

FY2005 Trends in Fisheries

Fisheries Measures for FY2006

Outline

This document reports the trends in fisheries and the measures taken during FY2005 based on the provision of Article 10(1) of the Basic Law on the Fisheries Policy. (Law No. 89 of 2001) and reports the measures to be taken in FY2006 based on the provision of Article 10(2) of the same Law.

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○ FY2005 Trends in Fisheries

Topics -Fisheries in FY2005-

1. Tasty fish for healthy life

-Passing down the fish-eating culture through “Shokuiku (Food Education)”-

Fish is essential for the diet of Japanese people of all generations from children to the elderly. Fish not only accounts for 40% of the animal protein intake of Japanese people, but it is full of other important nutrients including calcium and vitamins. In addition, the docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) contained in fish oils are known to help prevent the formation of blood clots and enhance brain development and eyesight. These are fish-specific elements that are not contained in any other food.

Do the effects of DHA and EPA change depending on the amount of fish eaten? As a result of a large-scale survey conducted by a study group of the Ministry of Health, Labor and Welfare, targeting 40,000 samples nationwide, it was found that persons who eat fish eight times a week had about 60% lower risk of cardiac infarction than those who only eat fish once a week. This result was published in a U.S. medical magazine, *Circulation*, in January 2006. It would not be an exaggeration to say that the fish-eating culture is one of the key factors for Japan having the world’s greatest longevity.

In recent years, however, a nutritionally unbalanced diet and irregular eating patterns have been observed more frequently in Japan. Also, the feeling of gratitude for food and the good, traditional food culture has been gradually lost. In response to such a situation, the Basic Law on Food Education was enacted in 2005 in order to have people develop mental and physical health and good character during their lifetimes by promoting “Shokuiku (Food Education)” as a national movement.

As part of the efforts on Shokuiku, the Japanese Food Guide Spinning Top was created. This is an easy-to-understand illustrated guide on the favorable meal composition and daily amount of food. Using this guide, we promote implementation of a *Japanese dietary pattern*, which combines a variety of side dishes with rice.



In the Special Public Opinion Poll on Shokuiku conducted by the Cabinet Office (released in September 2005), about 70% of the respondents answered that they were interested in Shokuiku. To meet such a high level of public interest, efforts are being made in various locations to convey the benefits of eating fish through Shokuiku programs.

In Ehime Prefecture, research was conducted, with aid from the Ministry of Agriculture, Forestry and Fisheries (MAFF), on an educational program based on six *gyoshoku* concepts: touching fish, fish color (category), fisheries jobs, aquaculture, fish as traditional ornaments, and fish eating (which can all be expressed as *gyoshoku* using different kanji characters). This is a comprehensive *gyoshoku education* program for elementary and lower secondary school students and their parents and guardians. In this program, the students learn about *fish eating* after going through the process of learning about the five other *gyoshoku*. These five are: *touching fish*, where students learn about fish through hands-on activities such as actually touching and cooking fish, *fish color (category)*, where students learn information on fish itself such as the types of fish and their nutrients, *fisheries jobs* and *aquaculture*, where students learn about fish production and distribution sites, and *fish as traditional ornaments*, where students learn about Japanese traditional fish culture such as the ornamental lobster used for a New Year's decoration and sea bream used for celebration.

The Women's Forum for Fish (WFF), a citizens' group for promoting fisheries and fish-eating culture, has been making steady efforts to help children, who will support the future dietary life, learn their ties with the sea. In one of their programs, Hama No Kāsan To Katarō Kai (Talking session with *seashore mothers*), elementary school students in urban areas learn about the sea and fish from mothers from fishing villages every year. In 2005, *seashore mothers* from Hokkaido Prefecture who brought marbled

sole, those from Toyama Prefecture who brought red snow crab, and those from Miyagi Prefecture who brought saury cooked their specialty dishes with students and talked with the students while eating the dishes together. Also, children reporters, who were chosen from the students who participated in the session, went to Shinminato City in Toyama Prefecture, and gathered information on the fishing village through trying out fishing and making exchanges with local children.

The Miyazaki Fisheries Cooperative Federation also holds a Fish Cooking Class every year at several upper secondary schools in the prefecture, and teaches students how to cut and cook fish including bonito. Such effort is made throughout the nation, mainly by women's divisions and the working-aged men's divisions of fisheries cooperatives.



Cooking fish dishes with a *seashore mother* (WFF)



Children reporters gathering information at a fish market (WFF)

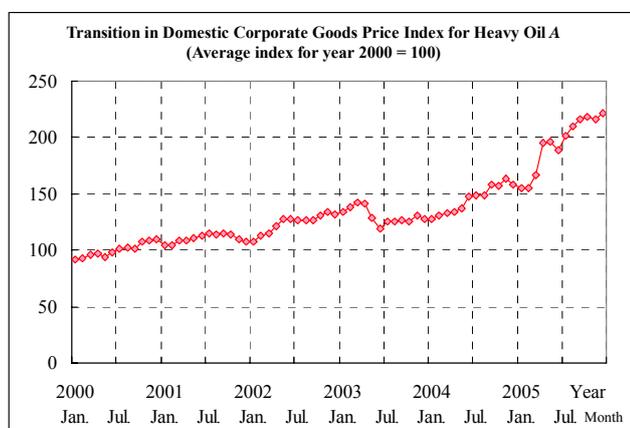
2. Impact of fuel oil price hike

-Efforts to shift to energy-efficient fishing-

Crude oil prices continue to rise worldwide. At the end of August 2005, the price of U.S. WTI crude¹ marked a record high at 69.81 U.S. dollars per barrel² (near-month³ closing price⁴), doubling from the level in 2003 when the price shifted around 30 U.S. dollars per barrel in only two years.

The price hike is reported to be attributable to the following four factors: (i) a surge in oil demand in China and other parts of the world (structural factor); (ii) a decline in OPEC nations' surplus production capacity (structural factor); (iii) destabilizing factors in oil supply including hurricane damage in the United States and the situation in the Middle East; and (iv) short-term fluctuations due to speculation. The crude oil prices are expected to stay at the current level for some time in the future.

The crude oil price hike has pushed up the prices of oil products overall, and this is expected to affect various fields. In the fisheries field, there is concern that the price hike would seriously affect fishery management, because the share of fuel cost in the total cost is higher compared to other industries due to delay in energy conservation efforts, and it is difficult to pass the cost on in the prices of the fish caught. For example, supposing that the fuel oil price is at the same level as at the end of 2005 and that the amount of fuel oil used remains at the same level as in FY2003, the annual average fuel oil cost for small- and medium-vessel fisheries would be about 7 million yen higher than that in FY2003.



¹ WTI crude: Crude oil of West Texas Intermediate. A representative U.S. crude that serves as an indicator of the world's crude oil market conditions.

² 1 barrel: approx. 159 liters

³ Near-month: The futures contract month (month in which the sales contract must be settled) with the earliest date of delivery. (Antonym: distant)

⁴ Closing price: Final contract price in the afternoon session.

In such circumstances, with the aim to promote structural reform toward achieving sustainable and robust fishery management, even with the current crude oil price level, fishery operator groups have created a *work schedule*, which will serve as a guidepost for fishery operators' energy conservation efforts, for the respective fishery types and regions according to their individual situations. Henceforth, fishery operators' energy conservation efforts will be promoted based on this work schedule.

With respect to the crude oil price hike, the relevant ministries and agencies of the Government will take countermeasures in coordination with each other.

In the Funds for Emergency Comprehensive Measures to Strengthen the Nature of Fishery Management, which was set up by the FY2005 supplementary budget in order to urgently support the efforts of fishery operators and their groups, and in the FY2006 budget, the Government will support the efforts made based on the *work schedule*, including the efforts to improve the efficiency of the fuel oil distribution by associations of fisheries cooperatives and energy conservation efforts through cooperative work between fishery operators. Additionally, with the aim to improve the efficiency of the fuel oil distribution by associations of fisheries cooperatives, the Government will support efforts to consolidate or relocate fuel oil tanks or to introduce an automatic management system based on a Plan to Improve Efficiency of Physical Distribution formulated for the respective prefectures. It is expected that the price of fuel oil supplied to fishery operators can be lowered by cutting personnel costs and facility management costs through these efforts.

Furthermore, the Government will support a shift to energy-efficient fishing in both tangible and intangible aspects through promoting cooperative work including joint operations using scouting vessels for group operation and encouraging squid fishery operators to shift to using light-emitting diode (LED) fishing lights that only consume about one-thirtieth of the electric power consumed by conventional lights.

Fishery operators are also able to introduce energy-saving facilities and equipment by using the Support Project for Industries for Increasing the Efficient Use of Energy.

Prefectural governments are also providing interest subsidies to financial institutions in order to urgently accommodate funds to fishery operators making energy conservation efforts at a low interest rate, and conducting activities to raise fishery operators' awareness for reducing the amount of fuel used for fishing vessels.

At the same time, as a medium-term effort, the Government will consider structural reform of fisheries using fishing vessels including a shift to low-cost management through laborsaving measures.

It is hoped that fishery operators will engage in energy conservation and cost reduction efforts using these support measures, and shift to energy-efficient fishing as early as possible.

3. Infestation of large jellyfish

-Measures against damages from large jellyfish-

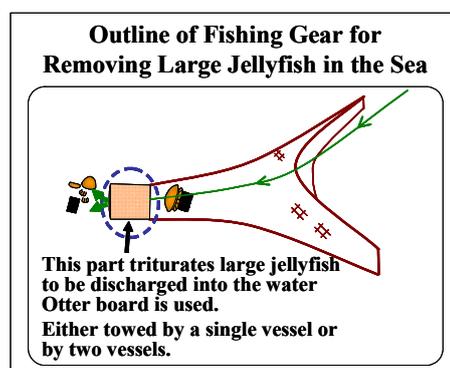
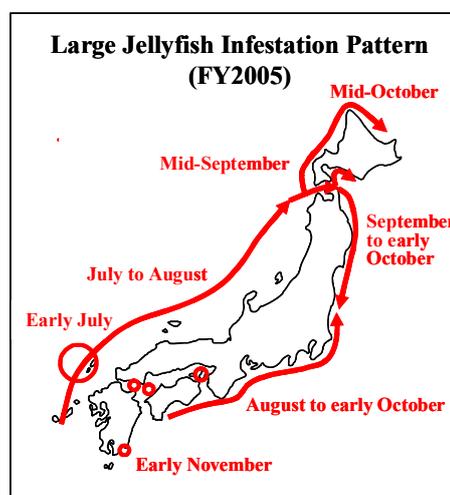
Year 2005 saw an infestation of large jellyfish in the East China Sea. The jellyfish drifted ashore on the coast of Japan and inflicted great damage on fisheries. During the period from September to the end of December of 2005, a total of about 1,022,000 cases of damages were reported.

Large jellyfish collectively refers to echizen jellyfish, bizen jellyfish, and hizen jellyfish. The size of large adult jellyfish could reach 150 cm or more in diameter and 150 kg in weight. The type that is drifting to the Japanese coast in large number is the echizen jellyfish. Their infestation had been rare in the past, but they have recently been observed in considerably large numbers for two consecutive years in 2002 and 2003, with several thousands of them being caught in set nets in a single day in some notable cases. In 2005, large jellyfish were witnessed in the East China Sea and in Tsushima, Nagasaki Prefecture, in early July, about one month earlier than they had appeared in previous years. Then, the jellyfish spread out widely by moving from the Sea of Japan northward, crossing the Tsugaru Straits, and moving towards the Pacific Ocean southward. Large jellyfish were also observed in large numbers off Shikoku, on the coast of the Seto Inland Sea and on the coast of Tokai and Kanto.

Many troubles related to large jellyfish have been reported. They become caught in nets, mainly set nets and purse seines, around the nation, and destroy fishing gear, reduce the freshness of fish caught, and interfere with fishing work.

In response to this situation, the Government, prefectures, universities, and persons involved in fisheries made concerted efforts to counter the large jellyfish, including removing jellyfish in the sea.

At the second joint international workshop on large jellyfish among China, South Korea, and Japan held in China in December 2005, researchers from the three countries made a large number of reports on the ecology,



countermeasures, and usage of jellyfish, and discussed joint research. In the future, the Government will provide subsidies to the costs required for removing jellyfish based on the Funds for Emergency Comprehensive Measures to Strengthen the Nature of Fishery Management, which was set up by the FY2005 supplementary budget, and continue to take countermeasures including joint research with China and South Korea for elucidating the cause of the infestation.

