# FY2012 Trends in Fisheries

FY2013 Fishery Policy

White Paper on Fisheries: Summary

This document is a report on fishery trends and the policy implemented during FY2012 in accordance with the provisions of Article 10, paragraph (1) of the Fisheries Basic Act (Act No. 89 of 2001) as well as the policy to be implemented in FY2013 in accordance with the provisions of paragraph (2) of said Article.

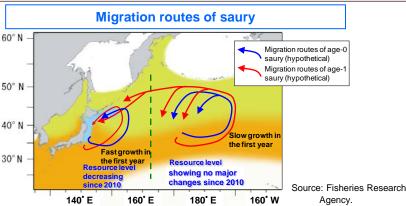
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### Topics: Fisheries in FY2012

### Topic 1: Poor catch of commercially important fish species (chum salmon, saury, and Japanese eel) and countermeasures

- FY2012 saw poor catches of commercially important fish species, such as chum salmon, saury, and Japanese eel. Various causes have been suggested, including a rise in the seawater temperature and changes in habitat conditions. It is important to further investigate the causes and, at the same time, take appropriate countermeasures against them.
- (1) Chum salmon: The chum salmon populations coming back to Japan's Pacific coast decreased, and its size became smaller nationwide. In FY2013, the Fisheries Agency will start measures that include research on the behavior of salmon juveniles in coastal areas after they are released in rivers for migration to the sea.
- (2) Saury: The landed value of saury was low, because aggregation of saury was not enough for forming fishing ground at the start of the fishing season and there was a decrease in large-sized saury. As the number of foreign fishing vessels catching saury in the high seas is also increasing, it is important to promote international resource management under the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean (currently under ratification procedures in related countries).
- (3) Japanese Eel: The catch of juvenile eels (glass eels) has been poor for three consecutive years in Japan, China, Taiwan, and other East Asian countries/regions. The price of the glass eels for aquaculture seeds has skyrocketed, and the prices of broiled eels and other eel products soared. Since June 2012, the Fisheries Agency has implemented the following emergency measures for eel in collaboration with related countries/entitties and organizations: (i) business recovery measures for aquaculture operators, (ii) resource stocking efforts and improvement of habitat environment in rivers, (iii) domestic and international resource management, and (iv) reinforcement of research and study.



Migration routes of Japanese eel ery ground Breeding ground West Mariana Ridge

### Topic 2: Reinforcement of resource management of Pacific bluefin tuna —For achieving sustainable use of resources—

- Japan is the world's largest producer and consumer of Pacific bluefin tuna. Also, Pacific bluefin tuna's spawning ground is presumed to exist around west and south of Japan. Therefore, Japan is not only domestically, but also internationally responsible for the conservation and management of Pacific bluefin tuna resources.
- The Fisheries Agency announced "Actions toward effective conservation and management for Pacific bluefin tuna" in May 2010. It introduced measures for making clear the actual statuses of catches and use of the resources in offshore fishery, coastal fishery, and aquaculture and reducing the juvenile catch.
- Since the amount of catch of juveniles used as aquaculture seeds has been increasing in line with the growth of aquaculture production of bluefin tuna, the Minister of Agriculture, Forestry and Fisheries issued a directive under the Fisheries Act in October 2012 stating that the number of aquaculture sites should not be increased nor should the scale of fish cages for bluefin tuna be expanded from the present level.
- The Fisheries Research Agency has launched a research project to develop technology for producing fertilized eggs of bluefin tuna in a stable manner by using on-shore experimental facility, which is one of the challenges of maintaining a stable supply of artificial seeds (Construction of onshore facility was completed in Nagasaki Prefecture at the end of March 2013.).

### Tuna Festival in Nagasaki



### Development of technology for stable collection of fertilized eggs

### Stable egg collection technology using large

- onshore water tanks
   Full control of the rearing environment (light and
- inducement in the large water tanks
- Stable egg collection technology for full-life-cycle



Onshore fish tank of 20 m in diameter to be used for bluefin-tuna-rearing experiments (under construction)

Source: Fisheries Research Agency.

# Topic 3: Launch of the "Delight of a Fish-Rich Country" project as a public-private collaboration effort to expand consumption

- The "Delight of a Fish-Rich Country" project, which includes the following activities, commenced in July 2012 as a public-private collaboration campaign to stimulate the overall fishing industry, aiming to expand consumption of fish and fishery products.
  - (1) A program was launched in August 2012. Since then, various efforts to expand consumption of fish and fishery products, including events and cooking classes, have been registered as "Delight of a Fish-Rich Country" demonstration activities. These activities have been periodically publicized and advertised nationwide by the Fisheries Agency.
  - (2) A system was established to seek handy and tasty processed fishery products and seasonings from the public, and select Fast Fish products from among them. Applications have been accepted since August 2012. (2,290 products from 296 companies have been selected as Fast Fish products as of the end of May 2013.)
  - (3) In order to enable fishery-related entities to provide schools with fish-rich-diet educational programs, etc. that meet schools' needs, the Fisheries Agency, through its Website, has informed the public of the website of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) since October 2012, with a view to match schools with fishery-related entities.
  - (4) A program was started in November 2012. Since then, the Director-General of the Fisheries Agency has appointed persons who are engaged in spreading and passing on fish-rich dietary culture as *Osakana Kataribe* (fish storytellers) and endorsed their activities. (58 persons have been appointed as of the end of May 2013.)

Overall image of the "Delight of a Fish-Rich Country" project

# "Delight of a Fish-Rich Country" project



### "Delight of a Fish-Rich Country" promotion conference

(with representatives from producers, fishery-related organizations, processors/distributors, and consumers)

#### August-

### "Delight of a Fish-Rich Country" demonstration activities

Periodically publicizing various activities that contribute to expanding consumption of fish and fishery products, such as fishery events

Activities of 102 entities have been registered.\*

#### August-

#### **Fast Fish**

Selecting Fast Fish products based on criteria, such as convenience, handiness, and potential for demand growth

Through five selection sessions, 2,290 products from 296 companies have been selected.\*

### October –

# Supporting promotion of fish-rich diet through school education

Collaborating with MEXT, etc. to enable schools and the local community, society, and industry to collaborate/cooperate with each other in providing educational activities

#### November-

### Osakana Kataribe appointed by the Director-General

The Director-General of the Fisheries Agency appointing fish storytellers to endorse them in spreading and passing on diverse fish-rich dietary culture in various fields

58 persons have been appointed.\*

Osakana Kataribe Conference 2012 and 2013 have been held.

