

**Annual Report on the Developments in the Fisheries in FY 2004**  
**Part 1 Developments in the Fisheries -- Summary**  
**( Provisional Translation )**

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## **Introduction**

In Japan, a country surrounded by sea on all sides, fishery products have been one of key sources of food since early times, accounting for 20% of the people's protein consumption (40% of their animal protein consumption). Japan's per capita fishery product consumption is among the highest in the world. In this country, the fisheries industry has played a key role in managing reproducible natural resources appropriately to ensure a stable supply of quality fishery products. As such, it has played an important role in the life of the Japanese people.

The annual report on developments in the Japanese fisheries is prepared by the government as a report to the Diet under the Basic Law on the Fisheries Policy. The report is expected to contribute to deepening the understanding of the people about aspects of fisheries development and policy that have a close bearing on national life.

The report has the following structure designed to make it as easy to read and understand as possible.

The opening article entitled "Topics: Major Developments in the Fisheries in the Previous Year" introduces six major topics relevant to the past year including the current status of fishery trade negotiations, the first shipments of completely cultured tuna and recently growing efforts in the area of fishery exports.

Chapter I covers special features for the particular year. This time, we have two features: "Special Feature 1: Recent changes in the environment surrounding fishery business management and its problems" and "Special Feature 2: Current status of fishing villages and various functions of the fisheries and fishing villages."

Special Feature 1 discusses how fishery business management recently faces growing difficulty, analyzes changes in fishery product consumption and distribution channels as factors affecting this management, and introduces efforts taken by producers.

Special Feature 2 introduces specific multiple functions of the fisheries industry and fishing villages.

Chapter II describes the developments in Japan's fisheries since FY 2003, including supply and demand for fishery products in Japan, international developments affecting Japan's fisheries, and fishery business management.

## **Topics: Major Developments in the Fisheries in the Previous Year**

### **1. Liberalization of fishery product trade**

#### **-- WTO situation and EPA/FTA negotiations**

The world trading system has been formed mainly through the World Trade Organization (WTO), which promotes free trade under common trade rules. Over the recent years, moves have been stepped up to conclude economic partnership agreements (EPAs) or free trade agreements (FTAs) to eliminate tariffs and implement other trade liberalization measures between particular countries or regions to complement the WTO-based trading system.

While the WTO system requires each WTO member country to apply the same trade rules including tariffs to any other member under the principle of the most-favored-nation treatment, EPAs/FTAs require only their signatories (ex. two countries for a bilateral agreement) to implement tariff elimination on virtually all kinds of trade and other economic partnership-enhancing measures under the principle of preferential treatment as provided by WTO rules.

Under the WTO, the Doha round of negotiations has been under way since November 2001 to reduce or repeal tariffs comprehensively and create balanced trade rules. At a meeting of the WTO General Council in Switzerland's Geneva in July 2004, trade ministers from Japan and many other countries discussed market access issues for agricultural, forestry and fishery products and agreed on a framework specifying major issues for future negotiations. Toward the sixth WTO ministerial conference in December 2005, negotiations will make further progress on fishery subsidies, tariffs and other measures.

In December 2004, the Korean government requested consultations with Japan under WTO rules on Japan's import quota on laver that Korea alleged to be running counter to WTO rules. As a result, a dispute settlement panel on the matter was created in March 2005 in accordance with WTO dispute settlement procedures.

EPAs/FTAs have been discussed throughout the world to complement the WTO-led multilateral free trade system. By May 2004, the number of EPAs/FTAs in force reached 150 as reported to the WTO.

Japan has concluded EPA/FTA negotiations with Singapore and Mexico. The agreement with Singapore took effect in November 2002. The pact with Mexico was to

take effect in April 2005, enabling implementation of a comprehensive set of measures including liberalization of trade in some agricultural, forestry, fishery products and other goods, trade in services, and investment.

Presently, Japan is negotiating EPAs/FTAs, which cover fishery products as well as other goods and services, with Asian countries including Korea, Thailand, Malaysia and the Philippines. In November 2004, Japan reached a broad agreement with the Philippines. In April 2005, Japan was to launch negotiations with the Association of Southeast Asian Nations (ASEAN). In January 2005, Japan and Indonesia opened a meeting of a joint study group to discuss the necessity of a bilateral EPA. Industry and academic experts have taken part in the proceedings. Japan and Chile have also created a joint industry-academic-government group to discuss the feasibility of a bilateral EPA/FTA.

The Ministry of Agriculture, Forestry and Fisheries will deal with EPA/FTA negotiations in accordance with “the basic policy on the future promotion of economic partnership agreements” as decided on at the ministerial meeting on the promotion of economic partnerships and with the Green Asia EPA Promotion Strategy as fixed by the ministry.

In dealing with fishery trade negotiations, the ministry is endeavoring to establish trading rules contributing to the sustainable utilization of fishery resources as limited natural resources since the world’s fishery resources have been deteriorating year by year.



Photo: A meeting of the WTO General Council

## 2. World's first completely cultured tuna put on table

### -- A university-born venture sells cultured tuna --

In September 2004, the world's first completely cultured bluefin tuna were shipped. The tuna were hatched at the Fisheries Laboratory of Kinki University in Wakayama Prefecture in June 2002 and had grown into one-meter, 20-kilogram fish in the following two years or so.

While natural tuna that were caught and raised at farms were already on the market, the laboratory succeeded in artificially completing a full lifecycle for tuna from spawning to hatching, growth and adulthood for the first time in the world. It took more than 30 years from 1970 to achieve this lifecycle artificially, that had been seen as difficult to complete for tuna.