4. Proud heritage of the sea and ports

-A selection of 100 historical and cultural heritage sites and heirlooms related to fisheries and fishing villages which we would like to hand down to future generations-

The fisheries industry and fishing villages not only supply fishery products, but also play other diverse roles including providing opportunities for exchanges, such as marine recreation and experiential learning opportunities, and passing on region-specific food culture and traditional culture from generation to generation. With the aim to discover such appealing characteristics of fishing villages and spotlight the history and culture that may become forgotten, “A selection of 100 historical and cultural heritage sites and heirlooms related to fisheries and fishing villages which we would like to hand down to future generations” was created in February 2006.

With a view to not only include heritage sites that are already famous, but also identify not so well-known facilities, historic sites, and ruins all over the country, applications were invited from the public, and historical heritage sites that have derived from fishery operations, highly cultural heritage sites, and facilities that have laid the foundation of fisheries were selected by a screening committee consisting of fisheries experts as well as a tourism expert, a writer, and a photographer.

The selected 100 heritage sites and heirlooms can be viewed on the National Association of Fisheries Infrastructure website (<http://www.gyokou.or.jp/index.htm> [in Japanese only]).



Hobiki bune (sailing vessels) in the Kitaura part of the Kasumigaura Lake, which once disappeared with the motorization of fishing vessels, but were later revitalized for cruise boats (Ibaraki Prefecture).



Funaya (boat storage), also referred to as *mogoya* (alga storage) built at a rocky beach without a wharf with piled beach stones and thatched roofs (Tsushima City, Nagasaki Prefecture).



Stone walls built in the late 19th century to protect the houses in the fishing village from the strong northwestern wind in winter (Ainan Town, Ehime Prefecture).



Kobaya bune of the annual Kifune Festival of the Kifune Shrine, established in 889 (Manatsuru Town, Kanagawa Prefecture).

5. Say “No!” to tuna overfishing

-Efforts to strengthen resource management by regional fisheries management organizations-

Tuna and other highly migratory fish stocks must be appropriately controlled by establishing regional fisheries management organizations for the respective migratory ranges and taking measures including trade restrictions with the cooperation of the countries concerned.

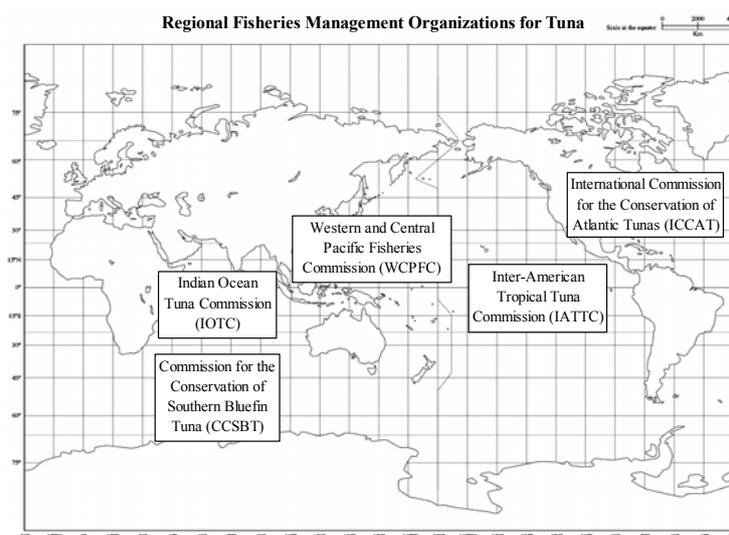
In 2005, significant progress was seen in the efforts of the regional fisheries management organizations.

The Indian Ocean Tuna Commission (IOTC),¹ the Inter-American Tropical Tuna Commission (IATTC),² the International Commission for the Conservation of Atlantic Tunas (ICCAT),³ and the Western and Central Pacific Fisheries Commission (WCPFC)⁴ addressed the issue of Taiwanese fishing vessels allegedly overfishing bigeye tuna and disguising the fishing areas in their annual meetings. In particular, the ICCAT took restriction measures against Taiwan, including a drastic reduction in the catch quota for 2006 and reduction in the number of vessels.

At the annual meeting of the ICCAT, it was decided that, in order to strictly manage the catching of bluefin tuna to be brought to fish farms,

imports of bluefin tuna from fish farms that are not registered with the ICCAT and those that do not collect data on fish sizes based on the recommendation of the ICCAT will be prohibited.

Japan will continue to actively promote control of fishing capacity and measures against illegal fishing vessels, and strive to secure sustainable use of tuna resources through strengthening the efforts of regional fisheries management organizations.



¹ Members: 23 countries and the EC (as of December 2005).

² Members: 15 countries (as of December 2005).

³ Members: 40 countries and the EC (as of December 2005).

⁴ Members: 22 countries, the EC, and Taiwan (as of December 2005). Japan joined in July 2005.

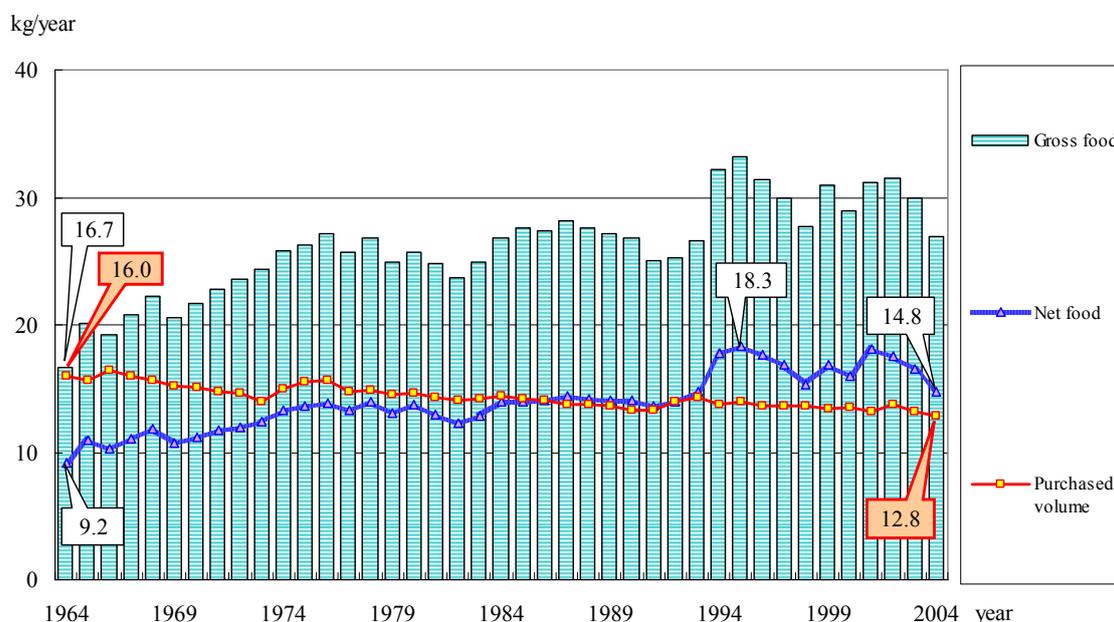
I. Special Feature: Attempts of Landing Areas to Meet Consumer Needs

1. Changes in consumption and distribution of fishery products as well as buying behavior and awareness of consumers

(1) Changes in consumption of fishery products

Although the annual per capita supplied volume of fresh fishery products (including frozen products) has generally increased over the past 40 years, the annual per capita purchased volume has gradually declined (see Figure I-1-1).

Figure I-1-1 Transition in Per Capita Supplied Volume and Purchased Volume of Fresh Fishery Products (Including Frozen Products)



Sources: Data for “gross food” and “net food” taken from “Food Balance Sheet,” Ministry of Agriculture, Forestry and Fisheries; data for “purchased volume” taken from “Family Income and Expenditure Survey” (two-or-more-person households [excluding agricultural, forestry and fisheries households]), Ministry of Internal Affairs and Communications.

Notes: 1. “Purchased volume” includes fresh fish in their entire form and those with minimum processing such as being frozen, washed, cut, and removed of inedible parts.

2. Data do not include products for processing such as salting and drying, smoking, and canning, or products that have been processed in such ways.

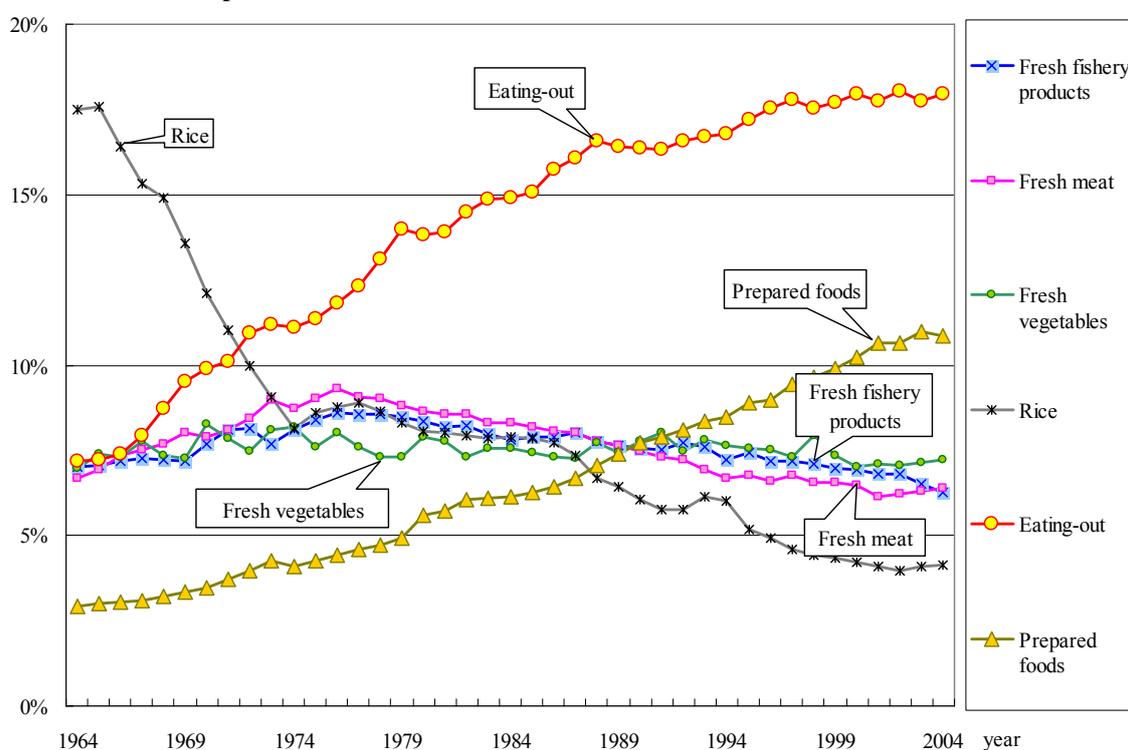
One of the reasons for this is that it has become less common for consumers to directly purchase fresh fishery products, since they have come to consume more fresh fishery products through eating-out and home meal replacement (HMR)⁵ (see Figure

⁵ Home meal replacement: Ready-to-eat, ready-to-heat, ready-to-cook, and ready-to-prepare foods eaten at home. The Japanese term is *nakashoku* (*naka* meaning “in-between”) as being a style in-between eating-out (*gaishoku* [outside meal]) and home-made meal (*naishoku* or *uchishoku* [inside meal]).

I-1-2).

During this period, the expenditures for eating-out and HMR have greatly increased their shares in household food expenditures. The growth of the eating-out market has recently stopped, but the HMR market including boxed meals, rice balls, and ready meal components has continued to grow. The growth is mainly attributable to: (i) an increase in the number of single-member and two-member households; and (ii) an increase in the number of working women.

Figure I-1-2 Transition in the Proportion of Food Items and Eating Styles in Food Expenditures



Source: Created based on “Family Income and Expenditure Survey” (two-or-more-person households [excluding agricultural, forestry and fisheries households]), Ministry of Internal Affairs and Communications.

