Radiation Monitoring of Public Water Areas

Radioactive Material Monitoring in and around Fukushima Prefecture (Public Water Areas)

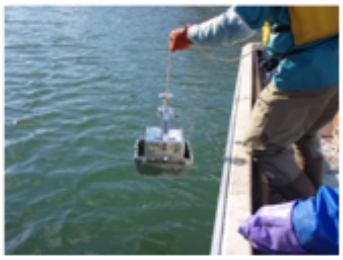
[Coverage]
Whole Area of Fukushima, Miyagi, Ibaraki, Tochigi and Gunma Prefectures, and part of Iwate and Chiba Prefectures, etc.

[Monitoring points]
602 locations

[Radionuclide analyses]
- Samples
  Water, sediments and Surrounding environment (soil)
- Analyzed radionuclides
  Radioactive cesium, Radioactive strontium (only for some water and sediment samples), etc.

[Frequencies]
Twice to 10 times a year depending on the contamination status, etc.

(River: water sampling)



(Lake: sediments sampling)

Prepared based on the Results of the FY2022 Radioactive Material Monitoring in the Water Environment (Public Water Areas) (Summary) by the Ministry of the Environment
https://www.env.go.jp/jishin/monitoring/results_r-pw-r04.html (in Japanese)

Radioactive material monitoring was conducted at rivers, lakes and coastal areas in Miyagi, Ibaraki and other Prefectures, centered on Fukushima Prefecture, where contamination with radioactive materials was suspected.

In FY2022, monitoring covered 602 locations and analysis was conducted for radioactive cesium and strontium in water, etc.

Monitoring results of radioactive cesium concentrations in water are as follows. Monitoring results for sediments (mud of the bottom of rivers, lakes, etc.) are shown in p.44 of Vol. 2, “Radioactive Material Monitoring in the Water Environment (River Sediments)” through to p.46 of Vol. 2, “Radioactive Material Monitoring in the Water Environment (Coastal Area Sediments).”

[Monitoring results of radioactive cesium concentrations in water]

River water samples (2,010 samples): Radioactive cesium concentrations were all below the detection limit.

Lake/reservoir water samples (1,378 samples): Radioactive cesium concentrations were all below the detection limit except for those in 9 samples collected at 2 locations in the Hamadori District.

Coastal samples (534 samples): Radioactive cesium concentrations were all below the detection limit.

- At all locations where radioactive cesium was detected, amounts of suspended solids (SS) and turbidity were relatively large.

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Radiation Monitoring of Public Water Areas

Radioactive Material Monitoring in the Water Environment (River Sediments)

Distribution of Radioactive Cesium Concentrations in River Sediments (FY2022)

[Number of collected samples]

Radioactive cesium concentrations [Bq/kg(dry)]	Iwate Prefecture	Miyagi Prefecture	Fukushima Prefecture, Hamadori District	Fukushima Prefecture, Nakadori District	Fukushima Prefecture, Aizu District	Ibaraki Prefecture	Tochigi Prefecture	Gunma Prefecture	Chiba Prefecture	Saitama Prefecture	Tokyo Metropolis	Total	Percentage
Less than 1,000	80	196	305	324	164	212	278	214	199	8	8	1,988	98.9%
1,000 or more but less than 2,000	0	0	18	0	0	0	0	0	1	0	0	19	0.9%
2,000 or more but less than 3,000	0	0	3	0	0	0	0	0	0	0	0	3	0.1%
3,000 or more but less than 4,000	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
4,000 or more but less than 5,000	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
5,000 or more but less than 10,000	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
10,000 or more	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Total	80	196	326	324	164	212	278	214	200	8	8	2,010	100.0%

Prepared based on the FY2022 Radioactive Material Monitoring in the Water Environment (Environmental Management Bureau, Ministry of the Environment)

Radioactive cesium concentrations in river sediments were measured in FY2022 as in the previous year.