Participants' activities

Introducing and publicizing members' activities, etc.
Providing information on events, etc.
Proposing projects, inviting collaboration partners

Forum for exchanging opinions and interacting

Participants' activities

Participants' activities

\* As of the end of May 2013

# **Topic 4 : Enhancement of food safety measures for fishery products based on the results of radioactive materials monitoring**

- Ever since the accident at the Fukushima Daiichi Nuclear Power Plant Station (F1NPS) of Tokyo Electric Power Company (TEPCO), the government, the relevant local governments, and relevant fishery industry/cooperatives have worked together to implement radioactive materials monitoring for fishery products. When radioactive cesium close to or exceeding the standard limit (100 becquerels per kilogram [Bq/kg]) have been detected in the products, fishers/distributors voluntarily suspend distribution/fishing operation and relevant local governments request fishers or distributors to voluntarily suspend distributing and/or fishery operations. Meanwhile, when the expansion of sea contamination is detected, for example, where radioactive cesium that exceeds the standard limit is detected in different locations off the coast of a certain prefecture, the Director-General of the Nuclear Emergency Response Headquarters (the Prime Minister) directs distribution restriction by area and species. Through such system, the government makes sure that fishery products containing radioactive cesium exceeding the standard limit are not distributed to markets.
- According to the monitoring results to date, excess ratio ( No. of samples more than the standard limit / Total No. of samples) has been decreasing. It reached to 7.6% in Fukushima during the January–March term of 2013, and 0.6% in other Prefecture.
- (1) No results of monitoring of skipjacks/tunas, chum salmon, and saury have exceeded the standard limit to date. (2) No results of fish in the surface layer, such as juvenile anchovy (whitebait) and juvenile sand lances (except for one sample of halfbeak collected off the coast of Fukushima Prefecture), have exceeded the standard limit since September 2011. (3) Also, no results of squids/octopuses, mollusks, crustacean, algae have exceeded the standard limit since August 2012. (4) Results of some species that live near the sea floor (demersal fish), such as flounders/soles and Pacific cod, still occasionally exceed the standard limit depending on the sea area, but the exceeding ratio has been gradually decreasing.
- The government has continued to ensure that fishery products that exceed the standard limit are not distributed to markets, by implementing radioactive materials monitoring for fishery products in cooperation with relevant local governments and fishing industry/cooperatives. It has also made efforts to allow consumers to purchase fishery products distributed to markets with greater confidence, by publicizing the monitoring results in a way that consumers find easy to understand,etc.

### Framework of radioactive materials monitoring for fishery products Monitoring plan developed mainly by local governments Monitoring Target species Frequency >100 Area Major species Once a week Bq/kg Divided into Species that has Before fishing several areas record of season At the main Monitoring detection with (skipjack, landing ports in more than 50 saury .etc.) each area Bq/kg ≦100 Bq/kg Strengthen monitoring Results of Close to standard limit neighboring monitoring For the effective suspension or restriction, the species subject to these measures are not landed

- Voluntary suspension of distribution in case that only one point shows excess of the limit
- Distribution restriction in case that more than one points show that.

Distribution for consumption (when the result is close to the limit, some prefectures may implement voluntary suspension.)

people involved in marketing.

and inspection is conducted at landing ports by

# Chapter I: [Special Feature] Bringing gifts from the sea onto the dining table: toward revival of fish-rich diet and lifestyle

# Section 1 : Situation of fish and fishery products for human consumption and the significance of achieving revival of fish-rich diet

(1) Japan: a major fishery resources holder (Japan surrounded by the world's richest fishing grounds)

- Japan's exclusive economic zone (EEZ) boasts the sixth largest area in the world. The Northwest Pacific region, including the waters surrounding Japan, represents one of the richest fishing grounds, accounting for about 20% of the world's fishery production in volume.
- In particular, a wide variety of fishery resources can be caught in the waters surrounding Japan where cold currents and warm currents meet. Japan still boasts the sixth largest marine fishery production in volume in the world.

### EEZ area, etc. by country

Ranking	Country		Territorial waters + EEZ area	Land area (including inland waters) ranking	Share in the world's marine fishery production volume (ranking) [2011]	
1st		USA	7.62 million km <sup>2</sup>	3rd	6.2% (4th)	
2nd	*	Australia	7.01 million km <sup>2</sup>	6th	0.2% (57th)	
3rd		Indonesia	5.41 million km <sup>2</sup>	15th	6.4% (3rd)	
4th	*	New Zealand	4.83 million km <sup>2</sup>	76th	0.5% (31 <sup>st</sup> )	
5th	*	Canada	4.70 million km <sup>2</sup>	2nd	1.0% (21st)	
6th		Japan	4.47 million km <sup>2</sup>	62nd	4.6% (6th)	

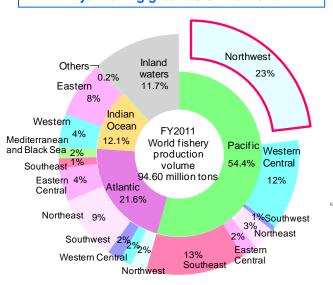
#### Sources:

For areas of EEZ, etc.: U.S. Department of State, *Limits in the Seas* (data for countries other than Japan); Japan Coast Guard Website (data for Japan).

For land area (including inland waters) ranking: U.S. Central Intelligence Agency, *The World Factbook*.

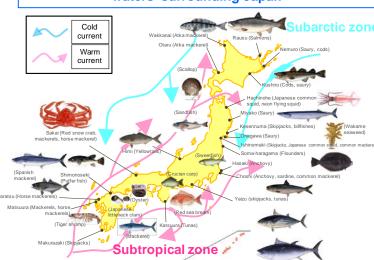
For catch volume: Food and Agriculture Organization (FAO), *Fishstat (Capture Production)* (data for countries other than Japan); Ministry of Agriculture, Forestry and Fisheries (MAFF), *Annual Statistics on Fishery and Aquaculture Production* (data for Japan).

### Major fishing grounds of the world



Source: FAO, Fishstat (Capture Production)

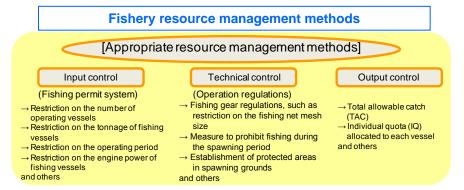
# Wide variety of fishery resources caught in the waters surrounding Japan



Source: Compiled by the Fisheries Agency based on MAFF, Annual Report of Distribution Statistics on Fisheries Products and Annual Statistics on Fishery and Aquaculture Production.

### (Sustainable use of the abundant fishery resources through appropriate resource management)

- In order to achieve sustainable use of the abundant resources in the waters surrounding Japan, the following measures are implemented under compulsory regulations and fishers' voluntary resource management: (1) input control (restricting the number of fishing vessels, etc.); (2) technical control (restricting the mesh size of fishing nets, etc.); and (3) output control (setting the total allowable catch [TAC], etc.).
- With the aim of appropriately managing abundant fishery resources while ensuring the business stability of fisheries that use such resources for human consumption, "resource management/income stability measures" have been implemented.

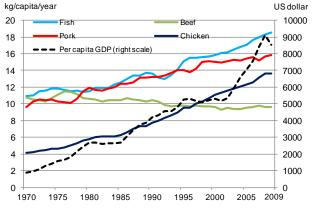


# (2) Fishery resources in the waters surrounding Japan gaining importance amid expanding global demand (Consumption volume of fish and fishery products for food increasing worldwide)

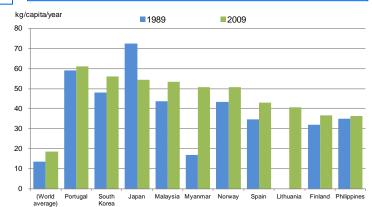
- The food consumption pattern around the world has changed due to improvement in living standards and other factors, with an increase in per capita gross domestic product (GDP). The per capita consumption of fish and fishery products has also increased, along with consumption of pork and chicken.
- Per capita consumption volume of fish and fishery products, which has been rising around the world, has declined in Japan (falling behind Portugal and South Korea in 2008 to the third rank among countries with a population of one million or more).

### Changes in the world's per capita annual consumption of fish and other meats and per capita GDP

Per capita annual supply of fish and fishery products for human consumption (countries with a population of one million or more)



Sources: United Nations (UN), National Accounts Main Aggregates Database; FAO, Food Balance Sheets.