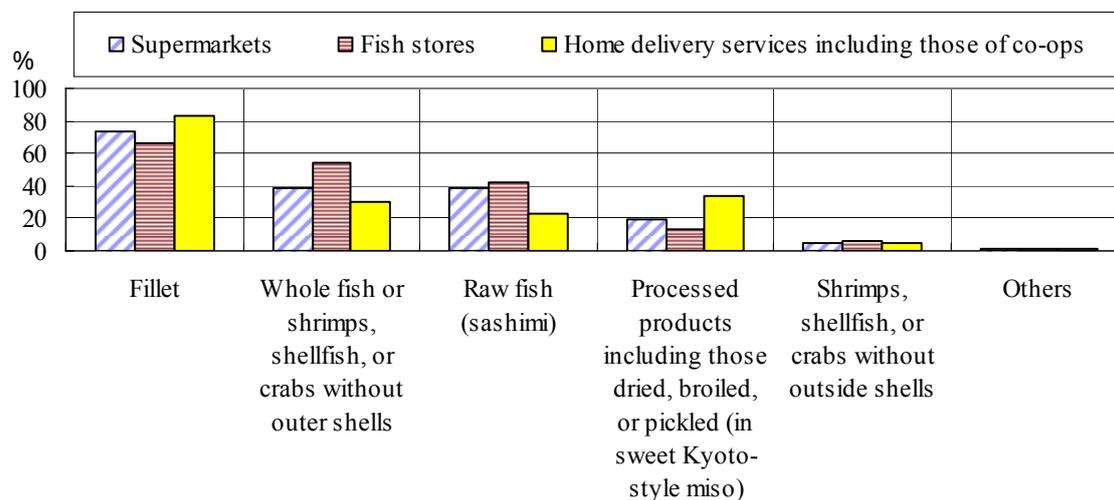
Note: “Prepared foods” refer to industrially processed foods as well as those of which all or part of the cooking generally conducted at home or restaurants are done. They include frozen prepared foods, retort-packed foods, and foods that have multiple cooked ingredients. Specifically, they are boxed meals, rice balls, sandwiches, Chinese steamed buns, retort-packed foods, and ready meal components, among other foods. They do not include instant noodles (with or without cups).

Another reason for the decline in the purchased volume of fresh fishery products despite the growing supply is the increased consumer preference for products in the forms of fillets and sashimi (thinly-sliced seafood made to eat raw). In other words, they have come to be sold and purchased after removing the inedible parts such as the head and bones (accounting for about 45% of the whole volume of a fish).

Consumers’ most preferred form of fresh fishery products for purchases at

supermarkets, at fish stores, and through home delivery services including those of co-ops is fillets. Sashimi is also in high demand. In short, products in easy-to-prepare or ready-to-eat forms are currently quite popular (see Figure I-1-6).

Figure I-1-6 Most Preferred Form of Fishery Products for Purchases (up to two answers)

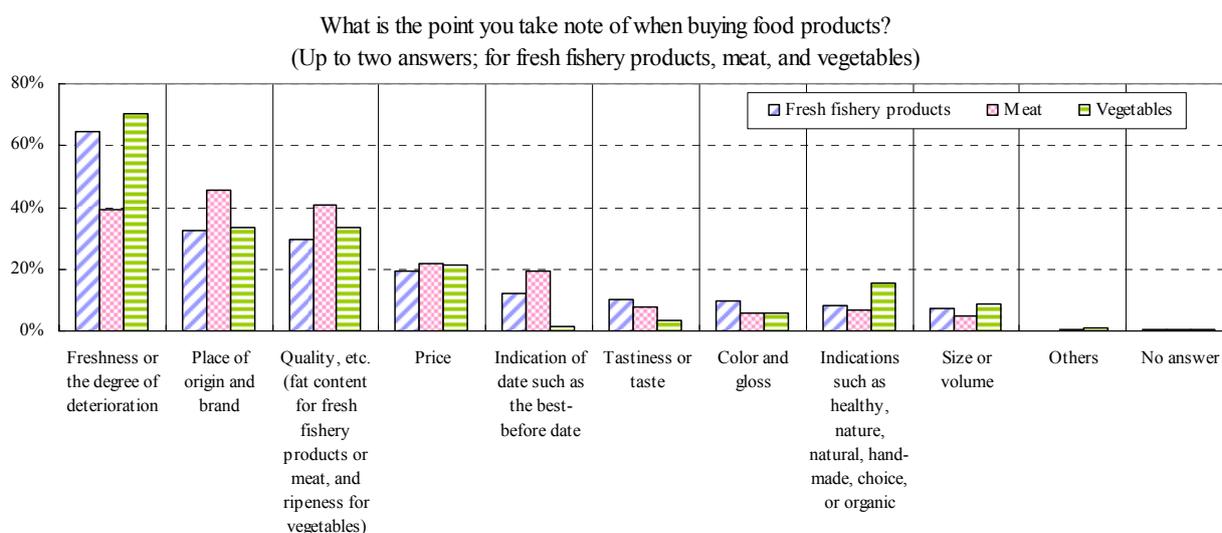


Source: “Survey on Consumption Fishery Products” (FY2004 Fisheries Agency-aided project), Japan Fisheries Association.

(2) Buying behavior and awareness of consumers

The point that consumers take note of when buying food products is “freshness or the degree of deterioration” for fresh fishery products and vegetables, far outstripping the second-ranking point of note. The first-ranking point is “place of origin and brand” for meat (see Figure I-1-8). Additionally, consumers tend to choose fish and vegetable stores by the “freshness” of their products.

Figure I-1-8 Point to Take Note When Buying Food Products



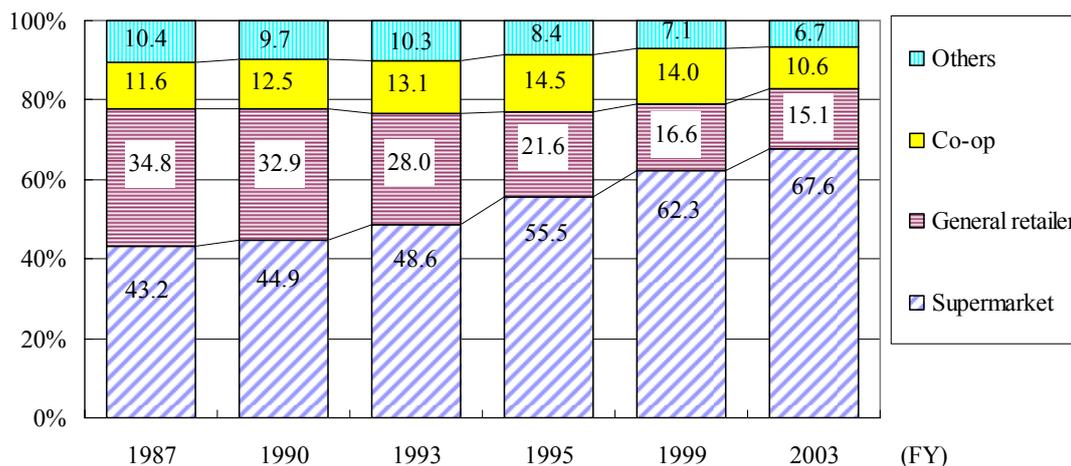
Source: “Buying Behavior for Food Products” (FY2003 Food Products Consumption Monitor, results of the third regular survey), Ministry of Agriculture, Forestry and Fisheries.

Note: Number of respondents was 1,010.

(3) Expanding market share of mass merchandisers and survival strategies of fish retailers

Fresh fishery products are most frequently bought at supermarkets. Supermarkets commanded about a 70% share in 2003 (see Figure I-1-16).

Figure I-1-16 Changes in Places for Purchasing Fresh Fishery products Over the Years



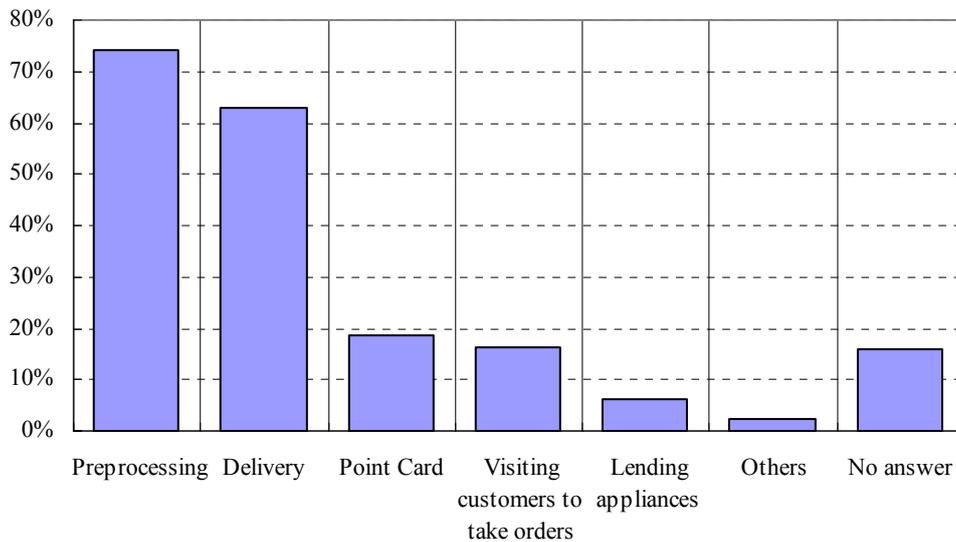
Source: “Food Purchase Trend” (3rd Food Consumer Monitor Survey, FY2003), Ministry of Agriculture, Forestry and Fisheries.

Consumers choose supermarkets due to their convenience, stating “they are conveniently located.” Meanwhile, about 90% of those who choose fish retailers mention the freshness of the products, stating “there are many fresh products.” Those who choose home delivery services such as those of co-ops mention the feeling of safety, stating “there is a feeling of safety in the products.”

Supermarket chains have many large stores and purchase large volumes of products in a systematic manner, so they tend to mainly deal in fish species that are distributed in large volumes such as tuna and salmon or imported products that come in large lots. Therefore, they cannot sufficiently supply seasonal fish of diverse kinds that are caught on the coast or adjacent waters of Japan.

The number of fish stores has considerably decreased. However, they differentiate themselves from mass merchandisers by providing detailed customer service such as recommending seasonal fish and giving advice on how to cook them, making the most of face-to-face sales, and offering a season-conscious product line-up by selling various kinds of seasonal fish according to the market conditions.

Figure I-1-20 Customer Service Provided by Fish Retailers (multiple answers)



Source: “Report about the State of Running on Food Specialty Retailers (Fish)” (March 2003), Organization of Food-Marketing Structure Improvement.

Note: Samples are 443 retailers nationwide extracted from members of the All Japan Fish Retailers Union.

(4) Rapid diversification of the distribution routes for fishery products

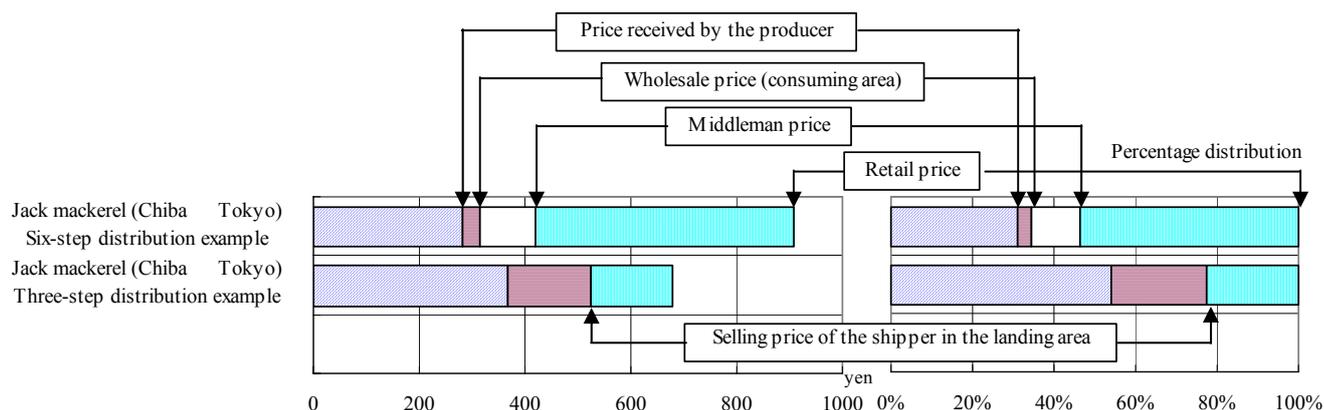
Since supermarkets that require four stable supply conditions (consistent volume, quality, prices, and deliveries) have come to command most of the retail share, there has been an increase in direct transactions that do not go through the wholesale markets in the consuming areas, and even in transactions through the wholesale markets, negotiated transactions are increasing.

In the area of fishery products as well, some producers and fishery cooperatives are independently cultivating markets through business to consumer (B to C) transactions and business to business (B to B) transactions via the Internet.

The percentage of the retail price that is received by the producers is 30% to 40% for vegetables, but it is about 20% to 30% for fishery products. The distribution margin for fishery products tends to become high because fishery products have a six-step distribution system, which is one step more than the system for vegetables, because they go through the wholesale markets in the landing areas, while they also require constant refrigeration to be kept fresh and incur costs in order to be processed into fillets and sashimi.

In the case where a retailer directly procures products from a landing area (three-step distribution system), the distribution margin is kept low due to shorter distribution route, resulting in a higher price received by the producers and lower retail prices compared to products using the six-step distribution system (see Figure I-1-25).

Figure I-1-25 Comparison Between Six-Step Distribution System and Three-Step Distribution System (Jack Mackerel)



Source: “Survey on Tracing Food Prices at Various Stages of Distribution (Survey on Fishery Products)” (April 2003), Ministry of Agriculture, Forestry and Fisheries.

