

○ **Inspections were strengthened by increasing the fish species to be inspected and the inspection frequencies.**

- The fish species in which radioactive cesium exceeding 50 Bq/kg has been detected and major fishery products are intensively inspected.
- Inspection results of neighboring prefectures are taken into account.

Coastal fish (e.g., Japanese sandlance, seabass, flounders, etc.)	Sea areas off prefectures are divided into zones in consideration of catch landing, fishery management and seasons, etc. and samples are collected at major ports. Samples are collected considering the habitats of fish such as surface layer, middle layer or bottom layer.
Migratory fish (e.g., Skipjack tuna, sardines and mackerels, Pacific saury, etc.)	Fishing grounds are divided into zones off each prefecture from Chiba to Aomori (by lines extending along the prefectural borders to the east) in consideration of migration of fish, etc., and samples are collected at major ports of each zone.
Inland water fish (e.g., YAMAME (land-locked cherry salmon), Japanese smelt, Ayu sweetfish, etc.)	Prefectural areas are divided into zones appropriately in consideration of fishery rights, and samples are collected in major zones.

Prepared based on the "Responses at Farmland" by the Ministry of Agriculture, Forestry and Fisheries (MAFF)

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Inspections of radioactivity in fishery products cover major fish species and fishing grounds, and species in which radioactive cesium exceeding 50 Bq/kg has been detected.

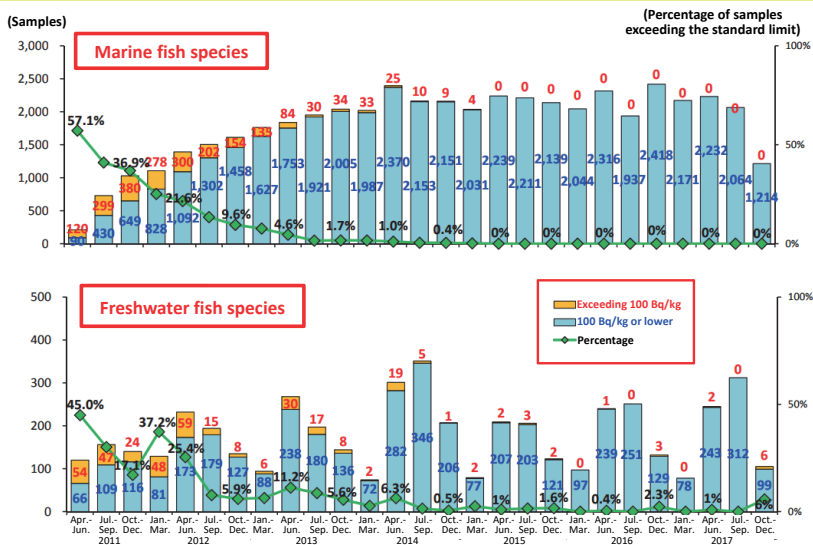
Analysis of accumulated inspection results, etc. has revealed that radioactive contamination levels differ depending on the habitats of relevant fish species, etc.

For example, contamination levels differ depending on whether the habitat is close to the sea surface, or the sea bottom, or in between. Therefore, inspections are conducted by classifying the fish species based on their habitats and fishing seasons, while also taking into account inspection results of neighboring prefectures. Regarding migratory fish, such as bonito and Pacific saury, which migrates over a wide area in the ocean, inspections are conducted broadly by multiple prefectures based on their migratory routes.

Included in this reference material on March 31, 2013

Updated on March 31, 2014

Inspection Results for Fishery Products (Marine Fish Species Caught off the Coast of Fukushima Prefecture and Freshwater Fish Species Caught in Fukushima Prefecture)



As of November 28, 2017

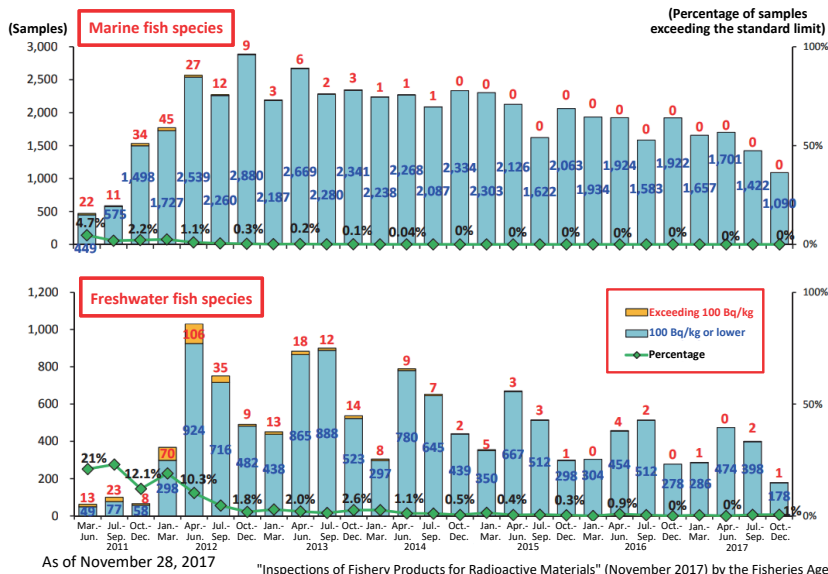
"Inspections of Fishery Products for Radioactive Materials" (November 2017) by the Fisheries Agency

