## ○Results of Radioactive Material Monitoring of Aquatic Organisms (Location K off the mouth of the Abukuma River)

<Location K off the mouth of the Abukuma River: Samples collected>

| Items / Locations | General items | | Radioactive materials | | | |
|---|---|---|---|---|---|---|
| | Water | Sediment | Water (Cs) | Water (Sr) | Sediment (Cs) | Sediment (Sr) |
| K-1 | - | ○ | - | - | ○ | - |
| K-2 | ○ | ○ | ○ | ○ | ○ | ○ |
| K-3 | - | ○ | - | - | ○ | - |

<Location K off the mouth of the Abukuma River: 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 | Contaminants | Water depth (m) | Secchi disk depth (m) |
| K-1 | 38.0457° | 140.9282° | 2016/6/6 | - | 09:46 | - | 16.9 | Sand | 10YR5/4 | None | - | - |
| K-2(Surface layer) | 38.0455° | 140.9401° | | 08:48 | 09:08 | 17.8 | 12.0 | Fine sand | 5Y2/2 | None | 16.1 | 7.0 |
| K-2(Bottom layer) | | | | 08:40 | | 12.4 | | | | | | |
| K-3 | 38.0458° | 140.9518° | | - | 09:26 | - | 11.0 | Silt | 10Y3/1 | None | - | - |

<Location K off the mouth of the Abukuma River: General survey items/Analysis of radioactive materials Water>

| Items / Locations | Latitude and longitude of the location | | Survey date and time | | pH | BOD | COD | DO | Electric conductivity | Salinity | TOC | SS | Turbidity | Cs-134 | Cs-137 | Sr-90 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Latitude | Longitude | Date | Time (water) | | (mg/L) | (mg/L) | (mg/L) | (mS/m) | | (mg/L) | (mg/L) | (FNU) | (Bq/L) | (Bq/L) | (Bq/L) |
| K-2(Surface layer) | 38.0455° | 140.9401° | 2016/6/6 | 08:48 | 8.1 | 0.9 | 2.8 | 8.9 | 4590 | 28.02 | 1.1 | 2 | 1.5 | N.D.(0.0016) | 0.0069 | - |
| K-2(Bottom layer) | | | | 08:40 | 8.0 | 0.6 | 1.9 | 9.0 | 5120 | 33.43 | 0.9 | 2 | 1.1 | 0.0017 | 0.0081 | 0.00098 |

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location K off the mouth of the Abukuma River: General survey items/Analysis of radioactive materials Sediment>

| Items / Locations | Latitude and longitude of the location | | Survey date and time | | pH | Redox potential $E_{N.H.E}$ (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) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | 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) | | | |
| | Latitude | Longitude | Date | Time (sediment) | | | | | | | | | | | | | | | | | |
| K-1 | 38.0457° | 140.9282° | 2016/6/6 | 09:46 | 7.9 | 283 | 25.2 | 1.7 | 1.2 | 2.717 | 0.0 | 1.3 | 60.4 | 36.8 | 0.7 | 0.8 | 0.28 | 4.8 | 9.1 | 48 | - |
| K-2 | 38.0455° | 140.9401° | | 09:08 | 7.8 | 257 | 30.6 | 2.5 | 2.0 | 2.746 | 0.0 | 0.0 | 3.1 | 70.6 | 17.3 | 9.0 | 0.12 | 2.0 | 12 | 57 | N.D.(0.12) |
| K-3 | 38.0458° | 140.9518° | | 09:26 | 7.8 | 238 | 48.0 | 6.7 | 11.3 | 2.723 | 0.0 | 0.1 | 0.3 | 21.8 | 61.3 | 16.5 | 0.050 | 2.0 | 42 | 290 | - |

Note) N.D. means to be below the detection limit and figures in parentheses show the detection limit.

<Location K off the mouth of the Abukuma River: Analysis items Aquatic organisms>

| Locations | Sampling point | Latitude and longitude of the location | | Sampling date | Division | Class | Order | Family | Scientific 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 | Total | Cs-134 | Cs-137 | |
| Surrounding water area off the mouth of the Abukuma River | - | — | — | 2016/6/2 | Arthropoda | Malacostraca | Decapoda | Portunidae | *Portunus trituberculatus* | Japanese blue crab | 3 | 1.2 | Imago | - | - | 0.53 | N.D.(0.31) | 0.53 | - |
| | | | | | Vertebrata | Osteichthyes | Pleuronectiformes | Pleuronectidae | *Platichthys stellatus* | Starry flounder | 1 | 0.96 | Mature fish | Empty stomach | Viscera removed | 1.1 | N.D.(0.31) | 1.1 | - |
| | | | | | Vertebrata | Osteichthyes | Pleuronectiformes | Paralichthyidae | *Paralichthys olivaceus* | Bastard halibut | 1 | 2.2 | Mature fish | Empty stomach | Viscera removed | 0.93 | N.D.(0.34) | 0.93 | N.D.(0.020) |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Carangidae | *Seriola quinqueradiata* | Japanese amberjack | 1 | 2.8 | Mature fish | Fish | Viscera removed | 0.57 | N.D.(0.29) | 0.57 | N.D.(0.021) |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Scombridae | *Scomber japonicus* | Chub mackerel | 3 | 1.9 | Mature fish | Empty stomach | Viscera removed | 0.82 | 0.27 | 0.55 | N.D.(0.017) |
| | | | | | Vertebrata | Osteichthyes | Tetraodontiformes | Monacanthidae | *Thamnaconus modestus* | Filefish | 14 | 3.1 | Immature fish | Obscure digesta | Viscera removed | N.D. | N.D.(0.29) | N.D.(0.29) | N.D.(0.020) |

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

*6: 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.

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

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