Notes: 1. The price by distribution step (left graph) shows the price per kg. However, the price of a product sold by removing the inedible parts such as the head and bones was converted to the price for the entire product before removing the inedible parts.

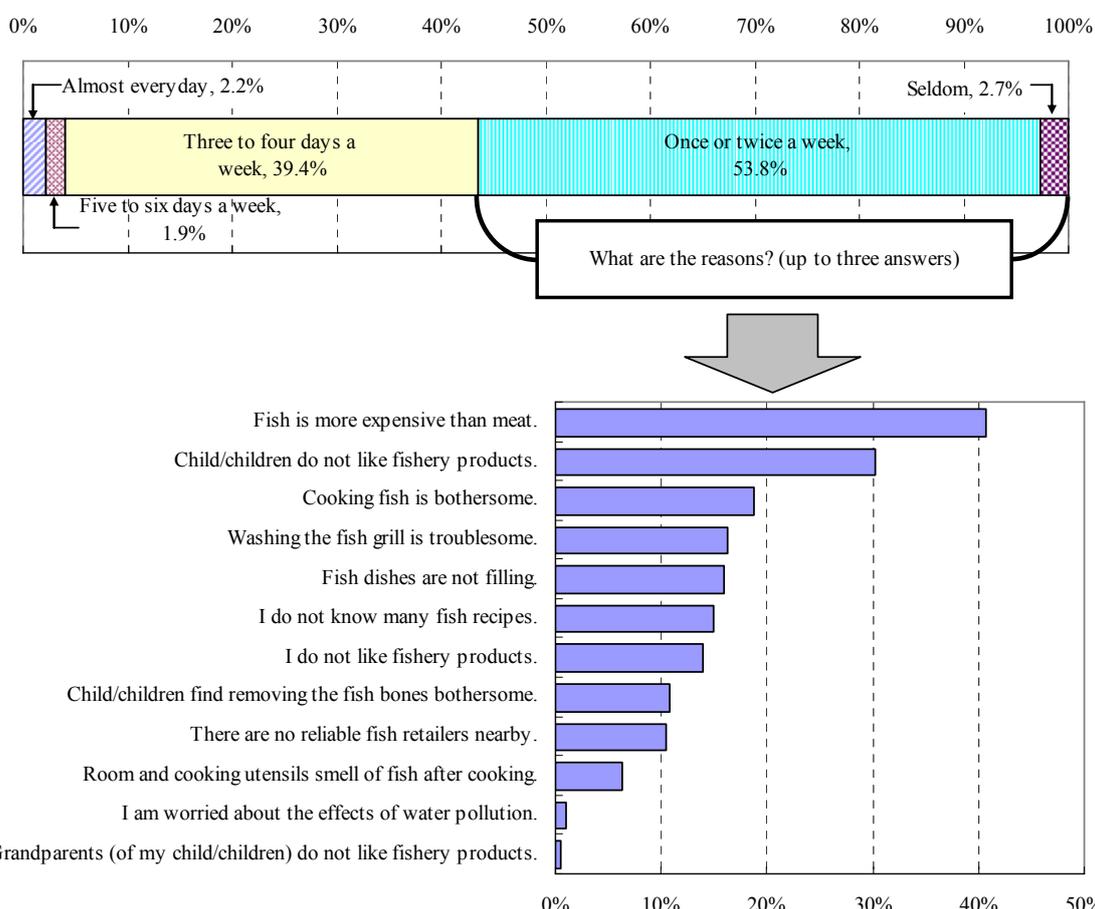
2. The survey was conducted by tracing back the distribution route of products that were sold at retailers in Tokyo on October 30, 2001.

(5) Facts about the high fish prices in consuming areas and low fish prices in landing areas

Nearly 60% of households with a child or children in elementary or lower secondary school have fish for dinner twice a week or less. The most notable reason was “fish is more expensive than meat,” accounting for about 40%. On the part of the fishery workers, however, the fish prices remain low amidst the rising fuel oil prices, so they even have difficulty in collecting the fuel oil cost. Thus, the awareness of fish prices differs considerably between producers and consumers.

Figure I-1-27 Frequency of Having Fishery Products for Dinner and Reasons for Low Frequency

How many days a week do you have dishes using fishery products for dinner on average (including eating-out, ready meal components, and boxed meals)?



Source: "Survey on Consumption Fishery Products" (FY2004 Fisheries Agency-aided project), Japan Fisheries Association.

For example, common mackerel are divided into those for fresh products, those for processing, and those for feed according to their size, and their wholesale price per kg in the landing area differs greatly based on their type of use. The price of common mackerel for processing is half, and the price of those for feed is one-tenth of the price of those for fresh products. The wholesale price in the landing area for common mackerel for fresh products is about 40% of the retail price (fresh products), but the average wholesale price in the landing area for common mackerel for all types of use is less than 20%. Therefore, the relation between the wholesale price in the landing area and the retail price differs considerably depending on which wholesale price is compared (see Table I-1-1).

Table I-1-1 Wholesale Price in Landing Area and Retail Price of Common Mackerel by Type of Use

(yen/kg)

	For fresh products	For freezing	For feed	Price in landing area (average for all types of use)
Wholesale price in landing area = A	223	105	24	98
Percentage to the price of common mackerel for "fresh products"	100%	47%	11%	44%
Retail price (fresh products) = B	533			
Percentage of wholesale price in landing area to retail price (fresh products) = A/B	42%			18%

Sources: Wholesale prices in landing area by type of use ("for fresh products," "for freezing," and "for feed") are data surveyed by the Japan Fisheries Information Service Center. Data for "price in landing area (average for all types of use)" are based on "Annual Statistics on Marketing of Fishery Products" (203 major fishing ports), Ministry of Agriculture, Forestry and Fisheries. As for the retail price, based on an assumption that only the edible part (60%) of the fish has been sold by removing the head and bones, the average purchase price (per 100g) of [fresh fishery products: common mackerel] in "Family Income and Expenditure Survey," Ministry of Internal Affairs and Communications, was converted to the price per 600g (equivalent to 1kg of whole fish).

Notes: 1. All prices are the average prices for the period of 1999 to 2003.

2. A common mackerel "for fresh products" weighs roughly 400g or more, that "for freezing" weighs roughly 300g to 399g, and that "for feed" weighs roughly 299g or less.

Since the shipment volume of common mackerel for fresh products is relatively stable and that of products for processing does not change drastically, when the production volume increases, the proportion of common mackerel for feed increases and results in a fall in the price in the landing area (average for all types of use).

In 1997, when common mackerel for fresh products only accounted for 10%, and those for feed took up 70% of the share, the price in the landing area (average for all types of use) was 62 yen/kg. However, in 1999, when the share of common mackerel for fresh products increased to 20%, and that for feed dropped to 50%, the price rose to 108 yen/kg.

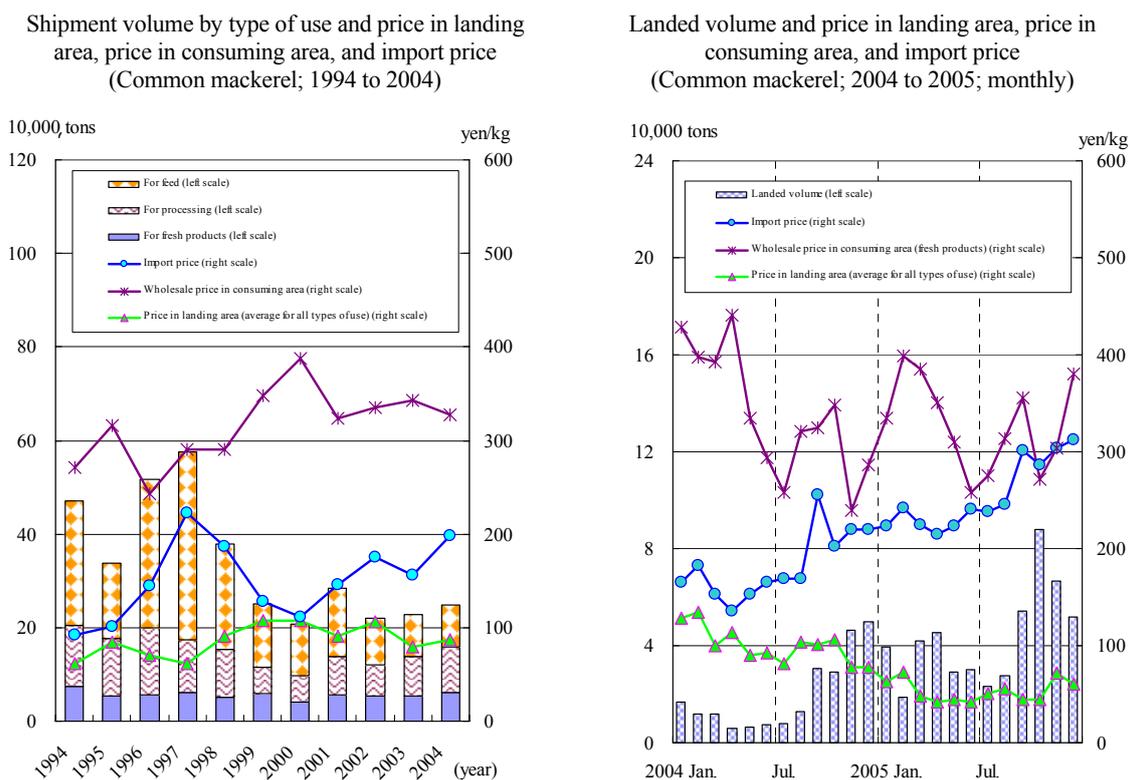
In 2005, the production volume increased considerably centering on small fish (for feed), so the price in the landing area (average for all types of use) fell close to 40 yen/kg.

While the wholesale price in the consuming area (fresh products; mainly domestic products) has stayed at around 300 yen/kg, the import price for common mackerel (frozen), which are generally larger than domestic products, has been rising due to an increase in global demand, reaching the same level as the price of domestic fresh products (see Figure I-1-28).

The challenge is to take strategic measures for raising the added value, such as

mainly catching fish for fresh products and for freezing due to their high wholesale prices in the landing area, and shipping small fish that are categorized as products for feed after farming them into a bigger size so as to be categorized as products to be eaten by humans.

Figure I-1-28 Production Volume of Common Mackerel and Their Price in Landing Area, Price in Consuming Area, and Import Price



Sources: Created based on “Annual Statistics on Marketing of Fishery Products,” Ministry of Agriculture, Forestry and Fisheries, and “Trade Statistics” (import price [frozen]), Ministry of Finance.

- Notes: 1. Price in the landing area (average for all types of use) is the average price in 203 fishing ports.
 2. Wholesale price in the consuming area (fresh products) is the average price in the central wholesale markets of ten cities.
 3. Shipment volume by type of use in the left graph is the average volume at 32 major fishing ports.
 4. Landed volume in the right graph is the average volume at 19 major fishing ports.

(6) Need for strengthening the selling ability of the landing area

Consumer needs are extensive, including freshness, convenience, and low price, and also vary by age group. Therefore, it is important to consider how to meet the changing consumer needs by making the most of the advantages of domestic fishery products, such as their freshness, diversity, and seasonality, amidst the competition with imported fishery products and non-fishery products.

Since the places of purchase of fishery products are changing, and distribution routes are diversifying, there is a need to strengthen the selling ability of the landing area.

In order to do so, it is important to promote the structural reform of the market in the landing area. There are about 900 markets in landing areas around the nation, but many of them are small and their price-making ability has declined due to a decrease in landed volume. Therefore, there is a need to integrate small markets in landing areas to restore their market functions and increase their selling ability.

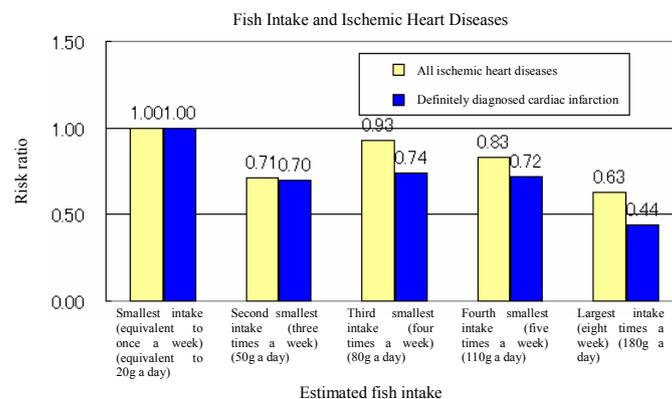
Additionally, it is important to make active selling efforts such as those of fisheries cooperatives independently acquiring the right to bid in market auctions and entering the distribution business or conducting sales promotion to large supermarkets.