The percentage of samples exceeding the standard limit (100 Bq/kg) was 57% for marine fish and 45% for freshwater fish during the period from April to June 2011, but the percentage decreased by half in one year after the accident. Since April 2012, inspections have been focused on the fish species in which radioactive cesium concentrations exceeding 50 Bq/kg had been detected, and the percentage of samples with radioactive cesium concentrations exceeding the standard limit is continuing to decrease. There have been no such marine fish samples since FY2015, but some freshwater fish samples still show radioactive cesium concentrations exceeding the standard limit.

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Updated on February 28, 2018

Inspection Results for Fishery Products (Marine Fish Species Caught off the Coast of Prefectures Other than Fukushima Prefecture and Freshwater Fish Species Caught in Prefectures Other than Fukushima Prefecture)



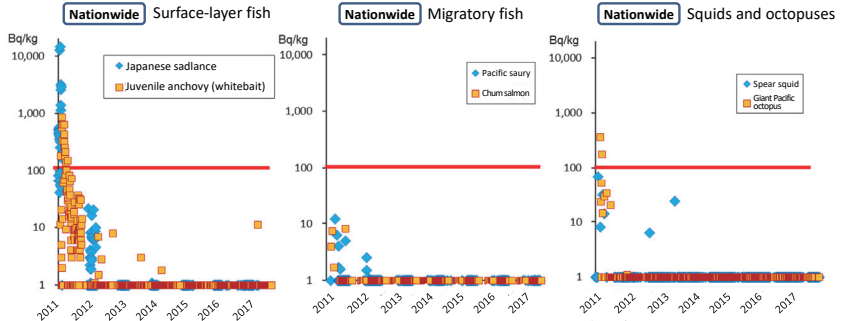
The percentage of samples with radioactive cesium concentrations exceeding the standard limit (100 Bq/kg) has also been decreasing among samples collected off or in prefectures other than Fukushima Prefecture. There have been no such marine fish samples since FY2015, but some freshwater fish samples still show radioactive cesium concentrations exceeding the standard limit.

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Updated on February 28, 2018

Trends of Radioactive Cesium Concentrations by Fish Species (1/2)

- At present, all samples of surface-layer fish, such as Japanese sand lance and whitebait, migratory fish such as bonito and tunas, chum salmon and Pacific saury, bottom fish such as flounders, flatfishes and cods, as well as squids and octopuses, shrimps and crabs, shellfish and seaweeds, show radioactive cesium concentrations below the standard limit in all prefectures.
- The environment of habitats and feeding habits correlate to changes in radioactive cesium concentrations in the respective groups of fish.



Results of inspections from March 24, 2011, to December 26, 2017, compiled by the Fisheries Agency

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The above figures show inspection results concerning radioactive cesium concentrations in fish by fish species with different habitats and feeding habits.

Japanese sand lance, whitebait and other species of surface-layer fish showed high radioactive cesium concentrations immediately after the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS, but radioactive cesium concentrations in samples of these fish species at present are all below the standard limit.

Regarding Pacific saury, chum salmon and others that migrate over a wide area in the ocean, radioactive cesium exceeding 100 Bq/kg or exceeding 50 Bq/kg was not detected at all even immediately after the accident.

Marine invertebrates, such as squid and octopus, also showed high radioactive cesium concentrations immediately after the accident, but declines in radioactive cesium concentrations in samples of marine invertebrates were more prompt than in the case of surface-layer fish, and their radioactive cesium concentrations at present do not exceed even 50 Bq/kg. This is considered to be due to the nature of marine invertebrates through which ions freely move in and out to seawater. Due to this nature, radioactive cesium concentrations in marine invertebrates decrease according to radioactive cesium concentration decreases in seawater.

In this manner, the results of the past inspections show correlation between the environment of habitats and feeding habits and changes in radioactive cesium concentrations in the respective groups of fish.

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Trends of Radioactive Cesium Concentrations by Fish Species (2/2)



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Inspections of shrimps and crabs (horsehair crab, snow crab and North Pacific krill) showed no results exceeding 100 Bq/kg even immediately after the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS. Most results were below the detection lower limit. Regarding shellfish (Japanese littleneck clam, common orient clam, surf clam, and oysters) and seaweeds (Wakame seaweed, laver and sea tangle), radioactive cesium exceeding the standard limit was detected in some samples immediately after the accident, but radioactive cesium concentrations decreased promptly thereafter. Radioactive cesium concentrations in samples of bottom fish (flatfish and flounders, etc.) caught off the coast of Fukushima Prefecture decreased over time and are all below the standard limit at present.

