

OResults of Radioactive Material Monitoring of Aquatic Organisms (Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J)

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Samples collected>

| Locations | General items | | Radioactive materials | | | |
|-----------|---------------|----------|-----------------------|------------|---------------|---------------|
| | Water | Sediment | Water (Cs) | Water (Sr) | Sediment (Cs) | Sediment (Sr) |
| J-1 | ○ | ○ | ○ | ○ | ○ | ○ |

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: Site measurement item>

| 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) |
| J-1(Surface layer) | 37.4203° | 140.1008° | 2020/7/3 | 14:20 | 15:00 | 21.0 | 20.5 | Sand | 7.5Y 5/3 | Corbicula,Waterweed | 3.5 | >3.5 |
| J-1(Bottom layer) | | | | | | 20.7 | | | | | | |

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: General survey items/Analysis of radioactive materials Water>

| 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) | | |
| J-1(Surface layer) | 37.4203° | 140.1008° | 2020/7/3 | 14:20 | 6.8 | 0.9 | 2.4 | 9.0 | 11.9 | 0.06 | 1.0 | <1 | 0.9 | N.D.(0.0014) | 0.0052 | - |
| J-1(Bottom layer) | | | | | 6.9 | 0.6 | 1.8 | 8.5 | 11.9 | 0.06 | 1.1 | <1 | 0.7 | N.D.(0.0013) | 0.0050 | 0.00068 |

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

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: General survey items/Analysis of radioactive materials Sediment>

| Locations | Latitude and longitude of the location | | Survey date and time | | 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) |
|-----------|--|-----------|----------------------|-----------------|-----|--|-------------------|--------|----------------|--|-------------------------|----------------------------|-------------------------------|------------------------------|--------------------------|------------------------------|----------------------------|--------------------|--------------------|-------------------|
| | Latitude | 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 (0.005-0.075mm) (%) | Clay (Less than 0.005mm) (%) | Median grain diameter (mm) | | | |
| J-1 | 37.4203° | 140.1008° | 2020/7/3 | 15:00 | 7.3 | 377 | 24.8 | 1.4 | 4.7 | 2.727 | 2.2 | 1.3 | 54.0 | 40.9 | 1.6 | 0.28 | 9.5 | 7.2 | 110 | 0.18 |