The more you eat fish, the less risk of cardiac infarction

- Study group of the Ministry of Health, Labor and Welfare-

The docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) contained in fish oils are known to help prevent lifestyle-related diseases by inhibiting the formation of blood clots, and to enhance brain development. There have been overseas research reports indicating that eating fish prevents ischemic heart diseases including cardiac infarction, even if the intake is only once or twice a week. However, there had been no report on whether the effect to prevent ischemic heart diseases would increase by eating a large amount of fish, more than once or twice a week. Thus, a study group of the Ministry of Health, Labor and Welfare conducted a follow-up survey on the relation between the lifestyle habits, including diet and ischemic heart diseases, for about 40,000 male and female samples living in Iwate, Akita, Nagano, and Okinawa Prefectures, for about 11 years starting in 1990.

During the follow-up period, a total of 258 samples, 207 males and 51 females had ischemic heart diseases. When the relevance of the amount of fish intake was analyzed for these samples by excluding the influences of other factors such as old age and smoking, the risk of ischemic heart diseases for the group with the largest intake (equivalent to eight times a week) was 63% of such risk for the group with the smallest intake (equivalent to once a week). When narrowing down the risk to cases of receiving a definite diagnosis of cardiac infarction by electrocardiogram and blood tests, the risk for the group with the largest intake was 44% of the risk for the group with the smallest intake, indicating a more obvious decline in the risk (see figure). Japanese people's per capita consumption volume of fishery products is among the highest in the world. This study revealed that fish is expected to have the effect of preventing ischemic heart diseases merely by eating it once or twice a week, but the preventive effect becomes higher by eating it more frequently.



Source: Website of Japan Public Health Center-based Prospective Study (<http://epi.ncc.go.jp/jphc/>)

2. Examples of efforts in landing areas

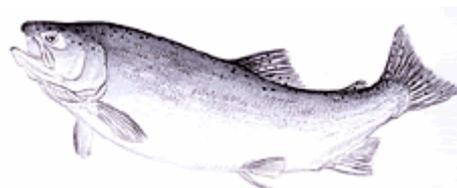
(1) Fisheries cooperative's active sales promotion to large supermarkets

Fisheries Cooperative A in Fukushima Prefecture makes direct transactions with large supermarket chains in the Tokyo metropolitan area. It conducts active sales promotion by actually visiting the stores and giving advice on arranging the selling space in an effective manner.



(2) Increasing safety and improving quality of silver salmon farming

Date No Gin is a brand of silver salmon farmed in Miyagi Prefecture. Efforts are being made to improve its quality by using originally developed feed and to build trust by making full disclosure of its production history.



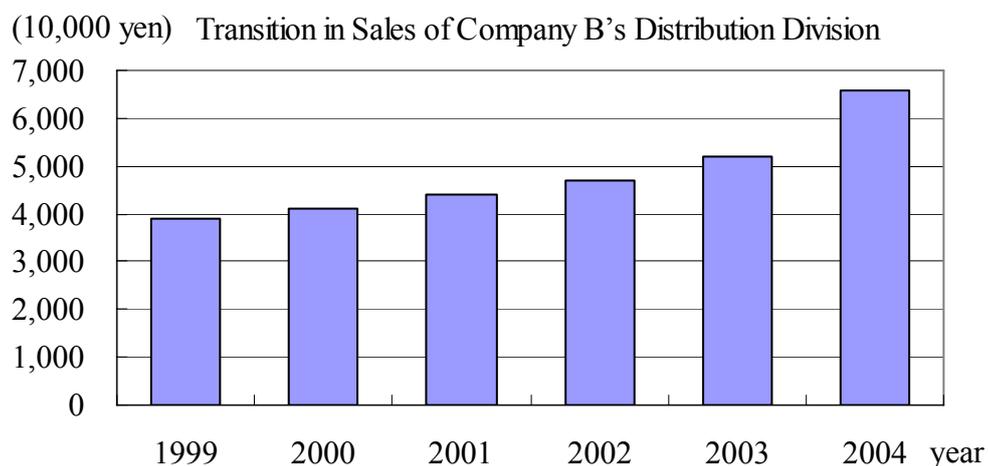
(3) Seafood market in landing area attracting tourists and promoting local consumption of local products

Karo Ichi, a seafood market in Karo Port, Tottori Prefecture, made success as a new tourist spot using the local marine products. The market is crowded with people seeking fresh and low-price products.



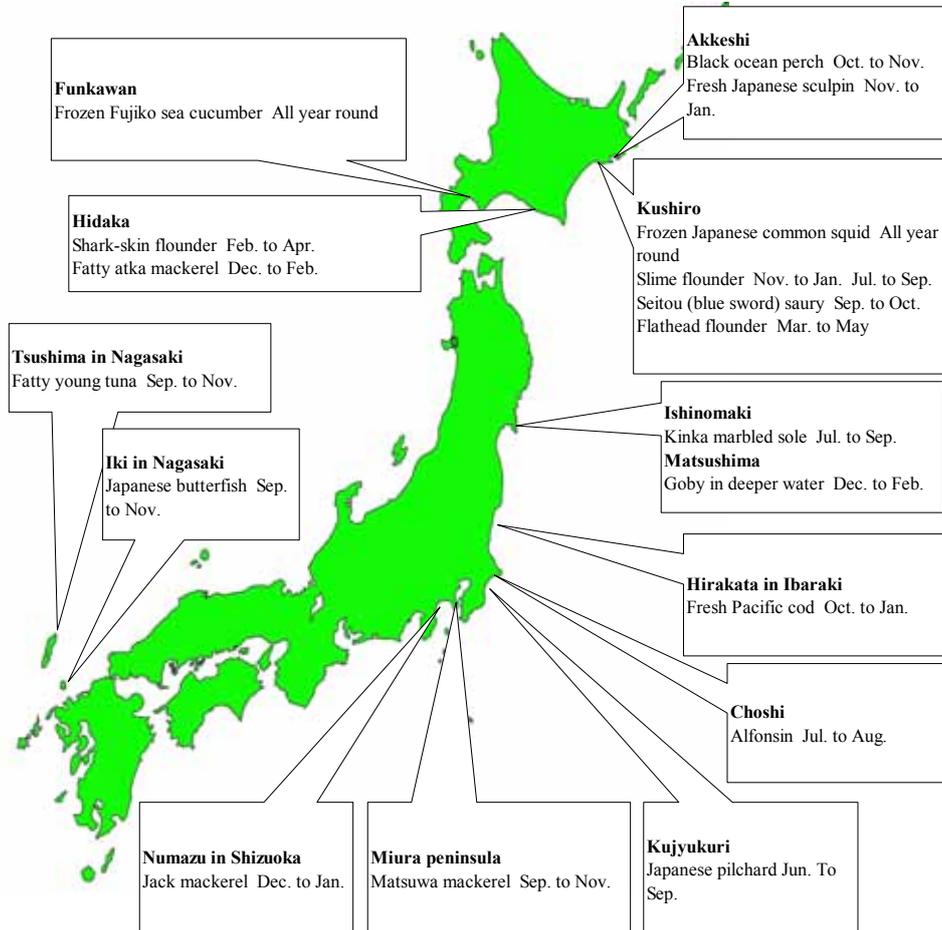
(4) Trawl fishery's survival strategy of cultivating new markets including restaurants

Company B, which engages in offshore trawl fishery in Yawatahama City, Ehime Prefecture, sells processed products to local welfare facilities and directly sells its products via the Internet.



(5) Wholesaler-led branding activity that links the landing areas and retailers

Company C, a wholesaler of fishery products based in the Tsukiji fish market in Tokyo, launched the *Otakara Burando* (precious brand product) series in cooperation with landing areas nationwide and retailers.



(6) Direct delivery of fresh fishery products from landing area using the Internet

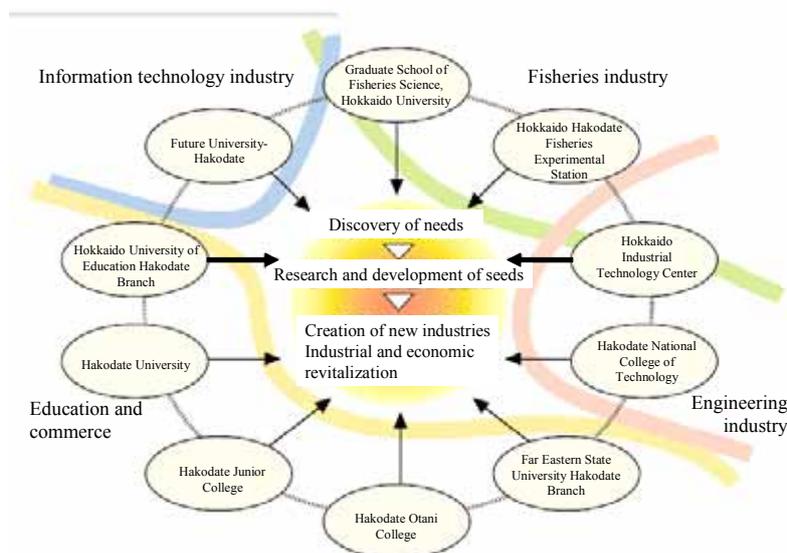
Company D, a general trading company, launched an Internet shopping service called Nippon Jizakana Kikō (Traveling around Japan for local fish) in collaboration with landing areas, and delivers very fresh, tasty fish to customers.



(7) Developing a fisheries city through collaboration between industry, academia, and government

Hakodate City is making efforts to become an academic and research center in the field of fisheries and marine study, based on the accumulations of research institutions including universities and collaboration between industry, academia, and government. As a result of such efforts, new technology has been developed including technology to package and distribute live squid.

Collaboration Between Local Community and Academic/Research Institutions



3. Key points in strengthening the selling ability of the landing area

(1) Establishing high-quality products and brand products supported by scientific production/distribution management

Efforts for scientific production management and distribution management are the key to the success of establishing high-quality fishery products and brand fishery products. Coordination and cooperation between industry and government will also be important.

(2) Securing transparency for consumers through active information disclosure

It is important to respond to consumer interest in food safety by advertising the efforts for increasing safety and making the production and distribution transparent for consumers.

(3) Promoting sales by developing new products and collaborating between different industries

Flexible ideas and thinking, including development of new products that precisely adapt to changing consumer needs, commercialization of home-made meals that incorporate women's viewpoint, and making diet proposals in collaboration with food manufacturers, lead to strengthening the selling ability of landing areas.

(4) Diversified efforts of landing areas to make effective use of local fish

There are many successful cases of business diversification through effective use of the aspects of fisheries and fishing villages to provide opportunities for exchange, such as opening facilities for direct sales of local fishery products or seafood restaurants and providing opportunities for trial fishing.

(5) Cultivating new markets through use of information and communications technology (ICT)

The Internet market for direct sales of products from landing areas is rapidly expanding. There are also cases of digital and information integration of markets in landing areas by using ICT.

(6) Penetration into overseas markets through active sales promotion activities

Exports of fishery products to China are increasing due to an increase in higher income groups in the coastal areas of China. It is important to cultivate overseas markets.

II. Trends in Japanese Fisheries since FY2004

1. Supply and demand of fishery products in Japan

(1) Domestic fishery production

In 2004, the fishery production volume in Japan declined by 5% from the previous year to 5.78 million tons (see Table II-1-1). Meanwhile, the fishery production value increased by 0.9% to 1,604.9 billion yen.

Table II-1 Fishery and Aquaculture Production Volume

(Unit: 10,000 tons)

	1993	1998	2002	2003	2004	Increase rate (%) from 2003 to 2004
Total	810	663	588	608	578	- 5.1
Marine fishery	659	524	443	472	446	- 5.7
Far seas fishery	106	83	69	60	54	- 11.1
Offshore fishery	372	280	226	254	241	- 5.4
Coastal fishery	181	160	149	158	151	- 4.0
Marine aquaculture	134	125	133	125	121	- 2.9
Inland water fishery and aquaculture	17	13	11	11	11	- 3.9

Source: "Annual Statistics of Fishery and Aquaculture Production," Ministry of Agriculture, Forestry and Fisheries

Notes: 1) Due to fractional rounding, component figures may not add up to the exact totals shown.

2) Inland water fishery and aquaculture production in and after 2003 covers trout, Ayu (sweetfish), carp and eel at 148 major rivers and 28 lakes.

According to the results of a resource assessment conducted in 2005, the levels of fishery resources are low for more than half of the fish species or stocks on which the assessment was conducted (see Table II-1-3).

