

Sea Area Monitoring in Wider Areas

May 6, 2011

Ministry of Education, Culture, Sports, Science and Technology

Fisheries Agency

Until now, The Tokyo Electric Power Company, Inc. has been taking water samples off the coast at depths up to 30m, within 30km from Fukushima Dai-ichi NPP. In the range of 30 to 40 km from Fukushima Dai-ichi NPP (excluding coastal areas with water depth of 30m or less) and off the coast of Ibaraki Prefecture, water samples have been collected by ships of the Japan Agency for Marine-Earth Science and Technology or the Japan Coast Guard. On the other hand, radioactive substances are forecast to spread in the sea, so there is a need to perform wider sea area monitoring.

Therefore, obtain the cooperation of related ministries, agencies and institutions, and for the time being, we would like to have sea area monitoring in a wider area, as follows.

1. Ministry of Education, Culture, Sports, Science and Technology “Marine Environment Radioactivity Comprehensive Assessment Project” Marine Ecology Research Institute Survey (Mid May to July) [Attachment 1]

As part of stronger sea area monitoring in response to the “Enforced Plan on Environmental Monitoring” (April 22, 2011), a wide area survey (sea water, seabed sediment, marine air dust) off the coasts of Miyagi, Fukushima and Ibaraki prefectures by the “Marine Environment Radioactivity Comprehensive Assessment Project” will be done, to understand the status of marine pollution by radioactive substances due to the Fukushima Dai-ichi NPP accident.

The Marine Ecology Research Institute will execute the project. (Sample analysis will be done by the Japan Atomic Energy Agency.)

2. Sea Area Monitoring by Marine Ecology Research Institute (Mid May to July) [Attachment 2]

The wide area survey described in 1. above will also take samples in wider sea areas off the coasts of Miyagi, Fukushima and Ibaraki prefectures. This will survey the status of marine pollution by radioactive substances due to the Fukushima Dai-ichi NPP accident (especially consistency with radioactivity concentration distribution simulation). (The plan is to have the samples analyzed by the Japan Chemical Analysis Center.)

3. Survey in Cooperation with Fisheries Agency (1. Mid to late May / 2. Late May to Late June) [Attachment 3]

In addition to the work described in 1. and 2. above, in coastal sea areas, under contract by the Ministry of Education, Culture, Sports, Science and Technology, a chartered ship of the Fisheries Research Agency will take water samples when it does its resource assessment survey, which will be analyzed by the Marine Ecology Research Institute. This institute will survey the status of marine pollution by radioactive substances due to the Fukushima Dai-ichi NPP accident (especially consistency with the radioactivity concentration distribution simulation).

4. Expansion of Marine Products Monitoring by the Fisheries Agency (May onwards)

[Attachment 4]

In order to strengthen the radioactive substance surveys of marine products, the Fisheries Agency created the “Basic Policy on Radioactive Substance Inspections of Marine Products,” and notified related prefectures, etc.

5. Sea Area Monitoring by The Tokyo Electric Power Company, Inc. (Mid May to July)

In addition to surveys conducted from an early stage at the Fukushima Prefecture coast and 15km offshore from Fukushima Dai-ichi NPP, monitoring (of sea water and seabed sediment) will be done at the Ibaraki Prefecture coast and 30km offshore from Fukushima Dai-ichi NPP (excluding places near the measurement sites described in 1. above), to gain an understanding of the status of marine pollution by radioactive substances due to the Fukushima Dai-ichi NPP accident and an especially detailed understanding of the status of sea areas which could be greatly affected by the nuclear power accident.