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

<Lake Inawashiro (north lakeside) I / Lake Inawashiro (south lakeside) J: 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 | |
| I-1 I-2 (north lakeside) | Within the lake and Nagase River | 37.5047° 37.4995° | 140.1143° 140.1409° | 2020/6/12 | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Tribolodon hakonensis</i> | Japanese dace | 10 | 1.8 | Mature fish | Obscure digesta | Viscera removed | 19.91 | 0.91 | 19 | - |
| | | | | | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Carassius auratus</i> | Carassius auratus langsdorffii | 4 | 2.0 | Mature fish | Obscure digesta | Viscera removed | 12 | N.D.(1.5) | 12 | - |
| | | | | | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Cyprinus carpio</i> | Common carp | 1 | 1.0 | Mature fish | Obscure digesta | Viscera removed | 1.8 | N.D.(0.66) | 1.8 | - |
| | | | | | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Hemibarbus barbus</i> | Hemibarbus barbus | 3 | 1.1 | Immature fish,Mature fish | Obscure digesta | Viscera removed | 36.5 | 2.5 | 34 | - |
| | | | | | Vertebrata | Osteichthyes | Salmoniformes | Salmonidae | <i>Salvelinus leucomaenis</i> | Char | 2 | 2.2 | Mature fish | Obscure digesta | Viscera removed | 41.3 | 2.3 | 39 | 0.12 |
| | | | | | Vertebrata | Osteichthyes | Salmoniformes | Salmonidae | <i>Oncorhynchus mykiss</i> | Rainbow trout | 1 | 0.88 | Mature fish | Midge | Viscera removed | 20.1 | 1.1 | 19 | - |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Actinopterygii | <i>Channa argus</i> | Snakehead | 1 | 1.1 | Immature fish | Carassius,Fish residue | Viscera removed | 14.2 | 1.2 | 13 | 0.40 |
| | | | | | Vertebrata | Osteichthyes | Siluriformes | Siluridae | <i>Silurus asotus</i> | Amur catfish | 2 | 2.4 | Mature fish | Obscure digesta | Viscera removed | 17.89 | 0.89 | 17 | 0.22 |
| | | | | 2020/7/1 | Coarse Particulate Organic Matter | - | - | - | - | Bottom fallen leaves | - | 0.12 | - | - | N.D. | N.D.(1.3) | N.D.(1.2) | - | |
| | | | | 2020/7/3 | Algae/plant | - | - | - | - | Plankton (Planktonic algae) | - | 0.0085 | - | - | N.D. | N.D.(3.9) | N.D.(3.4) | - | |
| J-1 (south lakeside) | Within the lake and around the Oninuma | 37.4203° | 140.1008° | 2020/7/1 | Algae/plant | Dicotyledoneae | Nymphaeales | Nymphaeaceae | <i>Nuphar japonicum</i> | Cow lily | - | 0.28 | - | - | - | 0.57 | N.D.(0.23) | 0.57 | - |
| | | | | | Arthropoda | Malacostraca | Decapoda | Palaemonidae | <i>Palaemon paucidens</i> | Common prawn | 1820 | 1.2 | Juvenile,Imago | - | - | 6.3 | N.D.(0.56) | 6.3 | 0.80 |
| | | | | | Mollusca | Gastropoda | Architaenioglossa | Viviparidae | <i>Cipangopaludina japonica</i> | Japanese mysterysnail | 30 | 0.095 | Juvenile,Imago | - | - | 6.3 | N.D.(0.65) | 6.3 | - |
| | | | | | Mollusca | Gastropoda | Architaenioglossa | Viviparidae | <i>Cipangopaludina chinensis laeta</i> | Mud-snail | 20 | 0.028 | Juvenile,Imago | - | - | 1.8 | N.D.(1.7) | 1.8 | - |
| | | | | | Mollusca | Gastropoda | Discopoda | Pleuroceridae | <i>Semisulcospira libertina</i> | Semisulcospira libertina | 21 | 0.019 | Imago | - | - | 1.8 | N.D.(2.0) | 1.8 | - |
| | | | | | Vertebrata | Osteichthyes | Cypriniformes | Cyprinidae | <i>Opsariichthys platypus</i> | Pale chub | 7 | 0.087 | Immature fish,Mature fish | - | - | 8.6 | N.D.(1.1) | 8.6 | - |
| | | | | | Vertebrata | Osteichthyes | Cypriniformes | Cobitidae | <i>Misgurnus anguillicaudatus</i> | Oriental weatherfish | 22 | 0.031 | Immature fish,Mature fish | - | - | 2.1 | N.D.(2.0) | 2.1 | - |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Gobiidae | <i>Gymnogobius urotaenia</i> | Goby | 48 | 0.11 | Immature fish | - | - | 14 | N.D.(2.2) | 14 | - |
| | | | | | Vertebrata | Osteichthyes | Perciformes | Gobiidae | <i>Rhinogobius kurodai</i> | Rhinogobius kurodai | 17 | 0.0082 | Immature fish,Mature fish | - | - | 8.4 | N.D.(3.6) | 8.4 | - |
| | | | | | Vertebrata | Amphibia | Anura | - | - | Frog | 158 | 0.075 | Larva(Tadpole) | - | - | 20 | N.D.(0.81) | 20 | - |
| | | | | | Vertebrata | Amphibia | Anura | Glandirana | <i>Glandirana rugosa</i> | Wrinkled frog | 5 | 0.059 | Imago | - | - | N.D. | N.D.(1.1) | N.D.(1.2) | - |
| | | | | | Vertebrata | Amphibia | Caudata | Salamandridae | <i>Cynops pyrrhogaster</i> | Cynops pyrrhogaster | 23 | 0.12 | Imago | - | - | 1.1 | N.D.(0.51) | 1.1 | - |

*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.