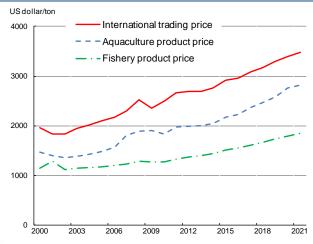
Sources: Compiled by the Fisheries Agency based on FAO, Food Balance Sheets (data for countries other than Japan) and MAFF, Food Supply and Demand (data for Japan).

Note: There is no 1989 data for Lithuania.

### (Prices on a rising trend worldwide against growing demand and limited supply capacity)

- The world's fishery production volume, which depends on the status of fishery resources, has plateaued since the second half of the 1980s. The U.N. Food and Agriculture Organization (FAO) predicts that future supply increase in the world's fish and fishery products for human consumption will be brought about by an increase in aquaculture production.
- However, aquaculture also faces restricting factors such as a lack of suitable aquaculture sites and a rise in feed prices. The future increase of world population is likely to cause a tight supply-and-demand balance of the world's fish and fishery products as well as their price hike.
- The Organisation for Economic Co-operation and Development (OECD) and FAO forecast a global increase in prices of fish and fishery products.

# Changes in prices of fish and fishery products and future forecasts

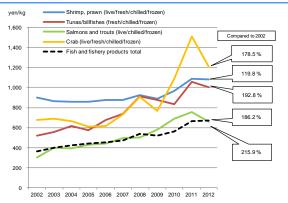


Source: OECD-FAO, Agricultural Outlook 2012-2021.

### (Risk of Japan's unstable imports of fish and fishery products in the future)

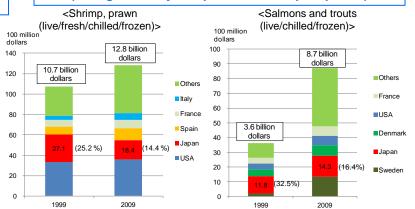
- Due to the growth in demand worldwide, the prices of Japan's imports of fish and fishery products have been on the rise. But while many countries' imports of key fish and fishery products have increased, the share of Japan's imports has been on a relative decline.
- There is an undeniable risk that Japan's imports of fish and fishery products will become unstable in the future.

# Changes in the import prices of fish and fishery products (exchange rate fixed at the rate as of April 30, 2013: 1 dollar = 97.82 yen)



Source: Compiled by the Fisheries Agency based on Ministry of Finance, *Trade Statistics*.

# World trade of shrimps/prawns and salmons/trouts (changes in major importers and import prices)



Source: Compiled by the Fisheries Agency based on FAO, *Fishstat (Commodities Production and Trade)* (data for countries other than Japan) and Ministry of Finance, *Trade Statistics* (data for Japan).

### (3) Fish and fishery products supporting a healthy diet for Japanese people

- Fish and fishery products are important sources of animal protein, vitamins, and essential minerals. They also contain plenty of functional components, including highly unsaturated fatty acids (DHA, EPA).
- Many studies have revealed the health benefits of eating fish and fishery products.

### Intake of nutrients, etc. by food group (per capita per day)

	Intake (g)	Energy (kcal)	Protein (g)	Fat (g)	Potassium (mg)	Calcium (mg)	Magnesium (mg)	Iron (mg)	Vitamin D (µg)	Vitamin E (mg)	Vitamin B12 (µg)
Total intake	2027.5	1840	67.0	54.0	2189.4	507.3	232.5	7.5	7.1	7.8	6.1
Intake from fish	72.7	114	13.6	5.2	182	37	23	0.7	5.5	0.9	4.3
Intake from other meats	83.6	196	14.2	14.0	203	5	15	0.7	0.2	0.3	0.7
Intake from eggs	34.8	52	4.2	3.4	39	18	4	0.6	0.6	0.3	0.3
Intake from milk	122.7	92	4.4	4.6	157	148	13	0.1	0.2	0.1	0.4
Percentage of intake from fish	3.6%	6.2%	20.2%	9.7%	8.3%	7.2%	9.8%	9.0%	78.1%	11.8%	71.0%

Source: Ministry of Health, Labour and Welfare, National Health and Nutrition Examination Survey (2011).

### Major functional components contained in fish and fishery products

Functional components	Fish and fishery products with high content	Component outline/expected effects
DHA	Fatty meat of bluefin tuna, salmon roe, yellowtail, mackerel	Highly unsaturated fatty acid contained in large amounts in fish oil     Promotion of brain development, dementia prevention, prevention of a decrease in vision, prevention an reduction of arteriosclerosis, anticancer effect, etc.
EPA	Sardine, fatty meat of bluefin tuna, mackerel, yellowtail	- Highly unsaturated fatty acid contained in large amounts in fish oil - Thrombosis prevention, anti-inflammatory effect, hypertension prevention, etc.
Astaxanthin	Salmon, krill, spotted shrimp, red sea bream	- One type of carotenoid - In vivo antioxidant action, immune function enhancement effect
Taurine	Spiny top shell, oyster, cuttlefish, dark meat of tuna	One type of amino acid     Prevention of arteriosclerosis, prevention of heart disease, gallstone prevention, anemia prevention, enhancement of hepatic detoxification effect, recovery in vision, etc.
Algin acid	Brown seaweeds (mozuku seaweed, hiziki, wakame seaweed, kelp, etc.)	<ul> <li>One type of high molecular polysaccharide; a dietary fiber contained in mucilage of brown seaweeds</li> <li>Cholesterol-lowering effect, effect of inhibiting a rise in blood sugar levels, constipation prevention effect etc.</li> </ul>
Fucoidan	Brown seaweeds (mozuku seaweed, barilla, wakame seaweed, kelp, etc.)	- One type of high molecular polysaccharide; a dietary fiber contained in mucilage of brown seaweeds - Anticancer effect, anticoagulant activity, immune function enhancement effect, etc.
Anserine	Tuna, skipjack, salmon, shark	A dipeptide consisting of two amino acids     Antioxidant action, effect of lowering uric acid level, pH-buffering effect, etc.
Balenine	Whale	A dipeptide consisting of two amino acids     Anti-fatigue effect through antioxidant action

Source: Compiled by the Fisheries Agency based on data from Fisheries Research Agency, etc.

[Examples of study results on health benefits of eating of fish and fishery products]

- People who eat more fish are less likely to suffer myocardial infarction.
- → Japanese people who eat fish eight times a week are 60% less likely to experience a myocardial infarction than those who eat fish only once a week.
- Fish diet significantly restrains thrombus formation.
  - → In a fish diet, (1) fish oil has the effect of inhibiting blood clotting, and (2) fish meat protein has a thrombolytic effect.
- Eating seaweed and fish together is likely to prevent obesity.
  - → Wakame seaweed and fish oil each has an effect of decreasing neutral fat in the blood with a different mechanism, so the effect is twofold.
- Eating of fish and fishery products is effective for preventing diabetes in men.
  - → Eating of small and medium-sized fish and fatty fish reduces the risk of diabetes in Japanese men.
- Eating of fish and fishery products reduces the risk of liver cancer
  - → The risk of liver cancer is low for groups that take in a large amount of fish with high content of n-3 polyunsaturated fatty acids.

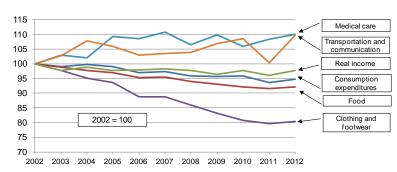
### Section 2: Current status and challenges of consumption of fish and fishery products

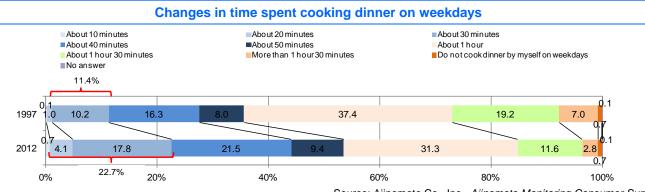
### (1) Overall trend of food consumption

- Food expenditure is declining amid a decrease in household income and spending.
- Unprocessed fresh materials are used less frequently when cooking meals at home. The Japanese diet has become westernized and diversified, shifting away from Japanese-style meals.
- The process of cooking dinner is becoming simpler with increased use of processed foods and prepared foods (delicatessen, frozen foods, etc.).