Tuna resources are feared to be declining globally. Japan, which consumes one-third of the tuna caught in the world, bears some responsibility, and is making efforts to conserve and manage tuna resources. The development and improvement of artificial seed production technology is significant for securing stable supply of fishery products while attempting to conserve and increase natural resources. The successful complete culturing and shipment of bluefin tuna, a species in especially strong demand, is a great achievement for Japan as the biggest tuna-consuming country.

Completely cultured tuna that the Kinki University Fisheries Laboratory produces are marketed by a university-born business venture that was founded in February 2003 with investment by several researchers at the laboratory. Over recent years, deregulation has stimulated efforts to found university-born ventures to utilize academic research achievements for commercial purposes. Even in the fisheries industry, there are strong hopes for future innovation through industry-university cooperation.



Photo: Completely cultured tuna on market

### 3. Say “No!” to tuna overfishing

#### -- WCPFC takes effect to complete global control on tuna fishing –

Tuna and other highly migratory fish stocks must be controlled by regional fisheries management organizations, each of which is established for a respective migratory range like the Atlantic Ocean and Indian Oceans. The Western and Central Pacific had been the only area outside such management. Disordered fishing of tuna species in the Western and Central Pacific (particularly, the Southern Pacific waters) can affect not only Japan’s distant water fishery but also tuna species’ migration to the waters around Japan.

The Western and Central Pacific Fisheries Convention (WCPFC)<sup>1</sup>, adopted in September 2000, took effect in June 2004 six months after the number of signatories reached the qualifying 13 in December 2003. The implementation of the convention for the Western and Central Pacific made tuna resources in all areas in the world subject to fishing management.

After seven preparatory sessions, the first WCPFC Commission meeting took place in Micronesia in December 2004 to decide on the organization and finance of the committee, and rules and procedures for a committee that was designed to make recommendations about the conservation and management of bluefin tuna and other tuna stocks in the Northern Pacific.

Broad international trade restrictions and other actions taken through other regional fisheries management organizations are effective against illegal fishing. Therefore, Japan also will take the leadership in controlling fishing capacity and promoting measures against illegal fishing boats through the WCPFC Commission, in order to secure the sustainable utilization of tuna resources and stability of operations in the Japanese fishery industry.



Photo: A shoal of tuna

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<sup>1</sup> WCPFC: The convention is officially named Convention of the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific. But it is usually called WCPFC (Western and Central Pacific Fisheries Convention).

#### 4. Squid-collecting blue LED and tuna fishing boat running by electric power

##### -- New technologies being introduced for fishing --

To respond to declining fishery resources and slack fish prices, the fishing industry must shift priority to profitability from amount of catches. In this respect, the industry should promote the innovation and introduction of fishing technologies with flexible way of thinking.

The light-emitting diode (LED), which features less electricity consumption and a longer service life, has already been used for traffic signals and home lighting equipment. Efforts have been launched to introduce the LED to lights for collecting squid on fishing boats. The realization of practical use of the



Photo: Test operation of a squid fishing boat using an LED

LED for such purposes is expected to help fishermen improve their business performance and working conditions through the elimination of infrared rays and noise. It can also contribute to reducing carbon dioxide and other emissions.

In June 2004, Japan's first tuna fishing boat with an electric propulsion system was launched. The electric propulsion system uses a electric motor to rotate propellers, requiring no independent engine. The electric motor for propulsion shares the power source (generator) with lighting equipment and freezers. The engine room size can thus be reduced, and a more efficient layout on the boat realized. The adoption of the electric propulsion system with no propeller shaft or rudder allows the stern bottom to become slimmer, reducing propulsion resistance and fuel consumption. The elimination of the engine also contributes to the reduction of maintenance costs and improvement in the work environment through the expansion of living space and the reduction of engine noise.



Photo: A fishing boat using an electric propulsion system (The stern bottom is slimmer with the absence of propeller shafts and rudders.)

Efforts to develop and utilize such new technologies are expected to make further progress.

## 5. Private resources utilized to introduce sophisticated equipment at a public market

### -- Special zone designation allows Shimonoseki market to make a breakthrough –

In December 2004, the Shimonoseki Special Zone for Revitalization of the Fisheries (in Shimonoseki, Yamaguchi Prefecture) was created with governmental authorization.

Fish market facilities are public ones that cannot be leased to any specific private businesses. This has forced private businesses to temporarily place simple refrigerators and live fish tanks at fish markets under short-term permits or locate large refrigerators and live fish tanks at non-public sites far away from public markets. Their business efficiency has thus been affected.

The designation of the special zone for deregulation has allowed the Shimonoseki fish market to lease part of its public space to private businesses. This means that private businesses can place sophisticated high-performance equipment at the market for a long time. Specifically, the market now can have live fish tanks, refrigerators and other equipment that feature sophisticated technologies enabling use of more powerful and efficient temperature-controlling functions by market participants.

The Shimonoseki market seeks to take advantage of such enhanced functions to boost the volume of fishery products it handles by more than 20 percent in five years.

The special zone designation to pave the way for the enhancement of market functions through the utilization of private sector resources is expected to help improve the freshness of fish and increase the efficiency of distribution. This means that more fresh fish will be supplied to consumers. The Shimonoseki market has thus attracted attention from various sectors including consumers who have great expectations for future developments.