A total of 2,010 samples, including 814 samples collected in Fukushima Prefecture and others collected in Iwate, Miyagi, Ibaraki, Tochigi, Gunma, Chiba and Saitama Prefectures and the Tokyo Metropolis, were surveyed.

The survey results showed that concentrations of radioactive cesium detected in approx. 99% of these samples were less than 1,000 Bq/kg (dry).

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Radiation Monitoring of Public Water Areas

Radioactive Material Monitoring in the Water Environment (Lake and Reservoir Sediments)

Distribution of Radioactive Cesium Concentrations in Lake and Reservoir Sediments (FY2022)

[Number of collected samples]

Radioactive cesium concentrations [Bq/kg(dry)]	Miyagi Prefecture	Fukushima Prefecture, Hamadori District	Fukushima Prefecture, Nakadori District	Fukushima Prefecture, Aizu District	Ibaraki Prefecture	Tochigi Prefecture	Gunma Prefecture	Chiba Prefecture	Total	Percentage
Less than 1,000	76	93	54	154	76	31	85	28	597	71.7%
1,000 or more but less than 2,000	0	40	13	11	0	1	9	4	78	9.4%
2,000 or more but less than 3,000	0	17	4	15	0	0	2	0	38	4.6%
3,000 or more but less than 4,000	0	21	6	11	0	0	0	0	38	4.6%
4,000 or more but less than 5,000	0	9	1	1	0	0	0	0	11	1.3%
5,000 or more but less than 10,000	0	28	1	2	0	0	0	0	31	3.7%
10,000 or more	0	40	0	0	0	0	0	0	40	4.8%
Total	76	248	79	194	76	32	96	32	833	100.0%

Prepared based on the FY2022 Radioactive Material Monitoring in the Water Environment (Environmental Management Bureau, Ministry of the Environment)

Radioactive cesium concentrations in lake and reservoir sediments were measured in FY2022 as in the previous year.

A total of 833 samples, including 521 samples collected in Fukushima Prefecture and others collected in Miyagi, Ibaraki, Tochigi, Gunma and Chiba Prefectures, were surveyed.

The survey results showed that concentrations of radioactive cesium detected in approx. 72% of these samples were less than 1,000 Bq/kg (dry).

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Radiation Monitoring of Public Water Areas

Radioactive Material Monitoring in the Water Environment (Coastal Area Sediments)

Distribution of Radioactive Cesium Concentrations in Coastal Area Sediments (FY2022)

[Number of collected samples]

Radioactive cesium concentrations [Bq/kg(dry)]	Iwate Prefecture	Miyagi Prefecture	Fukushima Prefecture	Ibaraki Prefecture	Chiba Prefecture	Tokyo Metropolis	Total	Percentage
Less than 1,000	4	52	150	20	23	18	267	100.0%
1,000 or more but less than 2,000	0	0	0	0	0	0	0	0.0%
2,000 or more but less than 3,000	0	0	0	0	0	0	0	0.0%
3,000 or more but less than 4,000	0	0	0	0	0	0	0	0.0%
4,000 or more but less than 5,000	0	0	0	0	0	0	0	0.0%
5,000 or more but less than 10,000	0	0	0	0	0	0	0	0.0%
10,000 or more	0	0	0	0	0	0	0	0.0%
Total	4	52	150	20	23	18	267	100.0%

Prepared based on the FY2022 Radioactive Material Monitoring in the Water Environment (Environmental Management Bureau, Ministry of the Environment)

Radioactive cesium concentrations in sediments in coastal areas were measured in FY2022 as in the previous year.

A total of 267 sediment samples collected in coastal areas, including 150 samples collected in Fukushima Prefecture and others collected in Iwate, Miyagi, Ibaraki, Chiba Prefectures and the Tokyo Metropolis, were surveyed.

The survey results showed that concentrations of radioactive cesium detected in all of these samples were less than 1,000 Bq/kg (dry).

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