet)
	Latitude	Longitude										Growth stage	Stomach contents			
M-1 M-2 M-3 (Hisanohama)	37.173567°	141.078833°	2013/12/5	Echinoderm	Sea Urchin	Sea urchin	Sea urchin	Glyptocidaris crenularis	Tugaruuni	32	1.3	Imago	—	6.6	16	5.2
				Vertebrata	Osteichthyes	Marbled rockfish	Fat greenling	Hexagrammos otakii	Fat greenling	5	3.7	3-year-old fish	Small fish, crustacean fragme	2.6	6.9	0.098
				Vertebrata	Osteichthyes	Righteye flounder	Flounder	Paralichthys olivaceus	Flounder	5	2.8	2-year-old fish	—	N.D.(<1.1)	2.7	—
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	Pleuronectes yokohamae	Marbled sole	5	4.2	3-year-old fish	Annelida	3.7	8.7	0.081
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	Pseudopleuronectes herzensteini	Brown sole	8	2.9	4-year-old fish	—	2.1	5.4	0.077
				Vertebrata	Osteichthyes	Righteye flounder	Righteye flounder	Eopsetta grigorjewi	Round-nose flounder	10	3.1	3-year-old fish	Crustacean fragments	1.9	4.3	—
				Vertebrata	Osteichthyes	Perciformes	Lateolabracidae	Lateolabrax japonicus	Japanese sea bass	1	3.9	7-year-old fish	Small fish	1.3	3.2	0.064
				Vertebrata	Osteichthyes	Perciformes	Sparidae	Eyvynnus japonica	Crimson sea-bream	8	1.4	4-year-old fish	Some (details unknown)	1.3	2.9	—
				Vertebrata	Cartilage fish	Skate	Skate	Okamejei kenoyei	Common Skate	5	3.4	Mature fish	Crustacean fragments	1.5	3.5	0.20
				Vertebrata	Cartilage fish	Sandbar shark	Banded houndshark	Mustelus manazo	Starspotted smooth-hound	3	2.4	Mature fish	Some (details unknown)	1.5	3.1	0.024
M-4 (Hisanohama)	37.154650°	141.001550°	2013/12/5	Brown algae	Phaeophyceae	Sea cabbage	Sea cabbage	Eisenia bicyclis	Eisenia bicyclis	—	1.1	—	—	0.43	0.62	—
				Echinoderm	Sea Urchin	Loxechinus	Strongylocentrotus nudus	Northern sea urchin	13	1.7	Imago	—	2.0	4.7	—	
				Mollusca	Gastropoda	Archaeogastropoda	Haliotis asinina	Haliotis discus	Abalone(molluscan body)	10	1.4	Imago	—	0.60	1.2	—

Note 1) When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

Note 2) For species with stomach contents as indicated in the note column, all stomach contents were removed for conducting the analysis.

Note 3) Underlined names in the English name column indicate species largest in number in the respective samples.

Note 4) A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

Note 5) N.D. means to be below the detection limit.