Photo: Shimonoseki fish market

## 6. Japanese fishery products aiming at the world market

### -- Fishery product producers trying to sell products in Dalian and Shanghai --

Moves have recently gained momentum to export Japanese agricultural, forestry and fishery products.

In 2003, 23 Japanese prefectures formed the Agriculture, Forestry and Fisheries Nippon Brand Export Promotion Prefectural Council to promote exports of unique agricultural, forestry and fishery products from their respective regions. The council has expanded its membership to 40 prefectures (as of December 2004). The council members, which periodically exchange information on overseas markets, joined hands to exhibit their regional products at the Japanese booth (established under the auspices of the Ministry of Agriculture, Forestry and Fisheries) for the China International Food Products and Beverage Exhibition in Shanghai in 2004.

The Ministry of Agriculture, Forestry and Fisheries has expanded its export promotion budget since FY 2004 to conduct surveys on foreign trading systems, dispatch overseas market development missions and support producer groups' promotion of Japanese brands for export. Under the FY 2005 budget, the ministry has further enhanced export-promotion measures by introducing measures for long-term sales promotion in export destinations and expanding the protection of intellectual property rights.

Fishermen are growingly willing not only to catch fish but also to expand their sales channels. Specifically, a Japan-China export and import promotion council for Nagasaki Prefecture's Kitamatsu region, led by fishing groups in the prefecture's Matsuura city, has made positive efforts to explore the Chinese market, including the preparation of Chinese-language leaflets introducing dishes using mackerel and horse mackerel, after finding that small mackerel and horse mackerel caught by local purse seine fishing are priced in China's Dalian higher than in Japan in the summer when China prohibits fishing with boats.

The Hokkaido Federation of Fisheries Cooperative Associations has been trying to export scallop, walleye pollack, chum salmon and other fishery products to Taiwan and Korea. It participated in the Qindao International Beer Festival in China's Shandong Province in August 2004 and held a Hokkaido Fishery Festival in Shanghai in January 2005, stepping up efforts to expand exports to China.

Japanese fisheries groups are thus expected to continue aggressive efforts to accurately grasp overseas demand and develop export markets.



Photo: Hokkaido Fishery Festival crowded with Shanghai citizens

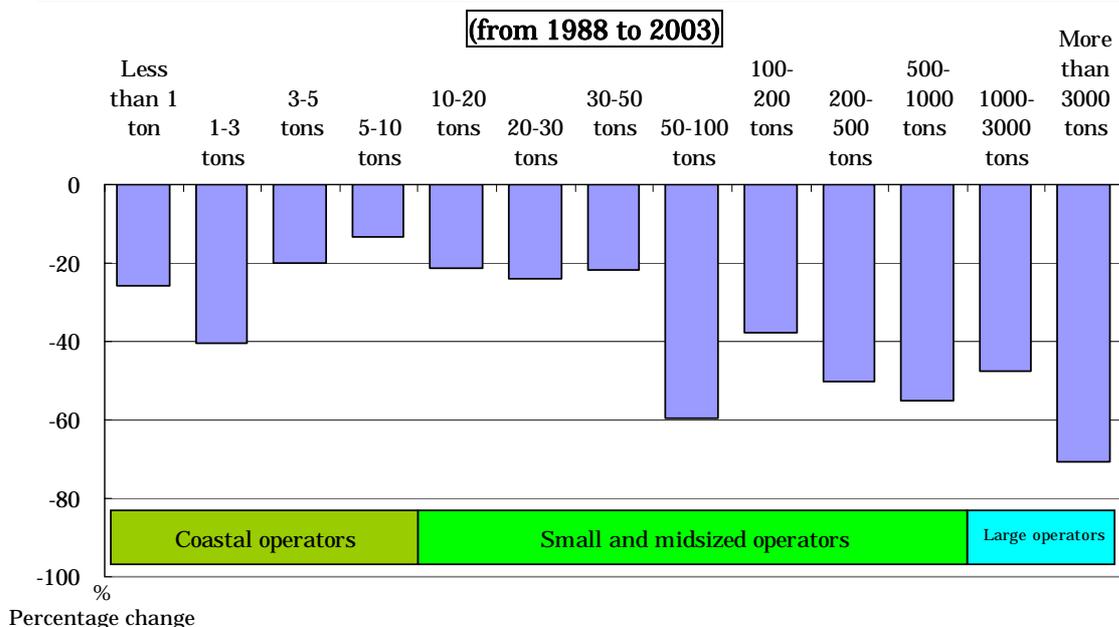
# I. Special Feature 1: Recent Changes in the Environment Surrounding Fishery Business Management and its Problems

## 1. Current status of fishery business management

### (Decline in fishery operators)

In the 15 years to 2003, the number of marine fishery operators in Japan declined 30% to 132,000. A sharp decline was seen in the less-than-3-ton category for coastal fishery operators and the 50-ton-or-greater category for small and midsized fishery operators. The number of large fishery operators also decreased substantially (see Figure I-1).