Table II-1-3 Resource Levels of Fish Stocks (Summary)

Resource level	2004	2005	Main species or stocks
High	12 stocks	13 stocks	Saury (stock in Northwest Pacific), Japanese common squid (autumn stock), red sea bream (stock in Middle Pacific), and others
Medium	30 stocks	30 stocks	Jack mackerel (stock in Pacific; stock in Tsushima warm current), snow crab (stock in North Pacific; stock in Sea of Japan), sandfish (stock in western Sea of Japan; stock in northern Sea of Japan), and others
Low	49 stocks	50 stocks	Pacific mackerel (stock in Pacific; stock in Tsushima warm current), Alaska pollack (stock in northern Sea of Japan; stock in Pacific), snow crab (stock in Sea of Okhotsk), Japanese pilchard (stock in Pacific; stock in Tsushima warm current), and others

Source: "Marine Fisheries Stock Assessment and Evaluation for Japanese Waters," Fisheries Agency and Fisheries Research Agency.

In FY2005, the Government formulated and implemented seven new plans including the Resource Recovery Plan for Red Snow Crab in the Offshore Area of the Sea of Japan and the Resource Recovery Plan for Machi (Blue Fusilier, Lavender Jobfish, Crimson Snapper, and Ruby Snapper) in the Waters of the Nansei Islands.

In 2005, there was an infestation of large jellyfish from the Sea of Japan to the Pacific Ocean for the fourth consecutive year, and this caused considerable damage to fisheries. The Government established funds for emergency measures with the FY2005 supplementary budget and took measures including removal of jellyfish in the sea with the FY2006 budget (see Topics 3 at p.6).

In June 2004, the Invasive Alien Species Law was enacted. Four species including largemouth bass were designated as invasive alien species in June 2005, followed by nine fish species and four genera of six species of invertebrates in February 2006.

In order to prevent and reduce damages to fisheries caused by river cormorants, measures were taken to prevent river cormorants from coming to fishing grounds, and eliminate them.

(2) Fishery product trade

Japan's fishery product imports in 2004 increased by 5% over the previous year in volume to 3.49 million tons, and increased by 4% over the previous year in value to 1,637.1 billion yen (see Table II-1-4).

Table II-1-4 Transition in Import Volume and Value of Fishery Products by Major Item

(Volume: 1,000 tons
Value: 100 million yen)

	1994	1999	2002	2003	2004		Increase rate (%) from 2003 to 2004
						Percentage distribution (%)	
Total import volume of fishery products	3,296	3,416	3,821	3,325	3,485		5
Total import value of fishery products	17,091	17,395	17,622	15,692	16,371	100	4
Shrimp	3,753	3,049	2,974	2,481	2,380	15	- 4
Tuna/marlin	1,865	2,305	2,434	2,229	2,337	14	5
Salmon/trout	1,313	1,340	1,046	1,016	1,036	6	2
Crab	1,229	1,049	898	854	807	5	- 5
Prepared eel	872	777	625	412	657	4	59
Cod roe	437	580	511	523	598	4	14
Prepared shrimp	177	352	475	483	522	3	8
Squid	570	491	460	417	437	3	5
Others	6,876	7,453	8,199	7,277	7,599	46	4

Source: "Trade Statistics," Ministry of Finance.

Notes: 1. Volume indicates the weight in the product form upon customs clearance.

2. Shrimp, tuna/marlin, salmon/trout, crab, and squid show the total values for live, fresh, refrigerated, and frozen products.

3. Cod roe shows the total value for fresh, refrigerated, frozen, salted, and smoked products.

Internationally, Japan has remained as the world's largest fishery product importer both in volume and value, accounting for 18% of the world's total fishery product import value and 11% of total import volume (as of 2003). China has raised its position as a fishery product exporter in recent years, and became the world's top exporter in value and the second largest exporter in volume in 2003 (see Table II-1-6).

Table II-1-6 World Fishery Product Trade (Five Largest Exporters and Importers in Value and Volume Terms in 2003)

(Value: million dollars
Volume: 10,000 tons)

Imports	Value (Share, %)	World total 68,262 100	Japan 12,624 18	U.S.A. 11,758 17	Spain 4,919 7	France 3,803 6	Italy 3,571 5	
	Volume (Share, %)	World total 2,856 100	Japan 321 11	China 232 8	U.S.A. 224 8	Spain 161 6	Denmark 160 6	
Exports	Value (Share, %)	World total 63,508 100	China 5,362 8	Thailand 3,920 6	Norway 3,669 6	U.S.A. 3,458 5	Canada 3,318 5	Japan (22 th) 952 1
	Volume (Share, %)	World total 2,801 100	Norway 214 8	China 208 7	Peru 172 6	Thailand 140 5	U.S.A. 131 5	Japan (24 th) 36 1

Source: FAO 「Fish stat (Fisheries Commodities production and trade 1976-2003)」

Japan's fishery product exports in 2004 increased by 15% over the previous year in volume to 420,000 tons and increased by 10% in value to 148.2 billion yen. The export volume has doubled over the past five years (see Table II-1-7).

Table II-1-7 Transition in Export Volume and Value of Fishery Products by Major Items

(Volume: 1,000 tons
Value: 100 million yen)

	1994	1999	2002	2003	2004		Increase rate (%) from 2003 to 2004
						Percentage distribution (%)	
Total export volume of fishery products	296	204	307	370	424		15
Total export value of fishery products	1,232	1,414	1,365	1,354	1,482	100	10
Pearl	415	557	332	243	275	19	13
Tuna/marlin	100	124	86	78	126	8	61
Alaska pollack	...	...	14	58	98	7	68
Salmon/trout	7	4	37	74	91	6	22
Prepared scallop ligament	100	101	95	77	65	4	- 16
Scallop	48	66	91	121	62	4	- 49
Dried sea cucumber	...	...	...	...	55	4	-
Fish paste products	57	42	40	39	41	3	5
Others	504	520	669	663	669	45	1

Source: "Trade Statistics," Ministry of Finance.

Notes: 1. Volume indicates the weight in the product form upon customs clearance.

2. Tuna/marlin, salmon/trout, and scallop show the total values for live, fresh, refrigerated, and frozen products.

3. "..." indicates a lack of statistical data.

(3) Processing and distribution of fishery products

The production volume of major items of processed fishery products stayed at the same level as the previous year on the whole.

In 2004, the volume of products landed at major Japanese fishing ports and listed in nearby local markets declined by 3% from the previous year. Their average price was 192 yen per kg, up 7%.

The trade volume of fishery products at major markets in consuming areas is on a decline. Their average price stayed at the same level as the previous year.

(4) Ensuring safety and labeling of fishery products

The Ministry of Agriculture, Forestry and Fisheries, the Food Safety Commission, the Ministry of Health, Labor and Welfare, etc. have cooperated in promoting risk communications on food throughout Japan.

Regarding the labeling of processed fishery products, indication of the place of origin for main ingredients had already been obligated for six items including salted common mackerel. Additionally, six groups of processed fishery products that are close to fresh foods, such as dried young sardine and lightly-roasted sliced bonito became subject to the labeling in September 2004, and the labeling for these groups will become obligatory from October 2006.

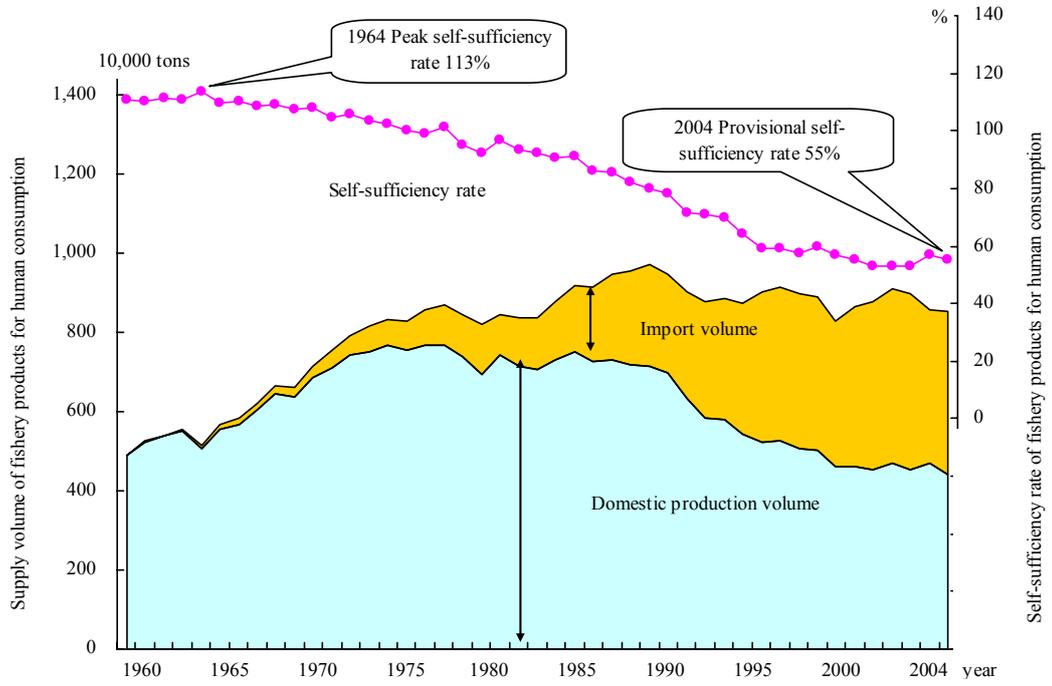
In July 2005, the Ministry of Agriculture, Forestry and Fisheries formulated guidelines for the labeling of place of origin of ingredients used in the food service industry.

(5) Consumption of fishery products and self-sufficiency rate

In 2004, the fishery products (on an original weight basis) supplied for domestic consumption decreased by 5% to 10.48 million tons from the pervious year, of which about 80% was supplied for human consumption, down 2% to 8.01 million tons. Per capita annual fishery product consumption came to 62.7 kg on a gross food basis and to 34.5 kg on a net food basis.

The self-sufficiency rate of fishery products for human consumption in 2004 declined by 2 percentage points from the previous year to 55% (see Figure II-1-8).

Figure II-1-8 Transition in Self-Sufficiency Rate of Fishery Products for Human Consumption



Source: "Food Balance Sheets," Ministry of Agriculture, Forestry and Fisheries.

Establishment of a fisheries course in an upper secondary school in the mountain area of Gunma Prefecture

The number of students taking fisheries courses at upper secondary schools has been decreasing nationwide. Gunma Prefectural Manba High School, located in the mountain area of Gunma Prefecture, established a fisheries course in FY2005, using the Kannagawa River with rich water, flowing near the school, in order to respond to the depopulation in the region, the declining birthrate, and diversification of students' interests.

With the establishment of the fisheries course, the total number of new entrants to the school, which had been between 40 and 50 persons in the past, increased to 73 persons. Students from different prefectures such as Chiba and Saitama or from different areas of the same prefecture account for 80% of all students, suggesting this course is drawing attention nationwide.

The school aims to become a center of freshwater aquaculture through providing unique education that uses the rich natural environment in the Kannagawa River basin.



Field study

2. International trends surrounding Japan's fisheries

(1) Bilateral fishery relations

Japan conducts its fishing operations in the waters of South Korea and China, and vice versa, under the bilateral agreement between Japan and South Korea and that between Japan and China, respectively. However, because no relevant fishing grounds were formed in China's waters during 2005, Japanese fishing vessels did not operate in China's waters.

Japan and Russia conduct their fishing operations in each other's waters based on three agreements: the Japan-Soviet Union Adjacent and Offshore Fishery Agreement, the Japan-Soviet Union Fishery Cooperation Agreement, and the Framework Agreement Concerning the Operations of Japanese Fishing Vessels in the Waters around the Four Northern Islands.

Japanese fishing vessels also operate in the 200-mile zones of Pacific island countries and African countries under bilateral government-to-government or private-level agreements.

(2) Crackdown on illegal foreign fishing vessels

Japan monitors and cracks down on foreign fishing vessels' illegal activities in its exclusive economic zones and territorial waters. In 2005, Japan seized 16 foreign fishing vessels, conducted boarding inspections on 148 vessels and confiscated fishing gear from 44 vessels. Recently, foreign fishing vessels' malicious actions have stood out. Some foreign fishing vessels have rejected boarding inspections and fled from Japanese patrol vessels. Japan has thus been trying to enhance its monitoring and crackdown activities.

(3) Multilateral fishery relations

A. Trends regarding bonito and tuna fisheries

In order to combat illegal, unreported, and unregulated (IUU) fishing, regional fisheries management organizations have resolved to introduce lists of authorized vessels and only to allow international trade in tunas caught by the listed authorized vessels, starting in 2003 (the Positive List scheme). Japan, the largest tuna importer, also implements this scheme.

In addition, at the 2005 annual meeting of regional fisheries management organizations, some progress was made in issues including Taiwan's alleged overfishing of tuna.