(Reference) Overview of the monitoring described above (3. 2 is to be arranged) [Attachment 5]

May 6, 2011

Sea Area Monitoring of “Ocean Environment Radioactivity Comprehensive Assessment Project” (Marine Ecology Research Institute Survey)

Main executing body: Ministry of Education, Culture, Sports, Science and Technology

Executing institution: Marine Ecology Research Institute

(Analyzing institution: National Institute of Radiological Sciences)

Survey period: May 8 to July 24 (Results announced: Biweekly starting 4th week in May)

1. Goal of Marine Ecology Research Institute Survey

As part of stronger sea area monitoring in response to the “Enforced Plan on Environmental Monitoring” (April 22, 2011), a wide area survey off the coasts of Miyagi, Fukushima and Ibaraki prefectures will be done by the “Marine Environment Radioactivity Comprehensive Assessment Project,” to understand the status of marine pollution by radioactive substances due to the Fukushima Dai-ichi NPP accident.

2. Marine Ecology Research Institute Survey Action Plan (See map on next page)

Establish 12 lines A to L off the coasts of Miyagi, Fukushima and Ibaraki prefectures, establish three to four measuring sites on each line, and do monitoring twice monthly.

This project’s executing institution is the Marine Ecology Research Institute. (Analysis of samples will be done by the National Institute of Radiological Sciences)

The plan is to have analysis results announced twice monthly by the Ministry of Education, Culture, Sports, Science and Technology.

3. Marine Ecology Research Institute Survey Monitoring Schedule

Use two survey ships, divide the sea area into two parts (northern and southern), and do the survey in six periods of about one week each.

1. May 8 – 14 Perform survey → 4th week in May Announce analysis results (planned)

2. May 22 – 29 Perform survey → 2nd week in June Announce analysis results (planned)

[Attachment 1]

3. June 5 – 12 Perform survey → 4th week in June Announce analysis results (planned)

4. June 19 – 26 Perform survey → 1st week in July Announce analysis results (planned)

5. July 3 – 10 Perform survey → 3rd week in July Announce analysis results (planned)

6. July 17 – 24 Perform survey → 1st week in August Announce analysis results (planned)

4. Marine Ecology Research Institute Survey Monitoring Items

(1) Radioactivity concentration of seawater (outer layer, middle layer*, lower layer):

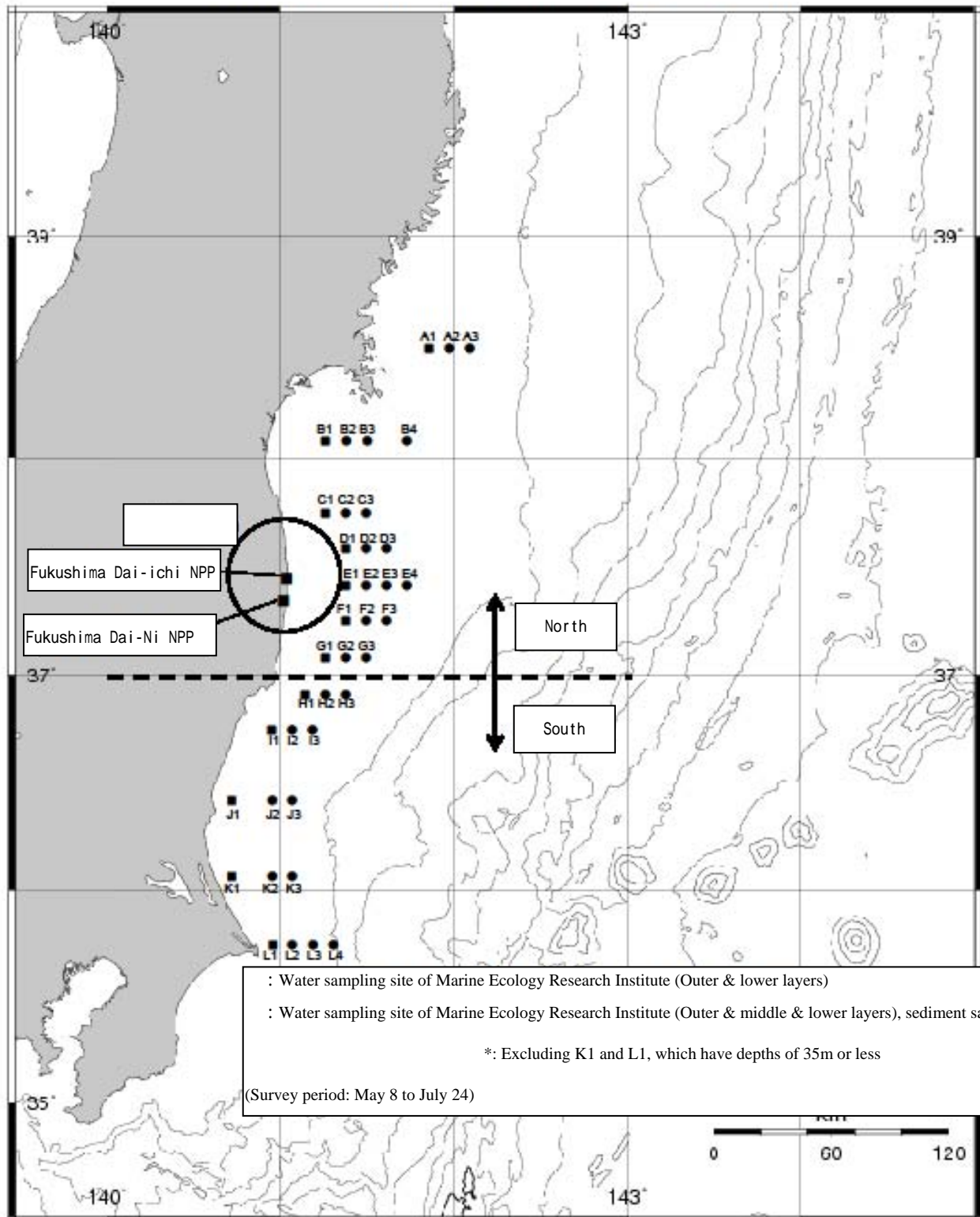
Take water samples at all measurement sites