**Figure I-1 Change in the Number of Fishery Operators in Each Gross Tonnage Group**

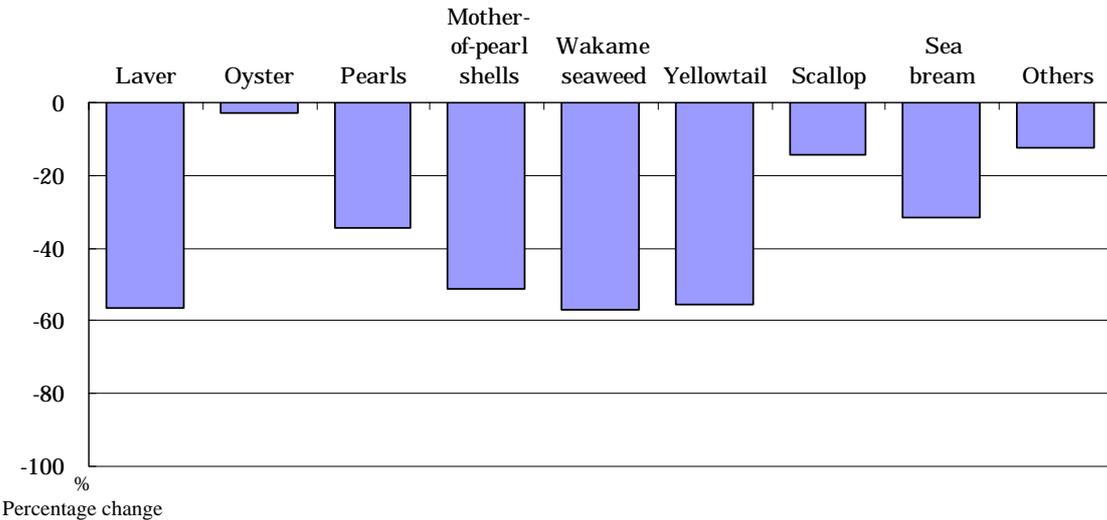


Source: "Fisheries Census," Ministry of Agriculture, Forestry and Fisheries

- Notes: 1) The decline in the 50-100ton group is attributable not only to the reduction of boats but also to some operators' shift to the 100-200ton group under the new tonnage system (based on a law regarding the tonnage of ships that took effect in 1982).  
 2) Figures for 2003 are provisional.

Among marine aquaculture operators, those cultivating laver, wakame seaweed, yellowtail, pearls and mother-of-pearl shells posted a large decline. Oyster and scallop cultivators leveled off or decreased slightly (see Figure I-2).

**Figure I-2 Change in the Number of Aquaculture Operators (from 1988 to 2003)**

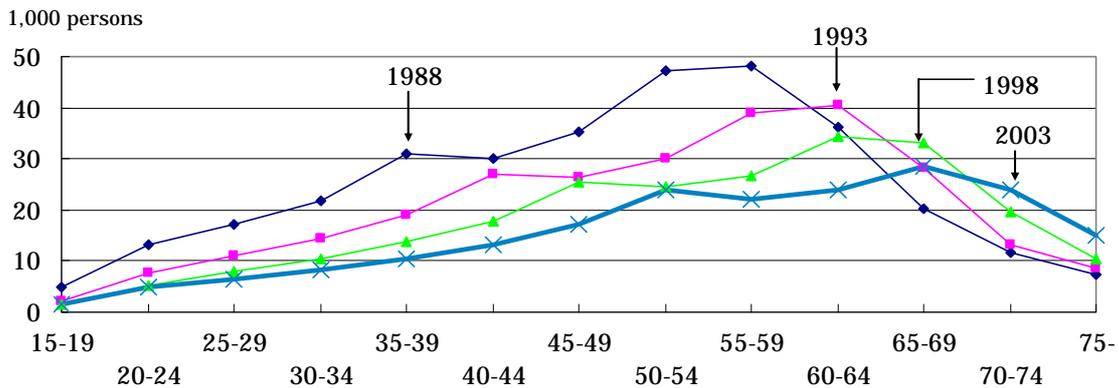


Source: "Fisheries Census," Ministry of Agriculture, Forestry and Fisheries  
 Note: Figures for 2003 are provisional.

**(Decline in fishery workers)**

In the 15 years to 2003, the number of fishery workers decreased 39% to 238,000. While young male workers declined, those aged above 70 increased. Fishery working population has thus aged further (see Figure I-3).

**Figure I-3 Change in the Number of Fishery Workers in Each Age Group**

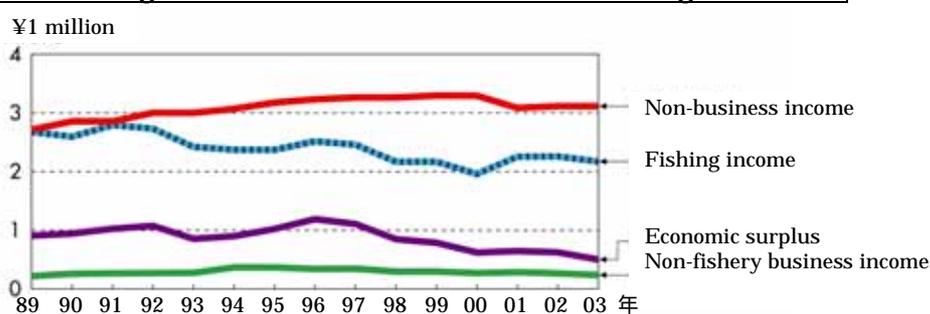


Source: "Fisheries Census," Ministry of Agriculture, Forestry and Fisheries  
 Note: Figures for 2003 are provisional.

### (Income and expenditure of marine fishery operators)

Fishery income at households operating coastal fishing boats has been on the decline. Their non-fishery business income from fish-processing and similar businesses is limited. They depend on wage income from non-fishery activities and non-business income like pension benefits to make up for the income shortage. Overall, their household finances are in a severe state. Their economic surplus has followed a downtrend over the past years (see Figure I-4).