Also, with regard to the western and central Pacific Ocean, which had been the

only areas where highly migratory fish stocks had not been managed, the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (WCPFC) entered into force in June 2004. Japan joined the WCPFC in July 2005.

B. Food and Agriculture Organization (FAO)

The Committee on Fisheries (COFI) of the Food and Agriculture Organization (FAO) agreed on the following matters at its 26th session in March 2005:

- (i) With FAO technical cooperation, holding a joint meeting of the tuna regional fisheries management organizations in Japan in 2007 in order to respond to various problems of tuna fisheries;
- (ii) Guidelines on ecolabeling of fishery products for showing that the products have been caught by a method that gives consideration to sustainability of the ecosystem and resources; and
- (iii) Guidelines to Reduce Sea Turtle Mortality in Fishing Operations aimed at recommending the appropriate treatment of sea turtles by-catch, and promoting use of fishing gear that prevents such by-catch.

C. International Whaling Commission (IWC)

At the annual meeting of the International Whaling Commission (IWC) held in June 2005, heated debate again took place between countries supporting the sustainable use of whales and antiwhaling countries. However, the gap between them is narrowing. Apart from some antiwhaling countries taking a hard-line attitude, momentum is gradually rising toward achieving a negotiated settlement. Japan will continue its effort to resume whaling in cooperation with many other countries supporting the sustainable use of whales.

(4) Current situation of international fisheries cooperation

Japan provides grant aid for fisheries and varied technical cooperation to other countries, mainly through the Japan International Cooperation Agency (JICA). The Overseas Fishery Cooperation Foundation also implements a wide range of cooperation projects including technology transfer. Japan provides support to the Southeast Asian Fisheries Development Center (SEAFDEC).

3. Fishery business management

(1) Trends of fishery operators

In 2004, the number of operators of sea-water fisheries and aquaculture declined by 2% from the previous year to 130,000. Of these, 95% are coastal fishery operators mainly run by family labor.

(2) State of fishery business management

In 2004, the fishery income per coastal fishery household (coastal fisheries using fishing vessels, marine aquaculture, and small stationary net fisheries) increased by 4% over the previous year to 2.82 million yen. The fishery household income including income from non-fishery sources was 6.08 million yen, which was the same level as the previous year.

By type of operation, the fishery income of coastal fishery operators using fishing vessels was at the same level as the previous year at 2.15 million yen. The fishery income of marine aquaculture operators declined for those farming yellowtail, sea bream and oyster, but increased for those farming scallop, wakame seaweed, and laver, and increased by 10% over the previous year to 6.26 million yen for marine aquaculture operators overall.

Small and medium-sized fishery operators' earnings from fishing have been in the red since the previous fiscal year. They offset this deficit with earnings from fisheries business other than fishing, mainly fishery processing business, and earnings from business other than fisheries. As a result, their ordinary profit (overall balance) marked 860,000 yen in surplus.

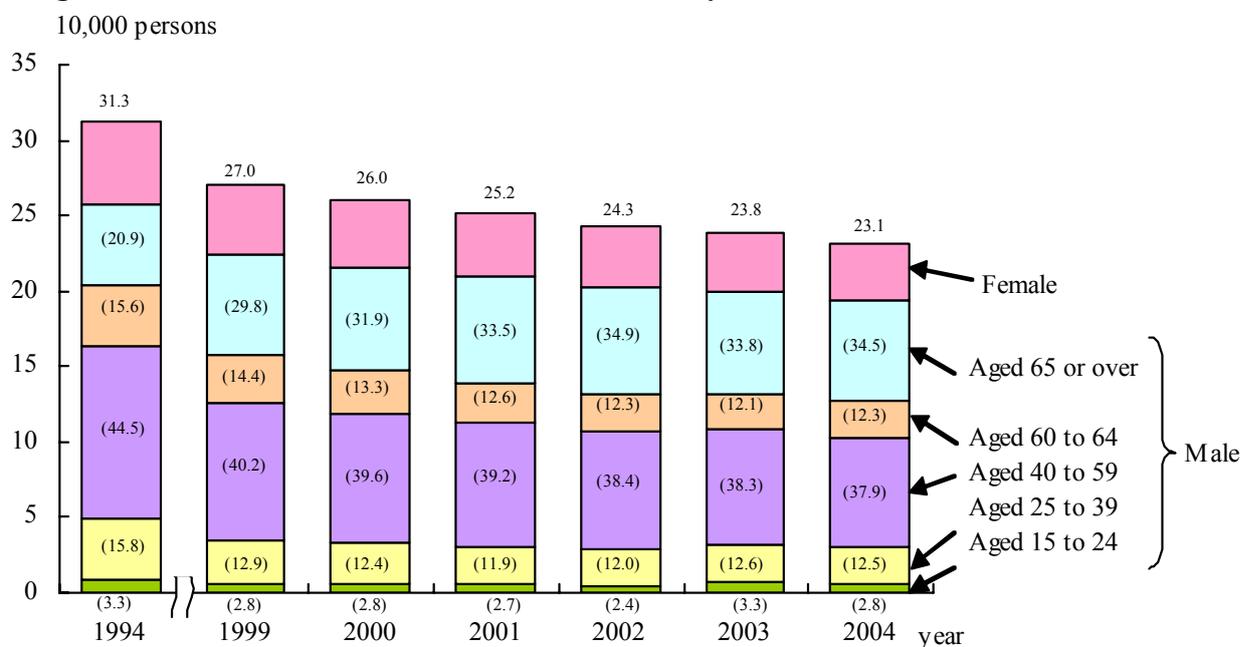
The expenditures for fishing in FY2004 declined by 30% from the 1989 level due to reduction in labor cost and restraint of capital investment in fishing vessels and fishing gears. However, oil cost alone has increased according to the influence of the fuel oil price hike. The percentage of oil cost in the total expenditures has increased from 9.8% in 1989 to 14.3% in 2004. This is a serious situation for fishery business management in which fuel cost accounts for a large proportion of expenditures (see Topics 2 at p.4).

(3) State of fishery workers

In 2004, the number of fishery workers declined by 3% from the previous year to 231,000. The aging of the workers has further progressed (see Figure II-3-6). Therefore, fisheries

cooperatives and fishing households throughout Japan are making efforts to accept new fishery workers.

Figure II-3-6 Transition in the Number of Fishery Workers



Sources: “Annual Statistics on Movement of Fishery Enterprises” (up to 2001), “Annual Statistics on Persons Engaged in Fisheries” (2002), “Fishery Census” (2003), and “Survey Report on Persons Engaged in Fishery” (2004), Ministry of Agriculture, Forestry and Fisheries.

Note: Figures in brackets are the percentage distribution (%) when male total is 100%.

In 2004, the number of Japanese workers employed for offshore and distant water fishing declined by 29% from five years ago to 25,000. Their wage level has been falling, while the wage level in the manufacturing industry turned to an increase in FY2002, and the wage gap is widening.

The number of fishing vessels involved in marine accidents has increased every year. The most notable accidents are colliding and capsizing, many of which are caused by humans, such as insufficient lookout and negligence concerning meteorological and oceanographic phenomena.

(4) Fisheries cooperatives

At the end of FY2004, Japan had 2,515 fisheries cooperatives, including 1,476 for coastal districts, 878 for inland water districts, and 161 sector-specific cooperatives.

Reflecting the recent deterioration in the environment surrounding the fisheries industry, the operations of fisheries cooperatives have leveled off or shrunk in scale. Three-quarters of fisheries cooperatives posted a deficit in business profits.

Efforts are being made to merge fisheries cooperatives in order to enhance their organization and business infrastructure. Such mergers have been accelerated in recent years with the time limit for the Fisheries Cooperative Merger Promotion Law scheduled at the end of FY2007. In FY2004, 52 fisheries cooperatives took part in mergers, but still, considerable efforts are required to achieve the target of about 250 fisheries cooperatives nationwide.

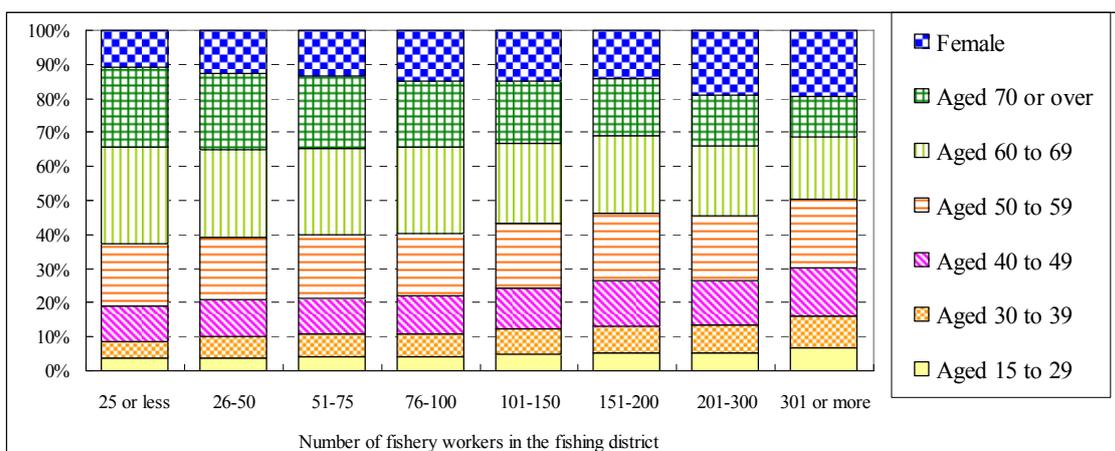
4. Revitalization of fishing villages

(1) Current status of fishing villages

Japan had 6,291 fishing villages as of 2003. Many of them are located in disadvantaged areas such as isolated islands or remote rural areas. These fishing villages have fisheries as their mainstay industry and play a key role in the stable supply of fishery products. They have also formed local communities at locations that have few other industries, contributing to Japan's balanced development.

In Japan, a decline in the vitality of fishing villages has become a matter of concern, with a fall in the number of fishery workers and their aging. The aging tends to be more conspicuous and the percentage of female fishery workers tends to be lower for fishing districts⁶ with fewer fishery workers (see Figure II-4-1).

Figure II-4-1 Percentage Distribution of Fishery Workers by Gender and by Age for Males



Source: Created based on "2003 (Eleventh) Fishery Census," Ministry of Agriculture, Forestry and Fisheries.

Additionally, in fishing districts with fewer fishery workers, the proportion of self-employed fishery workers who are dedicated to or mainly engage in fishery tends to be less, and the value of fish catch per fishery worker tends to be lower.

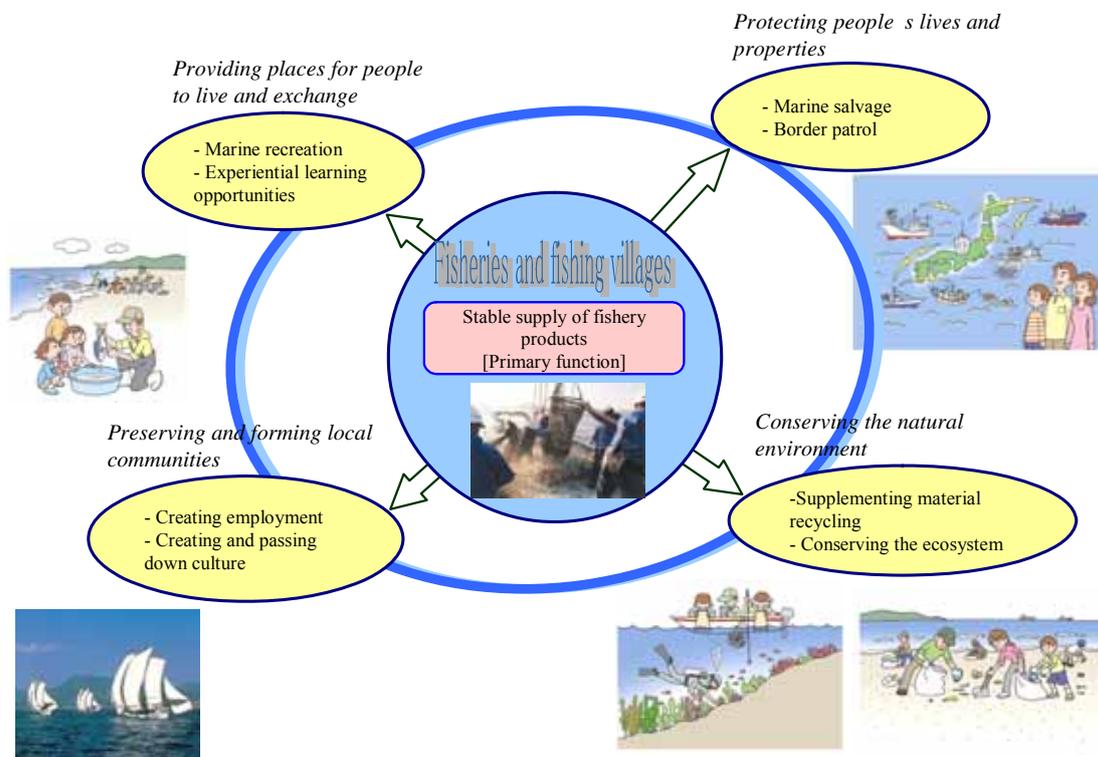
⁶ Fishing district: District in which fishery is conducted under common fishing conditions within the same municipality, which is designated by the Minister of Agriculture, Forestry and Fisheries based on commonalities in fishery-related social and economic activities such as use of the fishing ground extending in front of the district mainly under a common fishery right. There are about 2,000 fishing districts in Japan.