# Changes in per household expenditures by category of use

Source: Compiled by the Fisheries Agency based on Ministry of Internal Affairs and Communications, Family Income and Expenditure Survey (two-or-more-person households [excluding agricultural, forestry and fisheries households]) and Consumer Price Index.





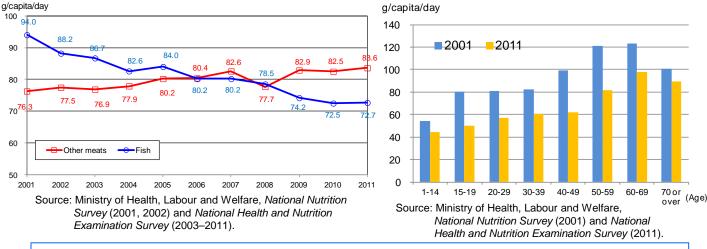
Source: Ajinomoto Co., Inc., Ajinomoto Monitoring Consumer Survey.

# (2) Current status of consumption of fish and fishery products(Risk of a sharp decline in national eating of fish and fishery products)

- While Japanese people's per capita daily eating of fish and fishery products is on a decline, the eating of other
  meats has increased or remained flat. Non-fish meat consumption surpassed fish consumption for the first time in
  2006. Although eating fish has slightly increased over the previous year in 2011, the gap between fish and other
  meat eating has widened.
- When comparing per capita daily eating of fish and fishery products in 2001 and that in 2011, the "age-related effect" (a tendency of consuming more fish and fishery products with advancing age due to changes in food preferences) was absent in all adult age groups, while age groups with little eating of fish and fishery products have expanded.
- If this trend continues, there is a risk that the national eating of fish and fishery products will decline sharply in line with generational changes.

# Changes in Japanese people's per capita eating of fish and other meats

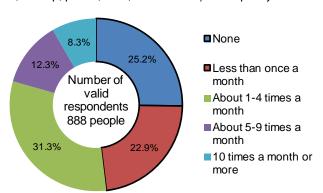
# Changes in per capita eating of fish and fishery products by age group



### Frequency of eating fish and fishery products and frequency of buying and cooking whole fish

<Frequency of eating fish and fishery products> 10.5% 10.0% 17.9% 80% ■Almost every 29.4% 60% About 4-5 About 2-3 54.9% 46.0% 45.5% About once a 20% 13.0% 1997 2000 2013 Number of valid 1,018 people 882 people

<Frequency of buying and cooking whole fish (excluding such products as squid, shrimp, prawn, crab, and shellfish) in the past year>



Source: Monitoring survey conducted by MAFF.

### (3) Consumer awareness revealed through questionnaire surveys

(Consumer awareness and preferences concerning fish and fishery products)

- Consumers highly regard the health benefits and an appreciation for the season that is associated with fish and fishery products.
- Compared to other meats, fish and fishery products have the following drawbacks: (1) not easy to use for food since they produce a lot of kitchen waste and are difficult to store for a long time; (2) seem more expensive than other types of meat; and (3) difficult to eat due to the bones, etc.
- Most consumers "like eating fish," and still nearly half of the consumers want to increase their opportunity to eat fish dishes. It is necessary to lower the hurdles for consumers to eat fish and create an environment for them to enjoy fish and fishery products more casually.

## Strong points and weak points of fish and fishery products compared to other meats

### Preferences concerning eating fish and fishery products

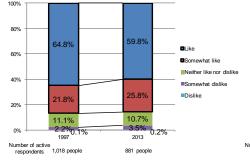
### Strong points

- Good for health (67.4%)
- Feel a sense of the seasons (53.6%)

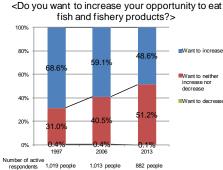
### Weak points

- Difficult to store for a long time (42.4%)
- Kitchen waste is a burden (39.7%)
- Seems more expensive than other meats (33.7%)
- Difficult to eat due to the bones, etc. (31.4%)

Source: Monitoring survey conducted by MAFF (January–February 2012; 1,588 male and female respondents aged 20 or older were asked to choose up to three strong points and three weak points of fish and fishery products compared to other meats).



<Do you like eating fish and fishery products?>



Source: Monitoring survey conducted by MAFF.

### Section 3: Efforts within the fishery sector to respond to diverse consumer demands

- Japanese consumers are becoming less familiar with fish, with the eating of fish and fishery products decreasing among younger generations and the "age-related effect" (whereby fish eating increases with advancing age) no longer seen among older generations.
- In order to put a halt to the declining trend of fish consumption among Japanese people, the following challenges must be addressed:
  - (i) increasing consumption by children, which serves as the starting point for eating of fish and fishery products; and
  - (ii) taking measures to upturn consumption by current middle-aged and older age groups, which no longer indicates the "age-related effect."
- It is important to implement effective measures that specifically target each age group.
- The following two approaches are essential: (i) fish-rich diet promotion activities and dietary education activities; and (ii) response to recent consumer needs such as "easy to use." Shown below are examples of efforts made by various organizations within the fishery sector using these two approaches.

### (1) Examples of fish-rich diet promotion activities and dietary education activities

### (i) Effort to suggest the good way of eating and cooking fish

 Cooking school offering popular courses of specialoccasion dishes (Hyogo Prefectural Federation of Fisheries Co-operative Associations "SEAT CLUB")



At "SEAT CLUB," a fish fun club in Hyogo Prefecture, fish cooking classes for cooking mainly special-occasion dishes of Italian, Korean and other cuisines have gained a great deal of popularity, and are enjoying repeat participants.

# (ii) Activity to convey the benefits and tastiness of fish to children

- Providing guest lessons on "Learning and eating whole fish with bones" (Fishery Product Market Improvement Association, Osakana Meister Association)
- Providing guest lessons on EPA and DHA contained in fish (Nippon Suisan Kaisha, Ltd., Minochu KK)



The Osakana Meister Association provides the guest lesson "Fish has bones" at elementary and junior high schools in Tokyo, teaching students about fish and how to eat fish neatly while actually eating fish with bones.

### (iii) Providing children with opportunities to eat fish through school meals

- Providing fish and fishery products to school meal suppliers to identify their needs and consider making it into a business (Ishikawa Prefecture, JF Ishikawa)
- Development and popularization of deep-fried products for school meals (Hokkaido Trawl Fisheries Cooperative Federation)

In 2011, JF Ishikawa (Ishikawa Prefecture) launched a model business to provide fish and fishery products that have been produced in Ishikawa Prefecture for school meals in elementary and junior high schools.



### (2) Examples of efforts to produce and distribute products that meet consumer needs

### (i) Providing products that meet the needs of consumers and users

- Enhancing the competitiveness of the producers by providing a line-up of high-quality products (Azuma-Cho Fishery Cooperative, Kagoshima Prefecture)
- Providing the season's taste and freshness to consumers with the latest freezing technology (Furusato Ama Co., Ltd., Shimane Prefecture)
- Changing to a *lower-temperature* market in order to respond to consumers' orientation toward safety and reliability (Nagoya Central Wholesale Market, Aichi Prefecture)

The Nagoya Central Wholesale Market implemented a redevelopment project for lowering the temperature of the selling space of the wholesale market in order to respond to the consumer needs for "food safety and reliability."