**Figure I-4 Change in financial conditions of coastal fishing households**



Source: “Survey Report on Fishery Economy (Fishery Household Section)” (up to 2000), “Survey Report on Fishery Business Management” (from 2001 onward), MAFF

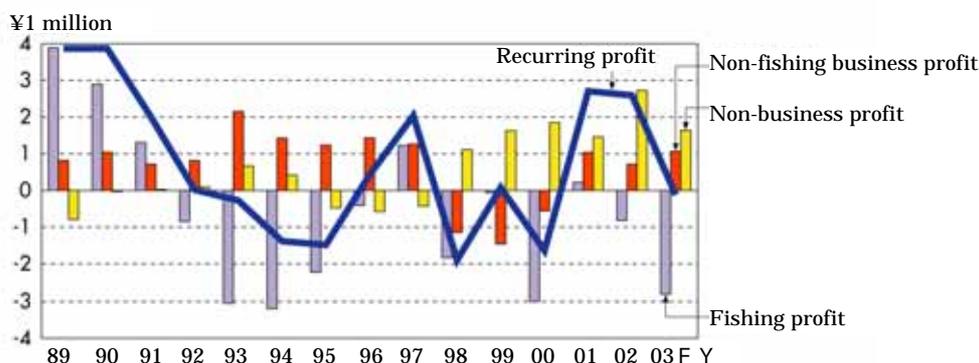
Notes: 1) For comparison with figures in and before 2000, those in and after 2001 were calculated based on figures for the less-than-10-ton group in the family fishery business management survey in the “Survey Report on Fishery Business Management.”

2) Economic surplus = disposable income – household expenses

For marine aquaculture households, meanwhile, income is unstable in the areas of yellowtail and sea bream aquaculture, which features large income and expenses, and relatively stable in the area of oyster, scallop and laver aquaculture. Income from wakame seaweed cultivation is so limited that wakame cultivators depend greatly on non-fishery income.

Small and medium-sized fishery operators have reduced wages and spending on fishing boats and fishing gear in line with a decline in fishing income. But fuel costs have fallen little. Overall, cost reductions have failed to keep up with the income decline, forcing most of these fishery operators to post fishing business losses over most of the past few years. Ordinary losses have also been seen in many recent years (see Figure I-5).

**Figure I-5 Change in Financial Conditions of Small and Mid-sized Fishery Operators**



Source: "Survey Report on Fishery Economy (Fishery Household Section)" (up to 2000), "Survey Report on Fishery Business Management" (from 2001 onward), MAFF

Notes: 1) For comparison with figures in and before 2000, those in and after 2001 were calculated based on weighted averages meeting the three fishery operator categories' shares of total fishery operators in the "Survey Report on Fishery Business Management." The three categories represent employment-based operators, companies and joint management entities.

2) Figures in and after fiscal 2001 cover the 10-20-ton category in the family business management survey.

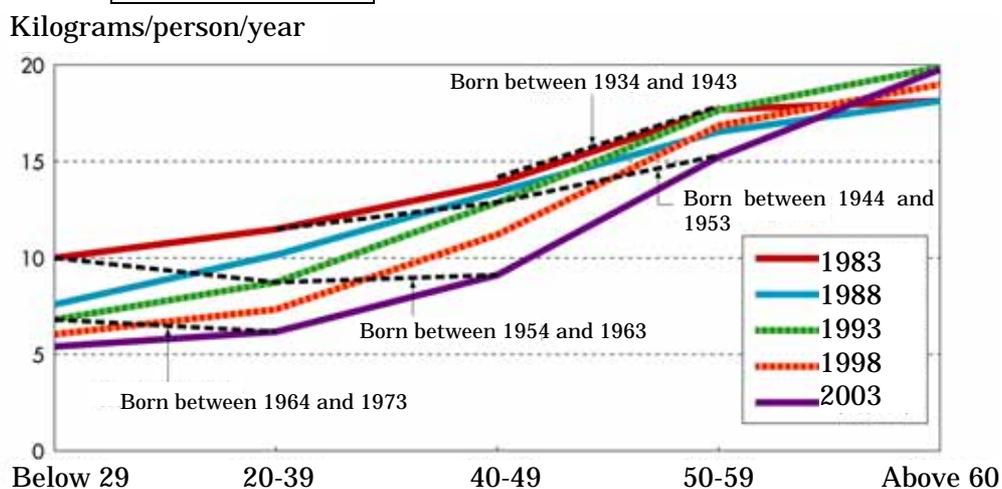
## 2. Factors affecting fishery business management

### (Changes in consumption of fishery products)

According to the annual family income and expenditure survey, the average purchase price for 100 grams of fresh fishery products in the recent years (average of years 2001-2003) by families with at least two members declined 12.4% from a decade earlier (average price of years 1991-1993).

However, per capita annual purchases in volume remained stable between 13-14 kilograms. Looking at the trend by age group of household heads, higher age groups tended to purchase more fishery products. The fishery product purchases tend to decline until the household heads become 40 and increase after they reach 40. Later generations tend to depend more on eating out and cooked meals and reduce fishery product purchases (see Figure I-6).

