

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

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

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

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

Locations	Latitude and longitude of the location		Survey date and time		Water		Sediment			Other		
	Scheduled latitude	Scheduled longitude	Date	Time (water)	Time (sediment)	Water temperature (degrees C)	Sediment temperature (degrees C)	Property	Color	Contaminants	Water depth(m)	Transparency (m)
M-1	37.1736°	141.0788°	2015/8/21	-	9:12	-	17.6	Fine sand	7.5Y3/2	Shell	-	-
M-2(Surface layer)	37.1996°	141.0853°		8:30	8:46	23.2	17.5	Fine sand	7.5Y3/2	Shell	42.5	15.5
M-2(Deep layer)	37.1996°	141.0853°		8:06	-	17.4	-	-	-	-	-	-
M-3	37.2324°	141.0935°		-	9:55	-	17.7	Fine sand	7.5Y3/2	Shell	-	-

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

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)
	Scheduled latitude	Scheduled longitude	Date	Time (water)												
M-2(Surface layer)	37.1996°	141.0853°	2015/8/21	8:30	8.2	<0.5	1.4	7.7	5210	33.49	0.8	2	<0.2	N.D.(0.0011)	0.0044	-
M-2(Deep layer)	37.1996°	141.0853°		8:06	8.1	<0.5	1.2	8.4	5250	33.85	0.7	3	1.1	0.0024	0.010	0.00095

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

Locations	Latitude and longitude of the location		Survey date and time		pH	Redox potential EN.H.E (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)	
	Scheduled latitude	Scheduled longitude	Date	Time (sediment)							Gravel (2-75mm) (%)	Coarse sand (0.85-2mm) (%)	Medium sand (0.25-0.85mm) (%)	Fine sand (0.075-0.25mm) (%)	Silt (0.005-0.0075mm) (%)	Clay (Less than 0.005mm) (%)	Median grain diameter				Maximum grain diameter
M-1	37.1736°	141.0788°	2015/8/21	9:12	7.9	190	27.6	2.0	1.6	2.784	0.0	1.3	3.6	90.8	2.1	2.2	0.14	2.0	13	46	-
M-2	37.1996°	141.0853°		8:46	7.9	190	25.3	1.7	2.0	2.779	0.0	0.6	3.3	91.3	2.6	2.2	0.14	2.0	8.9	41	N.D.(0.14)
M-3	37.2324°	141.0935°		9:55	7.9	163	28.1	1.5	1.3	2.768	0.0	0.3	1.6	89.3	4.3	4.5	0.13	2.0	13	48	-

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

Location	Sampling point	Latitude and longitude of the 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)	
		Latitude	Longitude										Growth stage	Stomach contents	Measurement site	Cs-134	Cs-137		
M-1 M-2 M-3	Hisanohama Coastal areas	37.1736°	141.0788°	2015/8/21	Arthropod	Malacostraca	Decapoda	Portunidae	<i>Portunus triuberculatus</i>	Japanese blue crab	2	0.72	Imago	-	-	-	0.44	1.9	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	<i>Pleuronectes yokohamae</i>	Marbled sole	1	0.30	Mature fish (3-year-old)	Ragworm	Viscera removed	0.36	1.5	-	
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	<i>Eopsetta grigorjewi</i>	Shotted halibut	2	0.33	Mature fish (3-year-old)	Empty stomach	Viscera removed	N.D.(0.50)	1.4	-	
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	<i>Pleuronichthys japonicus</i>	Finespotted flounder	1	0.099	Mature fish (2-year-old)	Shrimp	Viscera removed	N.D.(0.81)	1.5	-	
					Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	<i>Paralichthys olivaceus</i>	Bastard halibut	3	2.6	Mature fish (3-year-old)	Fish	Viscera removed	N.D.(0.37)	0.95	N.D.(0.018)	
					Vertebrata	Osteichthyes	Tetraodontiformes	Tetraodontidae	<i>Takifugu poecilonotus</i>	Pufferfish	5	0.68	Mature fish	Crabs	Viscera removed	N.D.(0.27)	1.1	-	
					Vertebrata	Osteichthyes	Scorpaeniformes	Triglidae	<i>Chelidonichthys spinosus</i>	Gurnard	1	0.56	Mature fish (5-year-old)	Red rice prawn, Ragworm	Viscera removed	0.48	1.3	-	
					Vertebrata	Chondrichthyes	Squatiformes	Squatinaidae	<i>Squatina japonica</i>	Japanese angelshark	1	6.3	Mature fish	Fish (Crustacea)	Viscera removed	5.8	25	0.027	
					Vertebrata	Chondrichthyes	Rajiformes	Rajidae	<i>Okamejei kenojei</i>	Skate	5	4.0	Mature fish	Crabs, Fish	Viscera removed	2.3	9.7	0.23	
					Vertebrata	Chondrichthyes	Carcharhiniformes	Triakidae	<i>Mustelus manazo</i>	Starspotted smooth-hound	5	5.2	Mature fish	Crabs, Crustacea, Fish	Viscera removed	0.69	2.8	0.018	
M-4	Offshore of Hisanohama	-	-	-	Brown algae	Phaeophyceae	Laminariales	Lessoniaceae	<i>Eisenia bicyclis</i>	Eisenia	-	0.30	-	-	-	1.9	8.1	-	
					Mollusca	Gastropoda	Archaeogastropoda	Haliotis asinina	-	4	0.62	Imago	-	-	Molluscan body	N.D.(0.21)	0.72	-	
					Echinoderm	Echinoidea	Echinoidea	Strongylocentrotidae	<i>Strongylocentrotus nudus</i>	Northern sea urchin	7	0.87	Imago	-	-	N.D.(0.26)	0.79	-	

*1: Organisms were collected in or around the targeted water areas.

*2: When multiple types of aquatic organisms were collected, a sample was prepared by mixing them.

*3: For a sample made of multiple types of aquatic organisms, the name of the dominant one largest in number is underlined.

*4: Basically, measurement was conducted for all organism samples. Viscera (stomach and bowels) were removed for the measurement when possible so that undigested food and sediments, etc. in the digestive system would be excluded.

*5: A statement in red in the "Growth stage" column shows the age assessed based on squama or otolith.

*6: Plankton (suspended algae) is the residue remaining after the filtration of lake water or seawater with a plankton net (40µm-mesh).

*7: River bottom materials (incl. algae) are algae, etc. that were scratched off stones with a brush, etc. and may include very fine particles such as inorganic silt and clay.

*8: N.D. means to be below the detection limit and figures in parentheses show the detection limit.

*9: Activity concentrations include counting errors, but the details are omitted here.