- Selling fresh catches as *mince of fresh fish caught this morning* (Ito Fishery Cooperative, Shizuoka Prefecture)
- Developing new products that meet consumer demand (Nihon Enyou Makiami Gyogyou Kyoudou Kumiai , Fukushima Prefecture and Nagasaki Prefecture)
- Developing processing methods that make fish to be eaten with bone (KK Uehara, Nagasaki Prefecture)
- Expanding the potential usage of kelp through development of new processed products (Hokkaido Nissui Co., Ltd., Hokkaido)



Nihon Enyou Makiami Gyogyou Kyoudou Kumiai makes fritters from horse mackerel and mackerel caught off the coast of Tsushima and Goto islands. Through pressure-cooking, the fritters can be eaten to the bone. They have been provided for school meals in Fukuoka Prefecture and Kagoshima Prefecture.

# (ii) Creating diverse distribution routes, which contribute to fulfill the various needs of consumers and users

- Selling an assortment of fresh seasonal fish landed at various locations in Hokkaido in handy-size packages (Hokkaido Federation of Fisheries Cooperative Associations)
- Conducting primary processing of just-landed fish, and expanding direct business with large retailers (JF Shimane)
- Directly delivering freshly kept, frozen, processed products to fishery processors immediately after landing (Kushiro Shi Fisheries Cooperative Association, Hokkaido)
- Mediating between production areas and users nationwide through use of information technology (Syunzai, Ltd., Osaka)



Hokkaido Federation of Fisheries Cooperative Associations collects fish from its member fishery cooperatives, and directly sells and sends an assortment of fresh fish packed in a box to mass retailers in the Tokyo metropolitan area and other retailers.

### (iii) Introducing unique ways to sell fish and fishery products at retail stores

- Effectively using online flyers that link between consumers and fish shops (Hiroshima Uosho Cooperative Society)
- Selling fresh saury through eight kinds of products (Aeon Retail Co., Ltd.)
- Developing fish-selling spaces that use new approaches to attract customers (Toshin Sea Foods Co., Ltd.)



Efforts have been made at a fresh fish store on the basement food floor of a department store to sell products by not only indicating their freshness and production area, but also the time required for cooking them as well as customer reviews, so as to effectively atract consumers who are less familiar with fish.

# (iv) Promoting use of fish and fishery products in the ready-to-eat and food-service industries

- A supermarket chain introducing a fish delicatessen corner nationwide (Ito-Yokado Co., Ltd. )
- A restaurant chain expanding menu items that go well with liquor, using fish and fishery products (Pronto Corporation )



A supermarket chain introduced a special corner selling various kinds of ready-to-eat fish products in their selling space so as to provide consumers with tasty ready-to-eat fish.

### Section 4: For successfully reviving fish-rich diet

# (1) Promoting a fish-rich diet in and outside Japan(Need for activities to promote fish-rich diet that affect consumer's buying power)

- Many consumers like to eat fish, and nearly half of consumers want to increase their opportunity to eat fish. In order to turn such potential needs into actual consumption behavior, it continues to be important for related bodies to cooperatively carry out activities to promote fish-rich diet, as well as dietary education activities to convey to consumers the tastiness, joy, and goodness for health of fish-rich diet.
- It is necessary, in the future activities, to review how to approach consumers to promote fish-rich diet, taking into account the changes in the needs of a majority of consumers toward fish and fishery products, such as increased preference for "easy to use" products.
- İt is important to note that activities to promote fish-rich diet are primarily aimed at actually stimulating fish consumption through spreading information to consumers, such as nutritional properties of fish, fish-cooking methods, and the significance of eating fish. The activities conducted to date at various locations need to be reviewed from such perspective.

### (Importance of promoting Japan's fish-rich dietary culture to overseas consumers)

- It is also important to enhance the recognition of overseas consumers and users about Japan's fish-rich dietary culture as well as the high quality and other excellent characteristics of Japanese fish and fishery products, as a stepping stone to expanding the overseas market.
- The recent Japanese food boom overseas, a rise in fish and fishery product prices worldwide, and the depreciation of the yen since the end of 2012 are serving as favorable factors for the expansion of the overseas market.

### Column: Uses of yellowtail expanding overseas

Yellowtail(hamachi) is hardly cultured in Europe and the United States.
 However, its fatty texture is gaining popularity among overseas consumers. Ninety percent of exported yellowtail goes to the United States to be mainly used for sashimi and sushi at Japanese restaurants.
 Recently, however, they have also been used increasingly for non-Japanese cuisines, such as Carpaccio.



Yellowtail Carpaccio is gaining increased popularity in North America.

# (2) Shifting production/distribution systems to the ones that can precisely respond to consumer demand

(Measures for promoting distribution and expanding consumption of fish and fishery products)

- In order to promote distribution of domestic fish and fishery products that can precisely respond to consumer needs and to expand their consumption, a government project started in FY2013 to comprehensively provide tangible and intangible support for distribution from production areas to consumption areas.

# Column: Latest technology that expands the potential of domestic fish and fishery products

- Technology related to distribution and processing of fish and fishery products has made remarkable progress in recent years. The latest freezing technology has made it possible to deliver extremely fresh fish and fishery products to consumers. In addition, due to the progress of fish-processing technology, more edible parts can be obtained from fish catches than in the past.
- It is important to send out more information to consumers about the improved quality of fish and fishery products using the latest technology, and thereby create new demand for them.



Horse mackerel under alcohol brine freezing at −25° C

### (For improving the production/distribution systems)

- In order to put a halt to the declining trend of fish consumption in Japan, the whole fishing industry needs to make the following efforts in concert: (a) respond to the recent typical needs of consumers, such as "easy to use" and "shorter cooking time"; and (b) develop methods to sell and provide fish and fishery products that would make them more approachable for consumers and improve the public perception of fish and fishery products.
- The following are some of the specific activities that related bodies should conduct:
  - (i) Promoting production, distribution, and sales of products geared to the needs of consumers and users Production, distribution, and sales of products that respond to such needs as "easy to use," "ready-to-eat," and "safe and reliable" should be promoted.
  - (ii) Promoting fishery processing that meets the needs of consumers and users

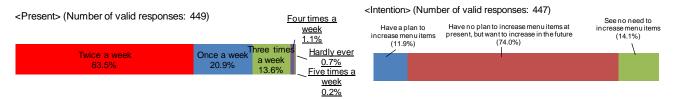
    The manufacturing of processed fishery products that meet consumer needs, such as "easy to use," should be promoted. Production areas should provide fish and fishery products that are easy for the processing industry to use.
  - (iii) Constructing diverse distribution routes that meet the needs of consumers and users A rich variety of fish and fishery products should be provided to consumers and users by constructing diverse distribution routes in addition to distribution through the market.
  - (iv) Introducing creative ideas in selling methods in the retail industry

    The attractiveness of retail stores should be enhanced, as places to have direct contact with consumers.
  - (v) Promoting use of fish and fishery products in ready-to-eat and food service industries In order to make fish and fishery products more accessible, the use of fish and fishery products in ready-to-eat and food service industries should be promoted.
  - (vi) Promoting the use of fish and fishery products in school meals.
    In order to promote the use of fish and fishery products in school meals, a trust relationship should be established between producers and school meal suppliers.