**Figure I-6 Per Capita Annual Fishery Product Purchases by Age Group of Household Heads**



Source: "Annual Family Income and Expenditure Survey Report" (2-or-more-member households excluding agriculture, forestry and fisheries households), Ministry of Internal Affairs and Communications

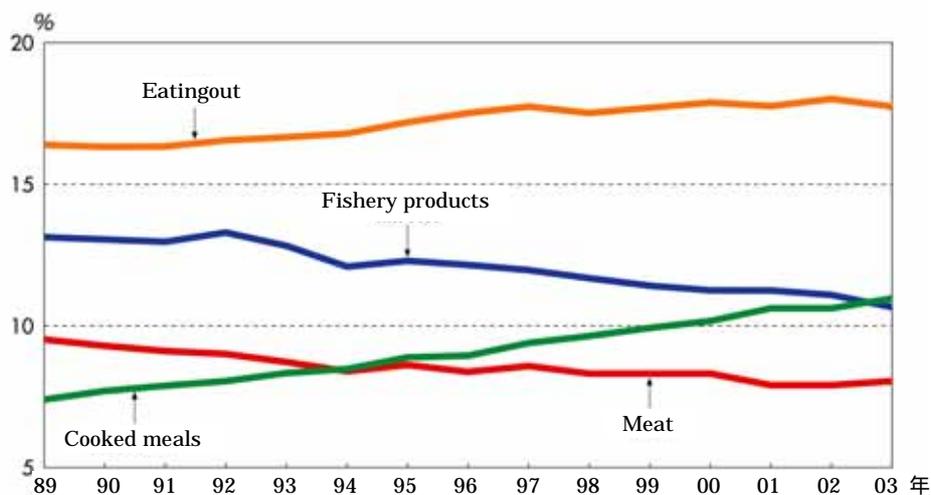
Notes: 1) Per capita purchases were calculated by dividing household purchases by the number of household members for each age group.

2) Since annual survey data (colored line plots) are for age groups of household heads by 10-year age category, a certain age group in a certain survey deemed to be the same group as the next age group up in the decade-later survey. Therefore, a dotted line linking these colored plots indicates changes in the habits of the same age group.

### (Changes in fishery product consumption patterns)

A breakdown in family food consumption by food type shows that families have increased their consumption of and dependence on cooked meals as more women have participated in society and single-person households increased. Spending on fishery and meat products for cooking use has tended to decline according to the price drops. Spending on eating out has meanwhile shifted from slow growth to zero growth over the past few years (see Figure I-7).

**Figure I-7 Breakdown of Food Consumption by Food Type**



Source: "Annual Family Income and Expenditure Survey Report" (2-or-more-member households excluding agriculture, forestry and fisheries households), Ministry of Internal Affairs and Communications

### **(Changes in fishery product distribution channels)**

Supermarket outlets, which are winners in the convenience food area, have expanded their share of fresh fish retail sales. Their share in 2003 was close to 70%.

Supermarket stores and restaurants have become the main demand source for fishery products as retailing and consumption patterns have changed. These large demand sources require four stable supply conditions (consistent volume, quality, prices and deliveries), increasing direct purchases from and bargaining with producers.

## **3. Producers' efforts in the business management**

### **(Higher value added)**

Fishery cooperative associations and other groups are promoting brand development and other efforts nationwide to increase value added to their products in response to consumers' growing interest in food safety. Some are trying to construct traceability systems for fishery products.

### **(Rationalization through fishery cooperative association mergers and local market integration)**

Rationalization has been progressing, including mergers between fishery cooperative associations, and the integration and expansion of local markets. The number of fishery cooperative associations in coastal regions has declined 30% over the

past 15 years. Local fish markets are not only enhancing their distribution functions but also expanding their exhibition and sales facilities and transforming themselves into tourist spots to revitalize regional economies.

#### **(Resources management aimed at resources recovery)**

Appropriate management of fishery resources is important for the stable continuity of the fisheries industry. Under agreements between relevant fishermen, resources recovery plans have been developed for deteriorating fish stocks. Under such plans, no-fishing period bans on catches of small fish and other fishing restrictions have been imposed, releases of seedlings have been promoted to enhance fishery resources and environment of fishing grounds have been restored and conserved.

#### **(Export Promotion)**

Moves have recently emerged to develop export markets such as Korea and China. As a result, Japan's fishery product exports in volume have continued an upward trend since 1999.

### **4. Future challenges**

#### **(Enhancement of fishery operators' strength)**

Regarding vessel-using fishing, it is difficult to realize any further cost reduction under current style of vessel operation and labor management. Therefore, fishermen and their groups should make their own efforts such as labor saving and rationalization of labor management and shift priority from gaining larger amount of catch to seeking profitability. They need to be aware of the need for such shift.

While consumers tend to limit spending on foods including fishery products, fishing earnings have remained unstable. Fishery operators should make efforts to diversify their operations by increasing the value added to their fishery products through processing, promoting producers' direct sales and taking advantage of fishing to attract tourists. They also need to develop new businesses that can revitalize regional economies.

Since the aging of fishermen has been responsible for a decline in activity, efforts are also required to secure young fishermen to take over the fishery industry's future reins.

#### **(Enhancement of producers' direct sales)**

As an appropriate response to changes in and diversification of demand and

distribution channels, fishery operators need to integrate local markets to secure a wider range of sales channels, and meet the growing demand for quality and safe food.

Efforts have been seen throughout Japan to increase the value added to fishery products through brand development and other measures. Fishery operators should further change their way of thinking in order to promote strategies to make consumers better informed and aware of products' originality or supremacy and to enhance quality control.

Some aquaculture operators have sponsored aquaculture inspection tours to promote exchange with consumers. The development of such direct relations with consumers is important.