*For the middle layer, take seabed sediment samples at 10 measurement sites closest to land (excluding K1 and L1, which have depths of 35m or less).

(2) Radioactivity concentration of seabed sediment: For each line A to L, take samples at the 12 measurement sites closest to land.

(3) Radioactivity concentration of airborne dust: Take samples in northern sea areas (each line A to G).

Sites for Measurements by Charter Ship of Marine Ecology Research Institute



Monitoring by the Japan Agency for Marine-Earth Science and Technology (JAMSTEC Survey)

Main executing body: Ministry of Education, Culture, Sports, Science and Technology

Executing institution: Japan Agency for Marine-Earth Science and Technology (Analyzing
institution: Japan Chemical Analysis Center (planned))

Survey period: May 8 to July 20 (Results announced: Biweekly starting 3rd week in May)

1. Goal of JAMSTEC Survey

As part of stronger sea area monitoring in response to the “Enforced Plan on Environmental Monitoring” (April 22, 2011), a ship of the Japan Agency for Marine-Earth Science and Technology will be used to perform monitoring in a wide area off the coasts of Miyagi, Fukushima and Ibaraki prefectures. This is to understand the status of marine pollution by radioactive substances due to the Fukushima Dai-ichi NPP accident (especially consistency with radioactivity concentration distribution simulation)).

2. JAMSEEC Survey Monitoring Action Plan (See map on next page)

Establish nine measurement sites off the coasts of Miyagi, Fukushima and Ibaraki prefectures, and do monitoring twice monthly at each measurement site.

Analysis results will be announced approximately twice monthly by the Ministry of Education, Culture, Sports, Science and Technology.

3. JAMSTEC Monitoring Schedule

Do the survey in six periods of about 10 days each, by a JAMSTEC survey ship.