(2) Multiple functions of fisheries and fishing villages and efforts for revitalization of fishing villages

A. Multiple functions of the fisheries and fishing villages

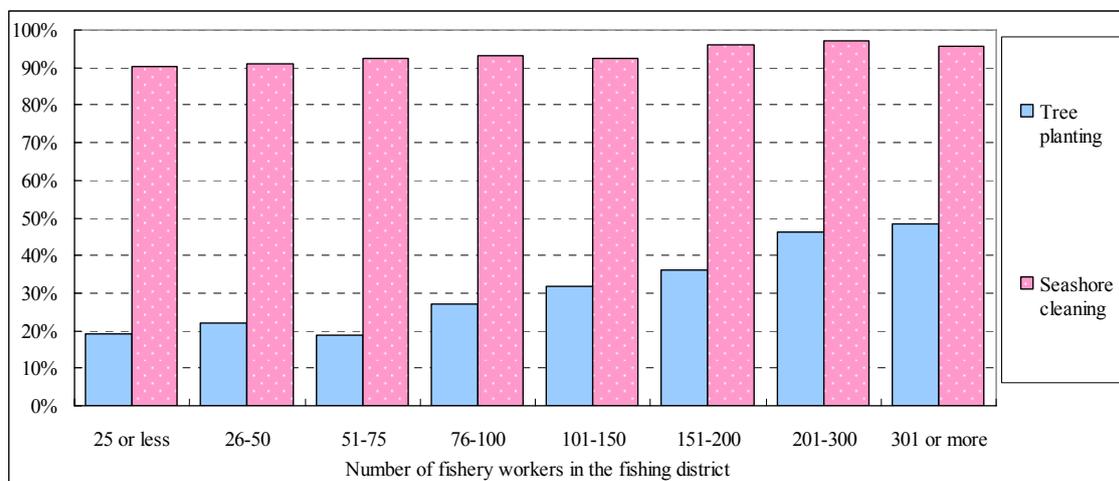
Fisheries and fishing villages have multiple functions other than their primary function to supply fishery products. These functions include conservation of the natural environment, protection of people's lives and properties, providing places for people to live and exchange, and preservation and formation of local communities. In August 2004, the Science Council of Japan reported on the details and evaluation of such multiple functions from a wide academic viewpoint at the request of the Ministry of Agriculture, Forestry and Fisheries.

Figure II-4-4 Various Roles of Fisheries and Fishing Villages



Fishery workers and volunteers engage in activities to conserve underwater plant beds and tidelands throughout Japan. In addition, in most fishing districts, regardless of their number of fishery workers, people collect dumped trash and clean the seashore. In fishing districts with a larger number of fishery workers, residents are particularly active in planting trees to conserve the environment of coastal waters (see Figure II-4-5).

Figure II-4-5 Percentage of Fishing Districts Engaged in Seashore Cleaning and Tree Planting



Source: Created based on “2003 (Eleventh) Fishery Census,” Ministry of Agriculture, Forestry and Fisheries.

B. Efforts to revitalize fishing villages

Campaigns for promoting “coexistence and exchanges between cities and rural communities” are implemented, and pioneering projects to develop autonomous, business-oriented rural communities have been selected as “rising rural communities.”

Women are playing an important role in revitalizing the community through wide-ranging activities including processing and selling products using unused resources of the community, selling products at the morning market, running restaurants, and spreading fish-eating habits by holding cooking classes.

Groups led by highly motivated young fishery workers (cooperative groups of core fishery workers) are making effort to revitalize the local communities.

(3) Improving the living conditions of fishing villages

In fishing villages that have lagged behind in developing modern living facilities, the national government, local governments, and related organizations collaborate in conducting the Fishing Village Life Environment Improvement Movement (Fishing Village Refresh Movement) for promoting the establishment of sewage treatment facilities and other facilities. In response to the aging of population in fishing villages, elderly-friendly facilities are being developed. They include establishment of floating mooring piers for eliminating the height differences that occur between vessels and the pier with changes in tide, establishment of facilities for protection against wind or heat, and eliminating level differences in piers and sidewalks (creating a barrier-free environment).

○ Fisheries Measures for FY2006

I. Measures for Securing Stable Supply of Fishery Products

1. Securing stable supply of fishery products for people's diet

In order to supply safe and reliable fishery products in a stable manner, the Government will promote introduction of a Hazard Analysis and Critical Control Point (HACCP) system and sophistication of hygiene maintenance and quality control from production through distribution. It will also ensure easy-to-understand, appropriate labeling from a consumer viewpoint. Additionally, the Government will promote "Shokuiku (Food Education)" including diffusion and use of the Japanese Food Guide Spinning Top based on the Basic Law on Food Education.

2. Appropriately preserving and managing fishery resources in the exclusive economic zone (EEZ)

While adequately implementing the total allowable catch (TAC) system and the total allowable effort (TAE) system, the Government will properly manage licensed fisheries as well as fisheries under fishery right. It will also instruct and regulate Japanese and overseas fishing vessels. Furthermore, the Government will promote creation of the *Resource Recovery Plans*, and provide necessary support for their smooth implementation.

3. Appropriately preserving and managing fishery resources outside the EEZ

As a responsible fisheries nation, the Government will cooperate in resource management efforts of regional fisheries management organizations with focus on measures to combat illegal, unreported, and unregulated (IUU) tuna fishing vessels, and ensure that Japanese fishing vessels observe international regulations.

4. Conducting surveys and research on fishery resources

From the viewpoint of making sustainable use of fishery resources in Japan's surrounding waters, the Government will conduct various surveys and research including resource assessment, and promote surveys and research on sustainable fishery

management that gives consideration to the state of resources and the marine ecosystem in cooperation with regional fisheries management organizations.

Additionally, the Government will provide the survey and research results as well as information on fishing and oceanographic conditions not only to fishing workers, but also to the general public and regional fisheries management organizations.

5. Promoting multiplication and aquaculture of aquatic animals and plants

The Government will maintain and increase resources through promoting production and release of seedlings, and achieve sustainable development of aquaculture. In addition, it will improve fish farms and take epidemic control measures for fishery resources, as well as promote branding of farmed fishery products by taking advantage of the local characteristics. Moreover, the Government will advance structural reform of laver aquaculture and increase its competitiveness in response to the progress of globalization.

In order to develop inland water fisheries and aquaculture, the Government will promote improvements of fish farms and propagation/farming of fishery resources, as well as take measures to prevent the spread of fish diseases.

6. Preserving and improving the living environment of aquatic animals and plants

The sea, rivers, and lakes are the living environment of aquatic animals and plants. Therefore, the Government will improve the living environment of aquatic animals and plants by implementing water quality control measures, creating underwater plant beds and tidelands, improving the environment of fishing grounds, and planting trees to conserve the environment of coastal waters. In addition, it will promote measures against invasive alien species including black bass, measures against fishery damages caused by wildlife including river cormorants and sea lions, and measures to revive the Sea of Ariake.

7. Maintaining and developing fishing grounds outside the EEZ

The Government will make effort to secure the catch quota for Japan through bilateral and multilateral talks on fisheries and through overseas fishery cooperation.

8. Taking measures on fishery product imports and exports

The Government will appropriately implement measures on imports including the import quota system for fishery products, and promote smooth exports of fishery products.

9. Promoting international cooperation

In order to develop the fisheries industry in developing economies and promote management and sustainable use of international resources, the Government will extend financial and technical cooperation to developing economies and contribute trust funds to international organizations.

II. Measures for Sound Development of Fisheries

Industry

1. Fostering efficient and stable fishery business management

Since there are concerns that the global crude oil price hike would have serious impact on fishery business management, the Government will support the efforts of fishery workers and their groups to promote fishery business management that is sustainable, even with the current crude oil price level and structural reform of fisheries.

Additionally, the Government will take measures to strengthen the management basis of fishery operators that engage in improvement of management with strong motivation, and promote the management improvement efforts of cooperative groups of core fishery operators and establishment of facilities for shared use.

2. Promoting more efficient use of fishing grounds

While appropriately implementing the fishing license system and the fishery right system, the Government will support voluntary efforts of fishing operators to reduce the number of vessels. It will also secure harmony between fisheries and marine recreation in use of the sea.

3. Developing and securing human resources

While improving the techniques and business management ability of fishery operators, the Government will promote recruitment of young workers in order to reform the fishery employment structure and to pass down the fishing techniques.

The Government will also promote safety in the fishing work by increasing safety awareness and developing the framework for maritime accident prevention and salvage, and improvement of the working environment. Furthermore, it will further enhance fishery education.

4. Compensation for damages caused by fishery disasters

The Government will appropriately implement the fishery mutual aid system and fishing vessel insurance system while making necessary reviews of the systems to meet the needs of fishery operators. In addition, the Government will promote measures to balance supply and demand and stabilize the prices of fishery products through the storage of fishery products for the purpose of market adjustment and other measures. It will also support relief of fishery operators who received damages from oil pollution caused by an unknown party, measures against large jellyfish, and recovery of the Nishiki carp production area affected by the Niigata Chuetsu Earthquake.

5. Achieving sound development of fishery processing industry and fishery distribution industry

The Government will encourage strengthening of hygiene/quality control systems through introduction of a HACCP system, streamlining of the market and distribution, and development of food retailers. In addition, it will reduce the environmental load by promoting recycling of by-products including residue from fishery processing and the outside shells of shellfish.

6. Developing the infrastructure of fisheries industry

Under the system to plan integrated and comprehensive development of fishing ports and fishing grounds, the Government will promote infrastructure development of the fisheries industry including the development of fishing ports, creation of underwater plant beds and tidelands, and conservation of coastal fishing grounds.

7. Developing and diffusing technology

The Government will strengthen collaborations between industry, academia, and government to promote development and commercialization of technology that contribute to the sound development of the fisheries industry. Additionally, it will promote projects to diffuse technology according to the local characteristics and the needs of fishery operators and working sites.

8. Promoting participation of women

The Government will support training programs and activities for improving the diverse abilities of women, and promote the development of an environment that facilitates women participating in fishery-related activities.

9. Promoting activities of the elderly

The Government will encourage fishery-related activities that take advantage of the techniques and abilities of the elderly, and promote the development of an environment that allows the elderly to engage in activities with a sense of purpose in life.

10. Achieving comprehensive development of fishing villages

The Government will take measures to strengthen the economic basis of fishing villages according to the local characteristics, and promote improvement of living conditions including establishment of a community sewage facility. It will also strive to protect people who require assistance at times of disaster by promoting disaster prevention measures.

11. Making exchanges between cities and fishing villages

In order to promote coexistence and exchanges between cities and fishing villages, the Government will promote and establish exchange activities, and advance efforts to develop attractive communities that appeal to urban residents. Additionally, the Government will ensure the safety of users of recreational fishing vessels and achieve orderly use of fishing ports by marine recreation and fishing vessels.

12. Increasing measures for optimizing the multiple functions

The Government will conduct diffusion and awareness-raising activities on the multiple functions of fisheries and fishing villages targeting the general public, and consider measures to support such functions. At the same time, it will promote measures to appropriately and sufficiently make use of such multiple functions.

III. Measures for Reorganization of Fishery-Related Groups

In order to strengthen the business and organizational basis of fisheries cooperatives, the Government will formulate a plan for achieving sound finance and management, and promote a guarantee by the Agriculture, Forestry and Fisheries Credit Foundations for fisheries cooperatives implementing the plan. It will also support the efforts to promote mergers between fisheries mutual aid groups.

In addition, the Government will promote surveys and guidance for developing human resources of the federations of fisheries cooperatives and for strengthening the

management basis of fisheries cooperatives, as well as consider concrete measures for strengthening collaborations between the groups.

For any questions and inquiries about this report, please call the following number:
Trend Analysis Section, Policy Planning Division, Fisheries Policy Planning
Department, Fisheries Agency

Phone: 03-3502-8111 (ext.7067. 7068)

Fax: 03-3501-5097