### **(Export-expansion efforts)**

The Japanese diet has recently attracted attention as healthy food in the Western world and as luxury food for high-income people in China and South-East Asia whose economies are enjoying remarkable growth. At a time when domestic fishery product prices are falling, fishery operators should not only defend themselves from imports but also take advantage of trade liberalization to aggressively develop overseas markets. Adding value to fishery products through brand development and other measures is strategically important for overseas market development.

## Special Feature 2: Current Status of Fishing Villages and Multiple Functions of the Fisheries and Fishing Villages

### 1. Current Status of fishing villages

#### (Basic roles of fishing villages)

Japan had 6,291 fishing villages as of 2003 (see Table I-1). Many of them are small in population and located in unfavorable places far away from urban areas. These fishing villages have fisheries as their mainstay industry and play a key role in the stable provision of fishery products. They have also formed local communities at locations that have few other industries, contributing to Japan's balanced development.

**Table I-1 Change in Number of Fishing Villages**

	1983	1988	1993	1998	2003
Number of fishing villages	6,719	6,750	6,585	6,245	6,291
Number of fishing households per village	37.6	33.8	31.6	29.1	25.9

Source: "Fisheries Census," Ministry of Agriculture, Forestry and Fisheries

Notes: 1) Figures for 2003 are provisional.

2) A fishing village was defined until 1998 as a village where fishing households number 10 or more or account for 30% or more of all households. Since 2003, a fishing village has been defined as a village with four or more fishing households.

#### (Declining vitality of fishing villages)

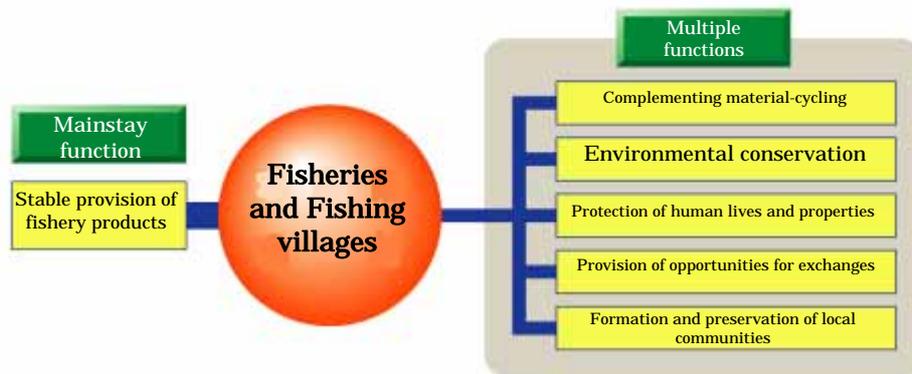
A decline in the vitality of fishing villages has become a matter of concern, with a fall in the number of fishery workers (a 27% drop in the decade from 1993 to 2003) and the aging of them (in 2003, fishery workers aged above 65 accounted for 34% of total fishery workers and those aged above 60 for 46%).

### 2. Multiple functions of the fisheries and fishing villages

#### (What are the multiple functions of the fisheries and fishing villages?)

There are various functions of fisheries and fishing villages other than the provision of fishery products, which is the mainstay function. These functions include complimenting material-cycling, environmental conservation, protection of human lives and properties, provision of opportunities for exchanges and preservation and formation of local communities (see Figure I-8). In August 2004, the Science Council of Japan identified and assessed the non-mainstay functions from a wide academic viewpoint at the request of the Ministry of Agriculture, Forestry and Fisheries.