1. May 8 – 17 Perform survey → 3rd week in May Announce analysis results (planned)

2. May 21 – 31 Perform survey → 1st week in June Announce analysis results (planned)

[Attachment 2]

3. June 1 – 11 Perform survey → 3rd week in June Announce analysis results (planned)

4. June 12 – 22 Perform survey → 5th week in June Announce analysis results (planned)

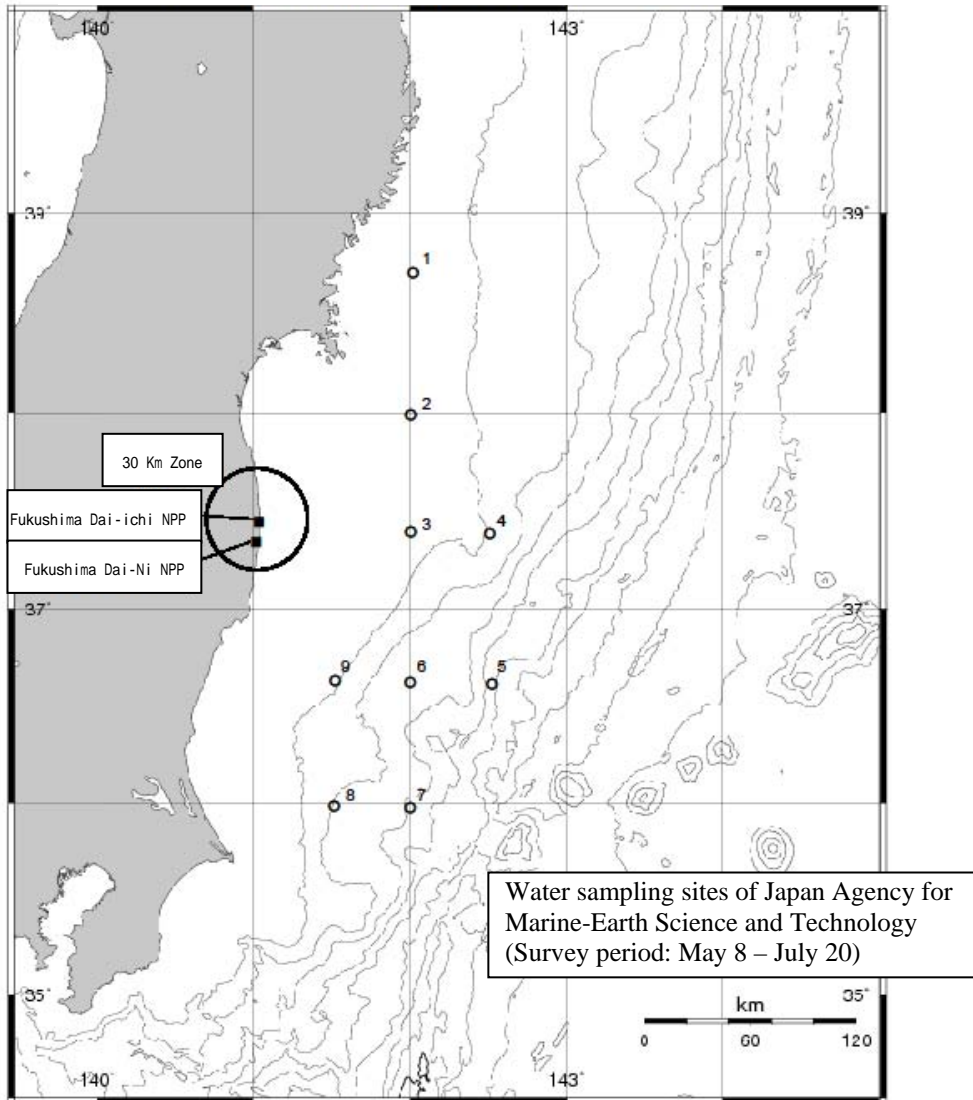
5. June 26 – July 6 Perform survey → 2nd week in July Announce analysis results (planned)

6. July 10 – 20 Perform survey → 5th week in July Announce analysis results (planned)

4. JAMSTEC Monitoring Items

- (1) Radioactivity concentration of sea water (outer layer and 100m depth)
- (2) Marine air dose rate

Sites of Water Sampling by Research Ship of
Japan Agency for Marine-Earth Science and Technology

