

Measurement Results of Radiation Monitoring Action Plan  
(Monitoring of River and Water Sources) for Supporting Restoration of the Former  
Evacuation-Prepared Area in case of Emergency  
(Minami Soma City, Tamura City, Kawauchi Village, Hirono Town, and Naraha Town)

March 19, 2012

Ministry of the Environment

Team in Charge of Assisting the Lives of Victims among the Nuclear Power Plant, Cabinet Office  
Emergency Operation Center, MEXT

1. Outline

On September 30, 2011, the designation of evacuation-prepared area in case of emergency was removed for five municipalities (Minami Soma City, Tamura City, Kawauchi Village, Hirono Town, and Naraha Town). In the context of the restoration plan for these municipalities, further enhancement of radiation monitoring is required. In response, MEXT, Team in Charge of Assisting the Lives of Victims around the Nuclear Power Plant, the Cabinet Office, Local Nuclear Emergency Response Headquarters, the Ministry of the Environment, etc. have been conducting the following types of monitoring since September 2011 as part of the measures to support the restoration of these areas in coordination with the related municipalities and Fukushima prefecture:

- (1) A vehicle-borne survey focusing on living areas, and wide-area monitoring using unmanned helicopters.
- (2) Monitoring in response to requests from respective municipalities
  - (i) Monitoring of underground water for drinking, such as well water
  - (ii) Monitoring of rivers and reservoirs

Of the above, the measurement results for the monitoring of rivers and water sources that was conducted in January 2012 (monitoring results for the third survey) has been compiled. Therefore, this will be released.

2. Specific outline of announced measurement results

Monitoring of rivers and water sources

1) Outline

Measurement of the concentration of radioactive materials contained in the water and bottom sediments in the rivers and water sources within the restricted area, which is being used as the water source for tap water in the former evacuation-prepared area in case of emergency (Minami Soma city, Kawauchi village, Hirono town, Naraha town) and the rivers and water sources upstream (monitoring period: November 2011).

Moreover, this monitoring is to be conducted at a frequency of once every 2 months from September 2011 (first monitoring (monitoring period: September 2011) was announced on November 15, 2011. Second monitoring (monitoring period: November 2011) was announced on February 17, 2012.)

## 2) Locations

Minami Soma city: Mano River; Ochiai Bridge, Majima Bridge

Niida River; Takanokura dam reservoir, Kidouchi Bridge, Sakekawa Bridge

Ota River; Yokogawa dam reservoir, Ishiwatato Bridge, Kaminouchi Bridge,

JR railroad bridge, Masuda Bridge

Kawauchi village: Kido River; Nishiyama Bridge

Hirono town: Asami River; Boda Bridge

Naraha town (inside restricted area): Kido River; Kido dam, Nagatoro Bridge, Kidogawa Bridge

Others (Iitate village): Mano River; Mano dam

Niida River; Ganbe dam reservoir, Kusano, Komiya

## 3) Results

The concentration of radioactive materials contained in the water and bottom sediments in the rivers and water sources where measurements were conducted are as given below:

### <Water quality>

Radioactive iodine (I-131): Not detected (Detection limit: 1Bq/L)

Radioactive cesium: Cs-134 Not detected (Detection limit: 1Bq/L)

Cs-137 Not detected (Detection limit: 1Bq/L)

"Emergency Preparedness for Nuclear Facilities (The Nuclear Safety Commission of Japan)," The index of drinking water based on the indicator about the restriction of food intake

Radioactive iodine (I-131): 300 Bq/kg or above

Radioactive cesium (Cs-134, Cs-137 total): 200 Bq/kg or above

### <Bottom sediment quality>

Radioactive iodine (I-131): Not detected (Detection limit: 30Bq/kg (dry mud))

Radioactive cesium: Cs-134 60 – 17,000 Bq/kg (dry mud)

Cs-137 79 – 22,000 Bq/kg (dry mud)

In addition, to confirm the surrounding environment in the vicinity of the location where the water and bottom sediments were collected, the concentration of radioactive materials in the soil and air dose rates at the riverbed, etc. were conducted, and the results are as given below:

### <Soil>

Radioactive iodine (I-131): Not detected (Detection limit: 30Bq/kg (dry))

Radioactive cesium: Cs-134 120 – 67,000 Bq/kg (dry)

Cs-137 160 – 87,000 Bq/kg (dry)

### <Air dose rate>

0.18 - 4.90 $\mu$ Sv/h

#### 4) Analysis results for river and water sources for each location

(Composition)

Monitoring Results of River and Water Sources

1) Monitoring Results Table of River and Water Sources

2) Measurement Location Map for Each Water System

- Mano River water system measurement location map

\* Mano River (Ochiai Bridge, Majima Bridge), Mano Dam

- Niida River water system measurement location map

\* Kusano, Komiya, Kidouchi Bridge, Sakekawa Bridge, Ganbe Dam Reservoir, Takanokura Dam Reservoir

- Ota River water system measurement location map

\* Ishiwatato Bridge, Kaminouchi Bridge, Masuda Bridge, JR Railroad Bridge, Yokogawa Dam Reservoir

- Kido River and Asami River water system measurement location map

\* Nishiyama Bridge, Nagatoro Bridge, Kido River Bridge, Boda Bridge (Asami River), Kido Dam

<Reference>

Radiation Monitoring Action Plan for Supporting Restoration of the Former Emergency Evacuation Preparation Areas (Minami Soma city, Tamura city, Kawauchi village, Hirono town, and Naraha town) (Announced on October 3, 2011)