### [Use of fish and fishery products in school meals]

- According to a questionnaire survey of nutrition educators and school dietitians nationwide conducted by the Fisheries Agency in 2012, (i) about 80% of schools provided menu items using fish and their processed products at least twice a week, and (ii) more than 80% of the respondents answered that they will or want to increase the number of menu items using fish and their processed products.

# Frequency of provision of menu items using fish and their processed products in school meals and intention for future provision



Source: Fisheries Agency, "Questionnaire survey about the use of fish and fishery products in school meals" (conducted in August 2012 with the cooperation of the School Dietitian Conference of Japan; extracted answers from ten nutrition educators and school dietitians as samples from each prefecture nationwide, and aggregated the data of the 449 people who responded).

### Chapter II: Toward recovery from damages caused by the Great East Japan Earthquake

### Section 1: Coping with damage caused by the earthquake and tsunami

### Damage incurred by the fishing industry

- The tsunami that followed the Great East Japan Earthquake caused massive damage to the fishing industry in not only the seven prefectures facing the Pacific Ocean from Hokkaido to Chiba, but nationwide.
- The earthquake caused land subsidence in many locations along the Pacific coast from the Tohoku region to the northern Kanto region. As a result, fishing ports, markets, fishery processing plants, etc. suffered inundation and flood.

### Fishery-related damage caused by the Great East Japan Earthquake and Tsunami

### Total damage: 1.26 trillion yen (seven affected prefectures: 1.25 trillion yen)

	Nation	wide	Seven affected prefectures		
Major types of damaged property	Extent of damage	Amount of damage (billion yen)	Extent of damage	Amount of damage (billion yen)	
Fishing vessels	28,612 vessels	182.2	28,479 vessels	181.2	
Fishing port facilities	319 ports	823.0	319 ports	823.0	
Aquaculture facilities and products (Aquaculture facilities)		133.5 (73.8)		125.4 (71.9)	
(Aquaculture products)		(59.7)		(53.4)	
Communal facilities	1,725 facilities	124.9	1,714 facilities	124.7	

#### Notes:

- 1. Damage was compiled from prefectural reports and is current as of April 18, 2012.
- 2. The seven affected prefectures are Hokkaido, Aomori, Iwate, Miyagi, Fukushima, Ibaraki, and Chiha
- 3. In addition to the damage listed here, there was approximately 160 billion yen in damage to fishery-processing facilities and ice-making/refrigeration facilities owned by private companies (source: hearings with fishery processors' associations).

### (2) Recovery and reconstruction efforts in the fishing industry

- Based on the recommendations by the Reconstruction Design Council in Response to the Great East Japan Earthquake, the Fisheries Agency formulated the Fisheries Recovery Master Plan (guidelines on concrete measures for the recovery of fisheries, to be implemented by the national and local governments) in June 2011.
- In response to the Great East Japan Earthquake, the Cabinet's Reconstruction Headquarters compiled the Basic Disaster Recovery Policy for the Great East Japan Earthquake (hereinafter referred to as the "Basic Policy") in July 2011. Based on the Basic Policy, the Fisheries Agency formulated a work schedule for recovery and reconstruction of fishing ports, fishing vessels, aquaculture facilities, fishery processing and distribution facilities, fishing grounds,
- Specifically, the Fisheries Agency has taken measures by using funds of more than a total of 800 billion yen from the FY 2011 first, second, and third supplementary budgets and the FY2012 initial budget (earmarked for recovery and reconstruction measures). It will also implement various measures for integrated reconstruction of fishery, aquaculture, and fishery-processing industries under the FY2013 budget.

### **Outline of the Fisheries Recovery Master Plan**

### Comprehensive and integrated reconstruction of various sectors constituting the fishing industry

### Strengthen national government's efforts for tackling the accident, including promoting inspections for radioactive materials contained in fish products Disseminate food safety information overseas 8. Fishing communities Promote disaster-resistant fishing communities while respecting the wishes of local residents Secure optimum disaster-prevention capabilities according to the circumstances of fishing communities

Response to the nuclear power plant

accident

### 1. Fishing ports

- Secure the functions necessary for the whole region at an early stage, while
- sharing functions among fishing ports
  (1) Fishing ports serving as national production/distribution bases for fish
- products
  (2) Fishing ports serving as production/distribution bases for local fishing
- industry
  (3) Other fishing ports

Promote reconstruction of Japan's fisheries as a whole by taking care of various sectors constituting the fishing industry and considering the local wishes

#### 2. Fishing grounds and resources

Support removal of debris from fishing grounds in which early resumption of fishing activities should be prioritized Continuous research on the fishing ground environment

#### 3. Fishing vessels and fisheries management

- Promote modernization and rationalization of fishing vessels and fleets
- Introduce fishing vessels for joint use, and promote joint and collaborative operations
- Ensure supply of fish products through measures to respond to fuel price hikes, etc

### 4. Aquaculture and stock enhancement

- Promote joint or collaborative operations and incorporation of organization in order to foster highly productive aquaculture operators
- Reconstruct systems for producing seeds and releasing juveniles of

#### 7. Fishery cooperatives

- Restructure organizations of fishery

Promote implementation of more ecological operations and the creation of a sixth industry

cooperatives that support local fisheries Ensure the soundness of JF marine banks through capital injections

### 6. Fishery business management

- Secure employment opportunities for affected fishers through removal of debris, etc.
- Promote coordination between local fishers and private companies

### 5. Fishery processing and distribution

- Promote integration of facilities or formation of facility complexes according to local wishes
- Support creation of a sixth industry and the improvement of quality and hygiene control Restructure landing area markets in a manner consistent with the reconstruction of fishing ports

### (Overview of recovery and restoration of fishery-related facilities)

- Two years after the Great East Japan Earthquake, efforts to restore the fishing industry in the affected areas are only half way to the goal. It is important to continue mobilizing the capacities of the public and private sectors to work toward robust revival of the fishing industry. Below is the overview of recovery and restoration of fishery-related facilities that have been promoted through accumulation of activities by fishery-related entities in the affected areas.

### <Landings>

- Total fish landings for January to March 2013 at key wholesale fishery markets in the production areas of Iwate, Miyagi, and Fukushima Prefectures were 71% of the pre-earthquake level (a total for January and February 2011 and March 2010) in volume and 61% in value.

### <Fishing port facilities>

- Since it is important to secure the functions necessary for the whole region at an early stage, while integrating functions and sharing roles among fishing ports, recovery efforts have been made by selecting high-priority facilities.
- The recovery of fishing port facilities is aimed to be mostly completed by the end of FY2015. (For fishing ports serving as national production/distribution bases and fishing ports serving as production/distribution bases for the local fishing industries, major functions such as landing piers are to be recovered by the end of FY2013.)
- At the 319 affected ports, the landing function has been recovered for the total length of the landing pier at 115 fishing ports (36%), and for partial length of the landing pier at 149 fishing ports (47%). Of the total length of all affected piers, 28% has been recovered.

### <Fishing vessels>

- Based on the wishes indicated by people resuming fishery and aquaculture operations in various locations, the target number of vessels to be recovered by the end of FY2013 was set at 12,000 vessels (Basic Plan for Fisheries, March 2012).
- This target has already been attained, but since people wishing for recovery of fishing vessels have increased with an increased resumption of fishery and aquaculture operations in various locations, a new target has been set, and further efforts are being made to recover fishing vessels.