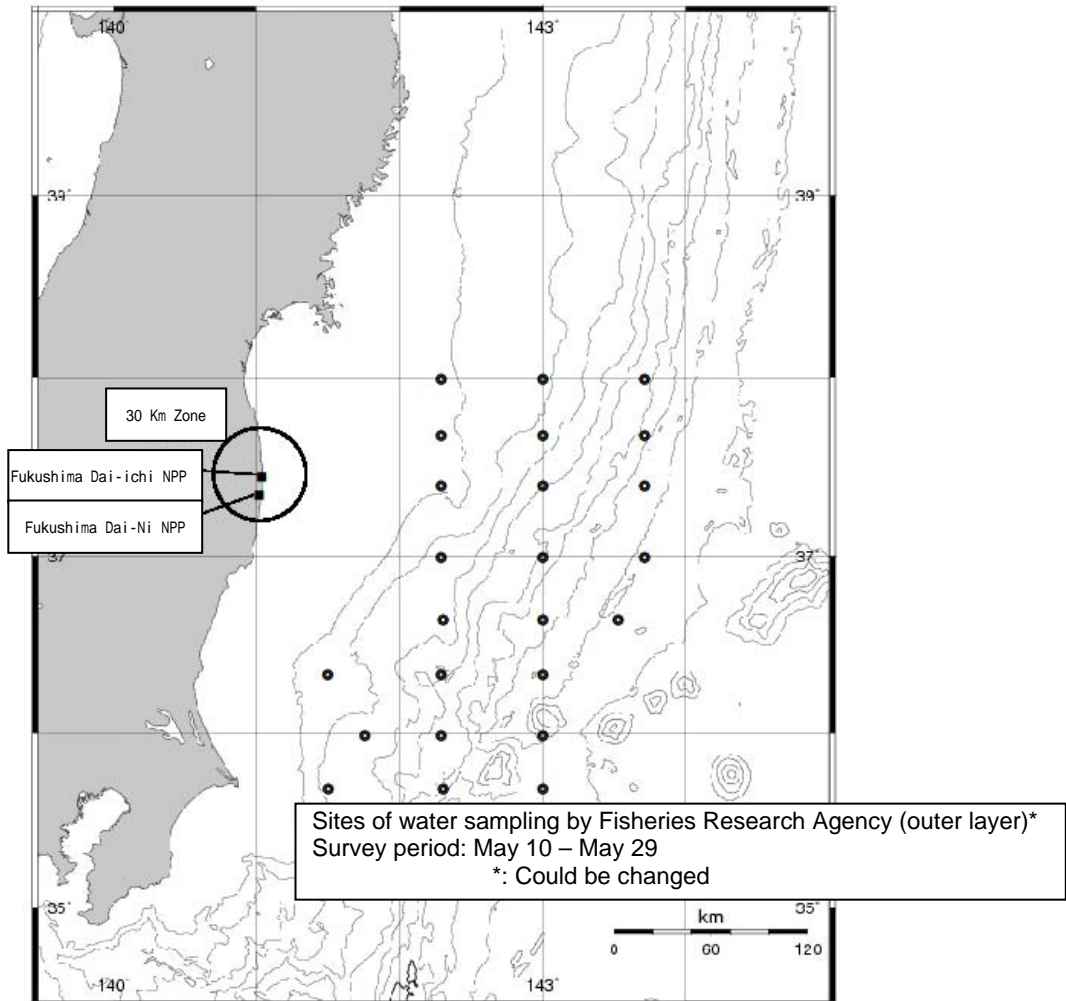


Survey in Cooperation with Fisheries Agency

Executing institution: Fisheries Research Agency (Analyzing institution: Mutsu Institute for Oceanography, Japan Agency for Marine-Earth Science and Technology, etc.)

Survey period: May 10 to May 29 (Results announced: Early June)

Sites of Water Sampling by a Chartered Ship (Hokuho-Maru) of the Fisheries Research Agency



May 2, 2011

Fisheries Agency

Basic Policy on Radioactive Substance Inspections of Marine Products

Radioactive substance inspections of marine products in response to the Fukushima NPP accident shall be as follows.