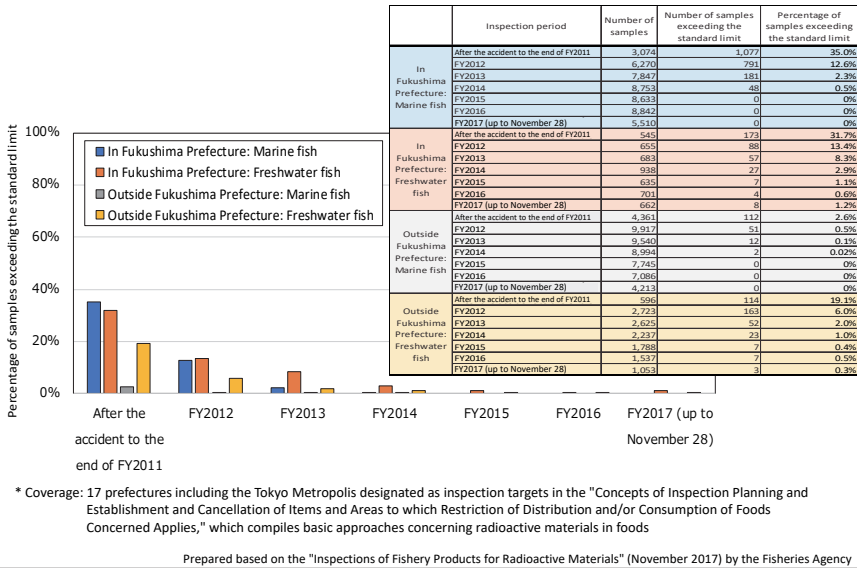
Inspection results for wild freshwater fish caught in Fukushima Prefecture (the figure right at the bottom) show that the percentage of samples in which radioactive cesium concentrations exceeded 100 Bq/kg was 51.3% in FY2011 but decreased as low as 1.4% in FY2016. Although some samples still show values exceeding 100 Bq/kg, but the percentage of samples exceeding the standard limit is decreasing over time.

(Prepared based on the "Inspections of Fishery Products for Radioactive Materials (December 2017)" on the website of the Fisheries Agency)

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Updated on February 28, 2018

Chronological Changes in Inspection Results for Fishery Products



Inspections of fishery products have focused on the fishery products in which radioactive cesium concentrations exceeding 50 Bq/kg were detected in the previous fiscal year and major fishery products in relevant prefectures. Monitoring is conducted once a week or so in principle. The number of fishery product samples showing radioactive cesium concentrations exceeding the standard limit is decreasing gradually.

Analysis of inspection results revealed that radioactive cesium exceeding the standard limit was not detected in fish that migrate over a wide area in the ocean even immediately after the accident at Tokyo Electric Power Company (TEPCO)'s Fukushima Daiichi NPS. Since FY2015, there have been no samples of marine fish species caught off the coast of Fukushima Prefecture and other prefectures that contained radioactive cesium exceeding the standard limit.

Some freshwater fish caught in and outside Fukushima Prefecture still show radioactive cesium concentrations exceeding the standard limit even in FY2017, but the number of such fish is decreasing year by year.

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Provision of Information on Place of Product Origin to Consumers

○ Since October 2011, it has been recommended to display places of origin of fresh fishery products, mainly those caught on the Pacific side of eastern Japan, by dividing the sea areas into 7 zones and clarifying these zone names.

Zones for migratory fish

[Migratory fish species]
Salmon shark, blue shark, shortfin mako shark, sardines, salmon and trout, Pacific saury, Japanese amberjack, Japanese jack mackerel, marlins, mackerels, bonito and tunas, Japanese flying squid, spear squid, and neon flying squid

Line of 200 nautical miles off the coast of Honshu

- (i) Pacific Ocean off the coast of Hokkaido and Aomori
- (ii) Off the coast of Sanriku (northern part)
- (iii) Off the coast of Sanriku (southern part)
- (iv) Off the coast of Fukushima
- (v) Off the coast of Hitachi and Kashima
- (vi) Off the coast of Boso
- (vii) Northern part in the Pacific Ocean (in Japanese waters) (Northern part in the Pacific Ocean off the coast of Japan)
- (viii) Due east line extending to the east from Nojimizaki, Chiba

Display example

Indicate the water zone of catch on a label

Indicate the water zone of catch on a label

Prepared based on the "Responses at Farmland" by the Ministry of Agriculture, Forestry and Fisheries (MAFF)

Since October 2011, the national government has been encouraging producers to display places of origin of fresh fishery products, mainly those caught on the Pacific side of eastern Japan so that consumers can easily understand where the relevant fishery product was caught. Related parties are providing consumers with information on inspections of fishery products for radioactive materials in an easy-to-understand manner, thereby striving to prevent harmful rumors.

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