### <Aquaculture facilities>

- Aquaculture facilities are generally vulnerable to wave and tsunami damage. Damage occurred in a wide area on the Pacific coast from Hokkaido to Okinawa Prefectures.
- Support for aquaculture facilities has been provided through various budget-funded projects so that all operators wishing to resume aquaculture operations can gain prospects for repairing their facilities by the end of FY2012.
- Looking at the recovery status in Iwate and Miyagi Prefectures, many people launched aquaculture of wakame seaweed and kelp, which can be harvested in a relatively short period after seeding, as the first step toward resuming their work. So recovery of their aquaculture facilities has advanced. As for laver and oyster, many people refrained from resuming aquaculture in the harvest season immediately following the earthquake, but progress has been observed in the subsequent recovery.

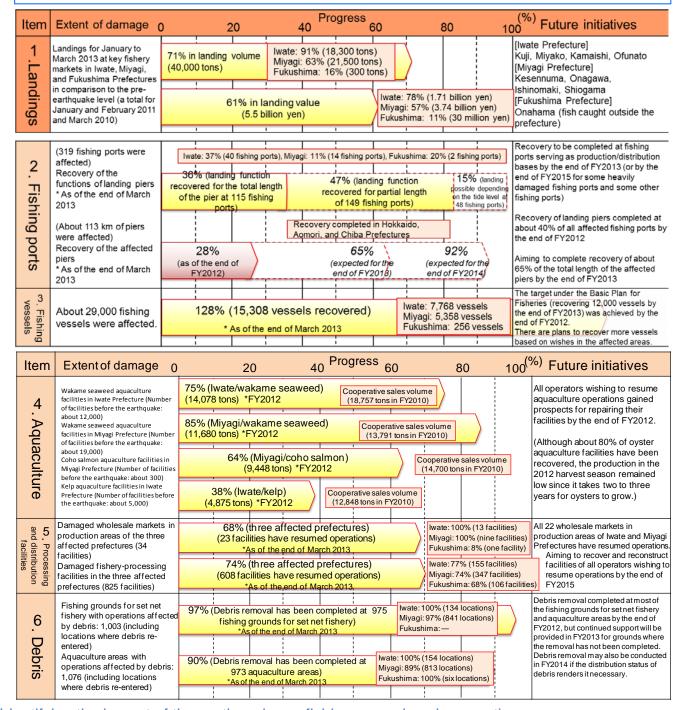
### <Processing and distribution facilities>

- All 34 wholesale fishery markets in the production areas of Iwate, Miyagi, and Fukushima Prefectures were affected by damage. Among them, all 22 facilities in Iwate and Miyagi Prefectures resumed operations by September 2012. Of the 12 wholesale fishery markets in production areas in Fukushima Prefecture, only one facility (Onahama) has resumed operations (as of April 2013).
- According to the National Federation of Processed Fisheries Products Cooperatives, 958 fishery-processing
  facilities in Iwate, Miyagi, and Fukushima Prefectures were affected by damage. Of the 825 facilities that wished to
  reopen, operations have been resumed at 608(as of the end of March 2013).

### <Seedling production facilities>

- A total of 48 salmon and trout hatcheries from Aomori to Ibaraki Prefectures were damaged. Among them, 26 facilities have been recovered (as of the end of March 2013). The salmon and trout seedling production capacity rose to about 80% of the level before the earthquake within FY2012.
- Meanwhile, 23 facilities producing seedlings of fish and shellfish (sole, abalone, sea urchin, etc.) for stocking purpose from Hokkaido to Ibaraki Prefectures were damaged. Among them, 11 facilities have been recovered. Seven facilities are under restoration work (as of May 2013).

# Recovery and reconstruction from damage caused by the Great East Japan Earthquake in the fishing industry



### (Identifying the impact of the earthquake on fishing ground environment)

- In order to identify the conditions of fishing ground environment on the Pacific coast of the Tohoku region, the Fisheries Research Agency, fishery-related research institutes, and other organizations in the affected prefectures jointly conducted an environmental survey of the affected fishing grounds.

### (3) Reconstruction efforts in the affected communities

- Young fishers and new recruits in the affected areas are using the national training system to acquire fishing and aquaculture skills.
- Engaged in set net fishery in Kanagawa Prefecture after the earthquake. Returned to hometown and learning wakame seaweed aquaculture as a trainee. (Mr. Tatsuhiko Ito in Miyako City, Iwate Prefecture)
- Entered the world of fisheries without experience, through a job-matching fair held in Sendai after the earthquake. Became a trainee of large-scale set net fishery. (Mr. Shungo Kuramochi in Ishinomaki City, Miyagi Prefecture)

- Distinctive efforts were introduced in affected areas to cultivate sales channels through collaborative operations or cooperation between production areas or between industries.

### (i) Efforts toward resumption of the fishing industry

- Increasing efficiency of small-scale set net fishery through collaborative operations (Mr. Yukio Ono from the Miyako Branch of JF Miyagi)

### (ii) Efforts toward recovery and expansion of sale channels

- Expanding sales channels through ties with agricultural cooperatives (JF Hirota in Rikuzentakata City, Iwate Prefecture)
- Making new developments for the fishery-processing industry (Domannaka Otsuchi Cooperative in Otsuchi Town, Iwate Prefecture)

### (iii) Efforts toward reconstruction of port towns

- Expanding the fishing port area and developing a center for fishery-processing facilities (Kesennuma City, Miyagi Prefecture)

### (4) Continuous support that backs up reconstruction of the fishing industry in the affected areas

- Efforts to support the fishing industry in the affected areas have been continued at various locations, powerfully backing up the reconstruction.

### Cooperation between production areas for expanding oyster consumption (Hiroshima and Miyagi Prefectures)

- Hiroshima Prefecture called on Miyagi Prefecture so that the two major production areas of cultured oysters in Japan would cooperate to expand oyster consumption and promote reconstruction of oyster aquaculture in Miyagi Prefecture.
- The two prefectures jointly held sales promotion events and recipe contests in the Tokyo metropolitan area.

### Section 2: Coping with damage caused by the nuclear power plant accident

### (1) Efforts for ensuring the safety of fishery products

- Sales, distribution, and processing of food containing radioactive materials exceeding the standard limit (100 Bg/kg) are prohibited under the Food Sanitation Act.
- Radioactive materials monitoring for fishery products has been implemented in collaboration with relevant local governments, relevant fishing industry/cooperatives and relevant ministries and agencies. Fishery products that have landed at key ports of different locations have been monitored once a week, in principle.
- When radioactive materials close to or exceeding the standard limit are detected in the fishery products, fishers voluntarily suspend fishing operations and/or distribution, or relevant local governments require fishers or distributors to suspend distribution and/or fishing operations.
- Meanwhile, when the expansion of sea contamination is detected, for example, where radioactive cesium that
  exceeds the standard limit is detected in different locations off the coast of a certain prefecture, the DirectorGeneral of the Nuclear Emergency Response Headquarters (the Prime Minister) directs distribution restriction by
  area and species.
- Through such system, the government makes sure that fishery products containing radioactive materials exceeding the standard limit are not distributed to the market.