1. Basic Policy of Inspections

(1) Inspections of Coastal Varieties

1. Kanagawa Prefecture to Southern Fukushima Prefecture

- Consider fishing grounds formation offshore from one's own prefecture, establish the sea areas subject to inspection, and do sampling once weekly (once biweekly for Kanagawa Prefecture and the islands within the Tokyo administrative district in principle, at each sea zone's main unloading port (in case of sampling at a market, it shall be done while confirming the fish catch sea areas)).
- For varieties subject to inspection, select the main fish catches for each fishing season, corresponding to actual local conditions. Select so that habitats are covered broadly, such as outer layer (e.g. sand eel), middle layer (e.g. common sea bass, porgy), and bottom layer (e.g. righteye flounder, salt-water eel). Take into account that until now, greater detections of radioactive substances have been seen in varieties which swim in the outer layer.

2. Northern Fukushima Prefecture and Northwards

- Do inspections before restarting operations. Then decide on restarting operations, based on results of analysis. If operations are restarted, establish the sea areas, and do inspections once weekly at the main unloading port for each sea zone (once biweekly for Iwate Prefecture and northwards), in principle.
- The way of thinking on subject varieties is the same as described in 1. above.

(2) Wide Area Migratory Fish Varieties (Bonito, Mackerel, Saury, etc.)

Inspections shall be done in cooperation with related industry organizations and prefectures with unloading sites. (Inspection systems are now being coordinated with industry organizations, etc., especially for fishing grounds which move northwards. Also, arrange to use the "Hokusho Maru" test operation ship of the north pacific roundhall net fishing cooperative.).

1. Bonito

- From fishing ground formation off the Izu Islands and Boso region (around mid May) onwards, do inspections once weekly in principle (do sampling at fishing ports in Chiba Prefecture (Choshi and Katsuura), where unloading is expected).
- In cases where fishing ground formation off Fukushima Prefecture (usually

about 240 – 320km offshore) is forecast (around early June), do advance sampling by a test operation ship. Decide on performing operations in that fishing ground, based on analysis results. If operations are continued, do sampling once weekly at the unloading port, in principle.

- Also in cases where fishing grounds are formed in Miyagi Prefecture and northwards, do inspections once weekly, in principle.

2. Sardine, Mackerel

- While fishing grounds are formed off Chiba Prefecture, continue sampling at a fishing port (Choshi) in Chiba Prefecture where unloading is expected.
- In cases where fishing ground formation off Ibaraki Prefecture is forecast (May), do sampling by the survey ship of that prefecture's marine products testing site, while obtaining the cooperation of Ibaraki Prefecture. Decide on performing operations based on analysis results. If operations are continued, do sampling once weekly in principle at the unloading port.
- In cases where fishing ground formation is forecast off Fukushima Prefecture (around June), do sampling by a test operation ship. Based on analysis results, take the same action as described above.
- Also in cases where fishing grounds are formed in Miyagi Prefecture and northwards, do inspections once weekly, in principle.

3. Saury and Salmon Schools Heading South

- Summer onwards, do inspections once weekly, in principle.

2. Sampling Amounts

- Ensure sufficient sampling amounts in doing inspections. At least 5kg for each fish variety, in principle.
- Record the place and time a sample is taken.

3. Points to Consider

- In inspecting marine products, due to the effects of marine product mobility, climate, etc., it is not necessarily possible to catch determined varieties at defined locations and times. Therefore, sampling shall be planned with plenty of margin.

