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

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

Items	General items		Radioactive materials			
Locations	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＞

Items	Latitude and longitude of the location		Survey date and time			Water	Sediment				Other	
Locations	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°	2015/6/26	-	8:58	-	13.1	Fine sand	10Y3/2	Shell	-	-
M-2 (Surface layer)	37.1996°	141.0853°		8:24	8:37	18.6	12.2	Fine sand	10Y3/2	Shell	42.7	13.5
M-2 (Deep layer)				8:02		11.9						
M-3	37.2324°	141.0935°		-	9:33	-	12.1	Fine sand	10Y3/2	Shell	-	-

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

Items	Latitude and longitude of the location		Survey date and time		pH	BOD	COD	DO	Electrical conductivity	Salinity	TOC	SS	Turbidity	Cs-134	Cs-137	Sr-90
Locations	Scheduled latitude	Scheduled longitude	Date	Time (water)		(mg/L)	(mg/L)	(mg/L)	(mS/m)		(mg/L)	(mg/L)	(FNU)	(Bq/L)	(Bq/L)	(Bq/L)
M-2 (Surface layer)	37.1996°	141.0853°	2015/6/26	8:24	8.1	<0.5	1.5	9.2	5090	33.27	1	4	0.4	0.0012	0.0028	-
M-2 (Deep layer)				8:02	8	<0.5	1.1	9.3	5190	33.5	1.1	4	0.7	N.D. (0.0015)	0.0066	0.0011

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

Items	Latitude and longitude of the location		Survey date and time		pH	Redox potential EN.H.E	Water content	IL	TOC	Soil particle density	Grain size distribution								Cs-134	Cs-137	Sr-90
Locations	Scheduled latitude	Scheduled longitude	Date	Time (sediment)		(mV)	(%)	(%)	(mg/g-dry)	(g/cm3)	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	(Bq/kg-dry)	(Bq/kg-dry)	(Bq/kg-dry)
M-1	37.1736°	141.0788°	2015/6/26	8:58	7.8	208	30.3	2	1.3	2.755	0.1	0.1	1.7	85.9	5	7.2	0.15	4.75	19	70	-
M-2	37.1996°	141.0853°		8:37	7.8	216	28.4	1.9	1.3	2.806	1.1	1	3	88.7	2.5	3.7	0.16	4.75	14	49	N.D. (0.14)
M-3	37.2324°	141.0935°		9:33	7.9	230	25.9	2.1	1.1	2.781	0.8	0.8	3.1	90.4	2.4	2.5	0.17	4.75	13	52	-

＜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° 37.1996° 37.2324°	141.0788° 141.0853° 141.0935°	2015/6/26	Echinoderm	Echinoidea	Echinoida	Phymosomatidae	*Glyptocidaris crenularis*	Sea urtin	12	0.48	Imago	-	-	0.53	2.6	-
					Vertebrata	Osteichthyes	Lophiiformes	Lophiidae	*Lophiomus setigerus*	Monkfish	2	2.5	Mature fish	Searobin (2 individuals)	Viscera removed	N.D. (0.4)	0.48	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Triglidae	*Chelidonichthys spinosus*	Gurnard	1	0.27	Mature fish (3-year-old)	Empty stomach	Viscera removed	0.42	1.4	-
					Vertebrata	Osteichthyes	Scorpaeniformes	Hexagrammidae	*Hexagrammos otakii*	Fat greenling	3	1.7	Mature fish (3-year-old)	Shrimp	Viscera removed	0.62	2.5	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	*Pleuronichthys japonicus*	Finespotted flounder	7	1.4	Mature fish (3-year-old)	Obscure digesta	Viscera removed	2.2	8.0	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	*Microstomus achne*	Righteye flounder	3	2.0	Mature fish (5-year-old)	-	-	2.4	9.5	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	*Kareius bicoloratus*	Stone flounder	4	2.3	Mature fish (3,4-year-old)	Shell	Viscera removed	0.58	3.1	0.026
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	*Pleuronectes yokohamae*	Marbled sole	8	4.5	Mature fish (4,5-year-old)	Obscure digesta	Viscera removed	2.1	7.9	0.084
					Vertebrata	Osteichthyes	Pleuronectiformes	Pleuronectiformes	*Eopsetta grigorjewi*	Shotted halibut	3	1.0	Mature fish (3-year-old)	Shrimp	Viscera removed	N.D. (0.5)	2.0	-
					Vertebrata	Osteichthyes	Pleuronectiformes	Paralichthyidae	*Paralichthys olivaceus*	Bastard halibut	2	3.5	Mature fish (4-year-old)	Empty stomach	Viscera removed	0.60	1.6	0.032
					Vertebrata	Osteichthyes	Perciformes	Triglidae	*Lepidotrigla microptera*	Searobin	3	0.67	Mature fish (4-year-old)	Gammarus	Viscera removed	N.D. (0.3)	0.97	-
					Vertebrata	Osteichthyes	Perciformes	Sparidae	*Evynnis japonica*	Crimson sea-bream	3	1.4	Mature fish (6-year-old)	Crabs	Viscera removed	0.47	0.94	-
					Vertebrata	Osteichthyes	Tetraodontiformes	Tetraodontidae	*Takifugu poecilonotus*	Pufferfish	3	0.77	Mature fish	-	-	0.73	2.8	-
					Vertebrata	Osteichthyes	Zeiformes	Zeidae	*Zenopsis nebulosa*	Dory	3	0.11	Mature fish	-	-	N.D. (0.8)	N.D. (0.7)	-
					Vertebrata	Osteichthyes	Zeiformes	Zeidae	*Zeus faber*	John dory	5	3.6	Mature fish	-	-	N.D. (0.3)	0.70	N.D. (0.018)
					Vertebrata	Chondrichthyes	Rajiformes	Rajidae	*Okamejei kenojei*	Skate	5	4.3	Mature fish	-	-	2.0	8.7	0.14
					Vertebrata	Chondrichthyes	Heterodontiformes	Heterodontidae	*Heterodontus japonicus*	Japanese bullhead shark	5	1.6	Mature fish	Crabs	Viscera removed	0.33	1.3	-
M-4	Offshore of Hisanohama	-	-	2015/6/26	Phycophyta	Phaeophyceae	Laminariales	Laminariaceae	*Saccharina japonica*	Japanese tangle	-	0.25	-	-	-	N.D. (0.4)	N.D. (0.4)	-
					Mollusca	Gastropoda	Archaeogastropoda	Haliotis asinina	-	abalone	4	0.61	Imago	-	Molluscan body	N.D. (0.4)	0.66	-
					Echinoderm	Echinoidea	Echinoida	Strongylocentrotidae	*Strongylocentrotus nudus*	Northern sea urchin	14	1.3	Imago	-	-	0.70	2.2	-

*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.