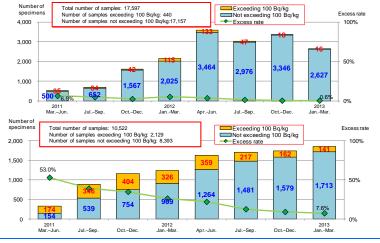
### (2) Status of radioactive materials monitoring for fishery products

- Radioactive materials monitoring for fishery products are implemented mainly for species that have exceeded 50 Bg/kg in the preceding fiscal year and the major species in the prefectures concerned.
- After the accident at TEPCO's Fukushima Daiichi Nuclear Power Plant Station(F1NPS), 28,119 samples had been monitored nationwide by the end of March 2013. Among them, 25,550 samples (90.9%) did not exceed 100 Bq/kg, which is the current standard limit.
- Among 17,597 samples for fishery products sampled outside Fukushima, 17,157 samples (97.5%) did not exceed 100 Bq/kg. Also for demersal fish (sole, flounder, etc.), the ratio of samples exceeding 100 Bq/kg had been decreasing, marking 0.1% in the January–March term of 2013.
- Among 10,522 samples for fishery products sampled in Fukushima, 8,393 samples(79.8%) did not exceed 100 Bq/kg. For demersal fish (sole, flounder, etc.), samples exceeding 100 Bq/kg was 53.0% in the March–June term of 2011, but the ratio had been gradually decreasing to 10.0% in the January–March term of 2013.

### Results of radioactive materials monitoring for fishery products (including freshwater)

<Fish caught outside Fukushima Prefecture (as of the end of March 2013)>

<Fish caught in Fukushima Prefecture (as of the end of March 2013)>



Major marine products for which none of the samples exceeded the standard limit in radioactive materials monitoring (as of the end of May 2013)

Seaweeds	All species				
Shellfish	All species excluding Stimpson's hard clam				
Squids and	All species				
octopuses	353333				
Shrimps, prawns,	All species				
and crabs	7th openies				
Epipelagic fish	Sardines, saury, juvenile sand lance, juvenile anchovy (whitebait), barracudas, flying fish				
Mesopelagic fish	Mackerels, billfishes, skipjacks, tunas, coho salmon, chum salmon, yellowtail, mako shark, blue shark, greater amberjack, gizzard shad, Spanish mackerel, mahi mahi (dorado), capelin, crimson sea bream, yellowtail amberjack				
Demersal fish	Black-throat seaperch, horse mackerels, bigeyed greeneye, Japanese parrotfish, forked hake, black scraper, alfonsino, thornyhead, tiger puffer, herring, spiny goby, balloonfish, Rikuzen flounder				
Mammals	Whales				

Marine products under distribution restriction (not distributed) in Fukushima Prefecture and neighboring prefectures (as of the end of May 2013)

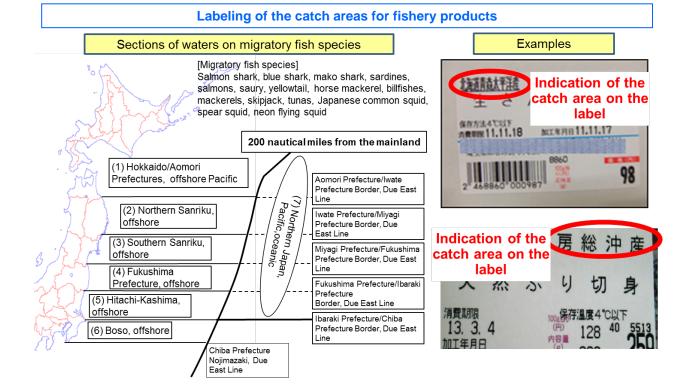
Fish species	Panther puffer	Olive flounder	Stone flounder Ocellate spotalate Rockfish Nibe croaker Pacific cod	Japanese black porgy	Sea bass
Part of Iwate Prefecture (note 2)				×	×
Miyagi Prefecture Southern part (note 3)	×			×	×
Fukushima Prefecture (note 4)	×	×	×	×	×
Ibaraki Northern part Prefecture (note 5)		×	×		×

### Notes:

- The " x " mark in the table denotes a area and species under a distribution restriction directive.
- Sea area south of the due east line from the land area border between lwate and Miyagi Prefectures
- Sea area of Miyagi Prefecture south of Kinkasan Island
- 4) In the sea area of Fukushima Prefecture, a distribution restriction directive has been imposed for 32 species of marine products other than the nine species indicated in this table.
- 5) Sea area of Ibaraki Prefecture north of latitude 36° 38' N

### (3) Status of efforts toward securing consumer confidence

- The national government, the relevant prefectures, and relevant fishery industry/cooperatives have worked together to ensure that fishery products containing radioactive cesium exceeding the standard limit are not distributed to the market, and that the food safety for fishery products that reach consumers has been secured.
- In order to allow consumers to purchase fishery products in Japan without anxiety, it is important that the national government, the relevant local governments, fishery industry/cooperatives to cooperate with each other to continue to implement radioactive materials monitoring for fishery products and to publicize the monitoring results in a way that consumers find easy to understand.
- Due to the growing consumer's interest in the waters where fishery products are caught, the Fisheries Agency has established the sections of the waters in the Pacific Ocean off the coast of East Japan and recommended to use them when indicating areas where fishery products were caught on food label.
- To respond to other countries' tightened import regulations on Japanese foods that include fishery products, the Japanese government has provided information on its radioactive materials monitoring results and safety measures to foreign governments, and has requested that they reconsider their own excessively strict import restrictions for agricultural, forestry, and fisheries products and foods, of which safety has been scientifically verified. As a result, a part of the restrictions for exporting fishery products to the EU has been lifted, and export to Egypt has resumed.



Stressing the safety of Alaska pollack to media reporters from South Korea (Hokkaido Federation of Fisheries Cooperative Associations)

- Alaska pollack in Hokkaido Prefecture had been exported mainly to South Korea as a popular ingredient for hot-pot and other dishes. However, exports decreased sharply after the accident of TEPCO's F1NPS.
- In order to wipe out South Korean consumers' concerns and recover the export of Alaska pollack, the Hokkaido Federation of Fisheries Cooperative Associations invited South Korean media reporters to Hokkaido in January 2013, so that they would report on the information on food safety gathered in Hokkaido back in South Korea.

### (4) Developments toward resumption of fishery in Fukushima Prefecture

- The Fukushima Prefectural Federation of Fisheries Co-operative Associations set up the Fukushima Local Fisheries Reconstruction Council, consisting of representatives from fishery-related entities, fishery processors and distributors, financial institutions, academic experts, and Fukushima prefectural government, aiming for the recovery of the fishing industry and resumption of fishery operations off Fukushima Prefecture.
- After deliberations at the Council and the conference of the heads of fishery cooperatives in Fukushima Prefecture, offshore trawlers belonging to the Soma-Futaba Fishery Cooperative started trial fishing operations in limited sea areas and for limited fish species in June 2012.
- The target fish species and fishing methods have been expanded; and as of the end of May 2013, 16 species were targeted, including North Pacific giant octopus, Japanese common squid, horse hair crab, Japanese whelk, thornyhead, bigeyed greeneye, and juvenile sand lance. The fishery products caught in the trial fishing operations have been distributed, after strict check of radioactive cesium, not only within Fukushima Prefecture, but also to central wholesale markets in Sendai, Tokyo, and Nagoya. They were sold out and delivered to consumers in various locations.

### Efforts at Onahama Port

- The Onahama Port in Fukushima Prefecture had been developed as a hub port for far-seas skipjack fishing vessels and large and medium-sized purse seiners. However, due to the damage by the earthquake and tsunami as well as the accident of TEPCO's F1NPS, vessels from other prefectures that used to land catches at the Onahama Port have come to avoid using the port.
- In such a situation, Aeon Retail Co., Ltd., a large distributor of nation wide, started an action to purchase skipjack that were landed at the Onahama Port and sell them at its retail stores, starting from June 2012 until the end of the skipjack fishing season in September.
- In addition, 100,000 cans of flaked skipjack, made of the species that were landed at the Onahama Port, were manufactured, and have been sold under the brand name of the Fukushima Prefectural Federation of Fisheries Co-operative Associations since January 2013.