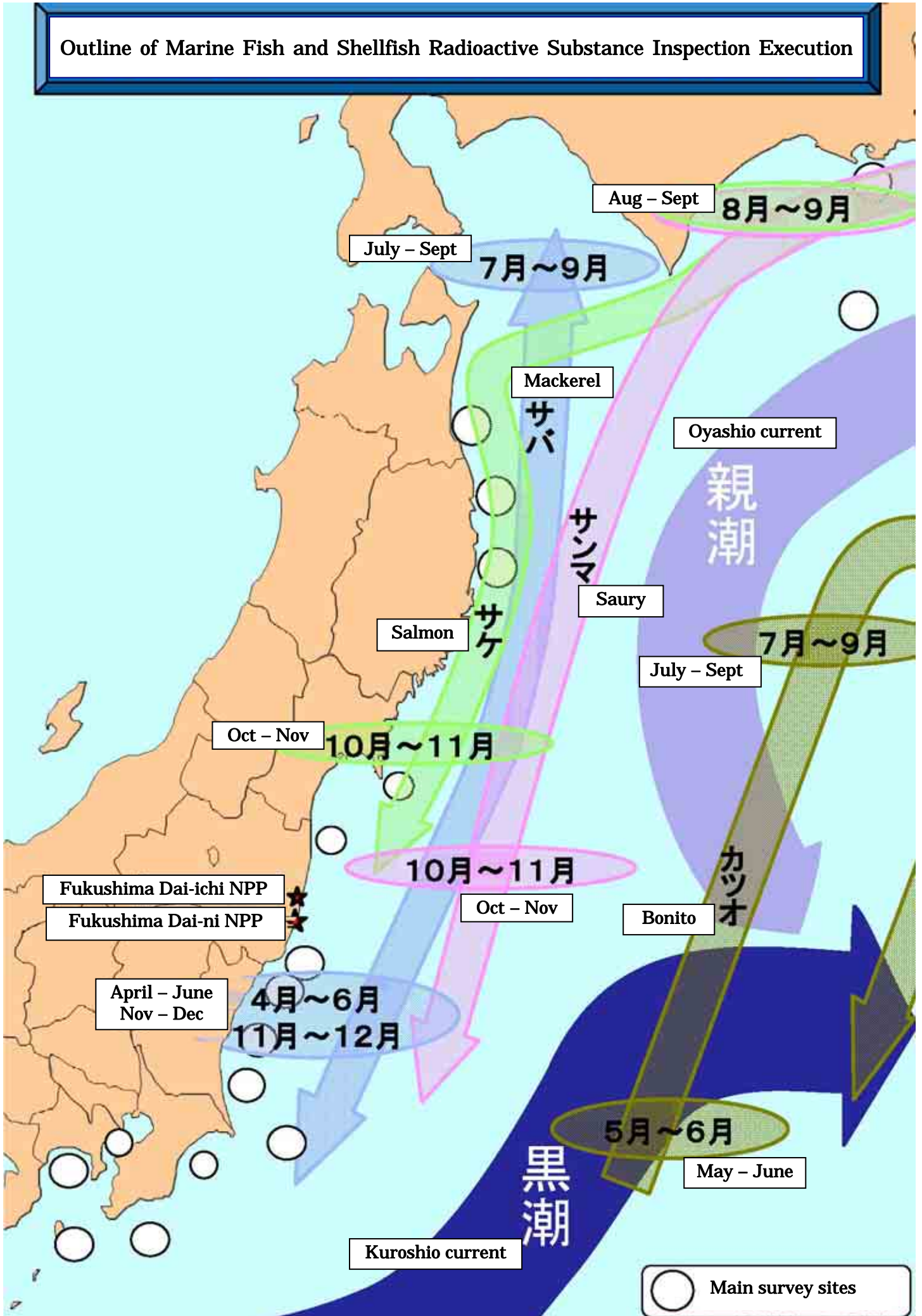
4. Announcement of Inspection Results, etc.

- Announcement of inspection results and notification to the Ministry of Health, Labour and Welfare shall be done by the prefecture which has the sea areas where sampling was done, or the prefecture with unloading ports where sampling was done.

5. If Inspection Results are Obtained which Exceed Tentative Regulatory Values for a Wide Area Migratory Fish Variety

- If inspection results obtained exceed tentative regulatory values, a demand shall be made for related fishing industries to self-regulate operations in sea areas surrounding where that inspection sample which produced those results was caught, for the time being.
- Sampling by a test operation ship shall be done once weekly in principle. If the results are below the tentative regulatory values three times consecutively, then restart operations.

Outline of Marine Fish and Shellfish Radioactive Substance Inspection Execution



Overview of Sea Area Monitoring in Wider Areas