**Figure I-8 Multiple Functions of the Fisheries Industry and Fishing Villages**

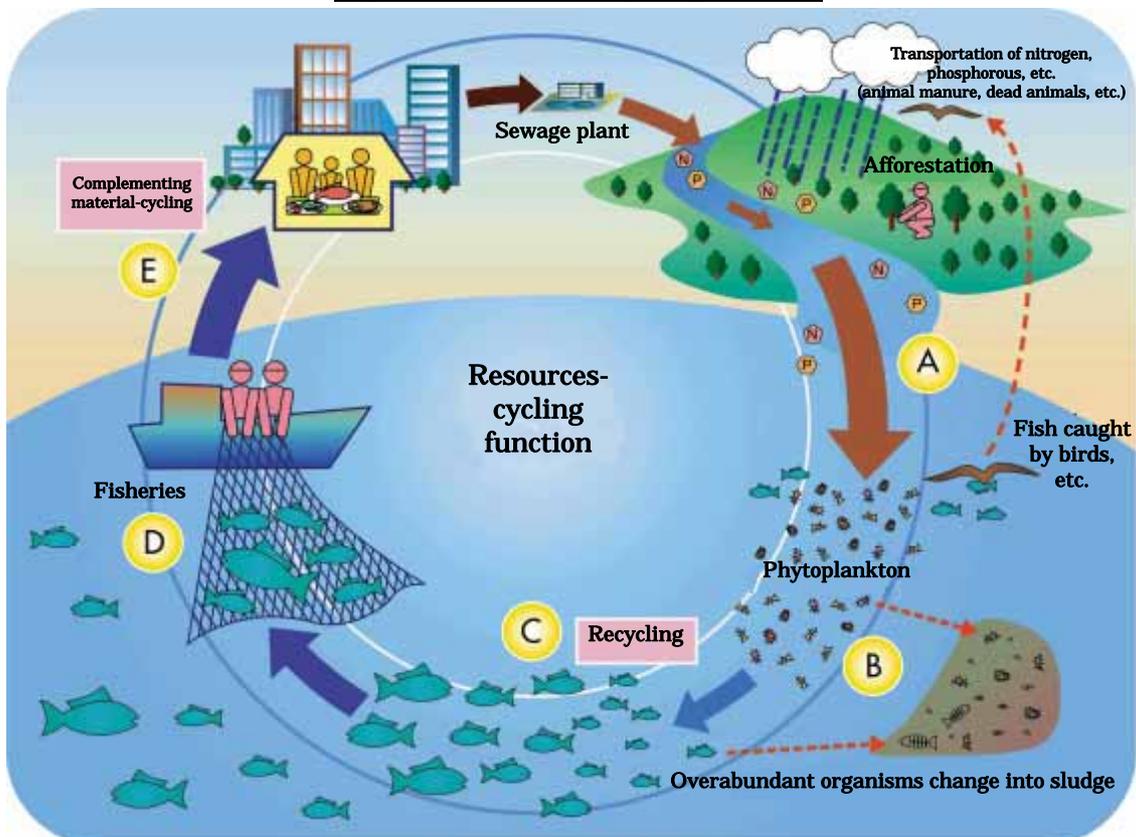


**(Details of the multiple functions of the fisheries and fishing villages)**

**Function to complement material-cycling (Resources-cycling function)**

A large quantity of nitrogen and phosphorus is generated from various human activities and discharged from land into the sea. Those materials are then transformed into fish and other aquatic organisms through food chains in marine ecosystems. Collecting such new living organisms from sea areas by fishing promotes material-cycling and also prevents eutrophication (See Figure I-9). Such material cycling function cannot be completed without fisheries.

**Figure I-9 Resources-cycling function**



Seagrass beds and tidelands are the place for spawning of various organisms and growth of the fry. They also can purify seawater and recover the transparency. While many seagrass beds and tidelands have disappeared during high economic growth period in Japan, fishery workers have stepped up efforts to create seagrass beds and manage tidelands. They have also been collecting dumped trash and cleaning seashore. Viewing forests, rivers and coasts as an integrated ecosystem, fishery workers plant trees to conserve environment of coastal waters. They also collect spilled oil emerging from oil-related accidents.



Photo: Fishery workers plant trees

### **Protection of human lives and properties**

Japan has some 210,000 fishing vessels and about 6,300 fishing villages along the coast line. That means, on average, one vessel exists for every 170 meters of shoreline and one fishing village every 5.5 kilometers. Fishery workers' vast information and surveillance network plays a key role in rescuing people trapped in marine accidents and disasters, in monitoring the marine environment and in national border surveillance.



Photo: A fishing vessel (left) tows a capsized vessel (right).

### **Provision of opportunities for exchanges**

Fishing villages promote exchanges among various people such as urban and rural residents, young people and children through a number of events including marine recreation, on-site training and direct sales of fresh fishery products. They also provide the opportunity to view beautiful Japanese scenery, like a fishing vessel against a background of beautiful coast with white sand and green pine trees, as well as fixed fishing nets and the drying of fish in the sun.



Photo: Salmon festival (Yamada, Iwate Prefecture)

### **Formation and preservation of local communities**

Fishing villages have created and maintained traditional cultures rooted deep in local communities, including festivals for safe fishing and good hauls, a diversity of fishing methods developed to meet the local fish species and fishing grounds, and local fish dishes made with unique cooking and processing methods.



Photo: Small trawl net vessels sailing in the Yatsushiro Sea

## II. Developments in the Japanese Fisheries since FY 2003

### 1. Supply and demand of fishery products in Japan

#### (1) Domestic fishery production

##### (Fishery and aquaculture production)

In 2003, Japan saw its fishery and aquaculture production increase 3% in volume from the previous year to 6.08 million tons (see Table II-1) and shrank 8% in value to 1.6 trillion yen.

**Table II-1 Fishery and Aquaculture Production Volume**

(Unit: 10,000 tons)

	1993	1998	2002	2003	Percentage change 2003/2002
Total	871	668	588	608	3
Marine fishery	726	531	443	472	6
Far seas fishery	114	81	69	60	△12
Offshore fishery	426	292	226	254	13
Coastal fishery	186	158	149	158	6
Marine aquaculture	127	123	133	125	△ 6
Inland water fishery and aquaculture	18	14	11	11	△ 3

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 2002 covers catch amount at 148 major rivers and 28 lakes and amount of production of cultured trout, Ayu (sweetfish), carp and eel.

##### (Fishery resources in surrounding waters)

According to the results of a resource assessment conducted in 2004 on major fishery resources in the waters surrounding Japan, the levels of fishery resources are low for more than half of the species or stocks on which the assessment was conducted.

Since FY 2004, such new resources restoration plans as the "Resources Restoration Plan for Launce in the Soya Straits" and the "Resources Restoration Plan for Pacific Spear Squid Stock (Southern Part)" have been developed and implemented. These plans include measures that have severe short-term effects on fishery business management. However, their expansion is important.

##### (Aquatic environment)

The aquatic environment of coastal waters, which are important for fishing and

aquaculture, has been affected by such factors as the influx of wastewater from factories and households, land reclamation and sea gravel extraction. Many seagrass beds, which are essential for aquatic animals to spawn and secure places for the fry to grow, have disappeared. Causes for the disappearance are unknown for about 40% cases. Indicated causes attributable to human activities include direct effects of land reclamation, etc., as well as indirect effects of buildings or other structures that stop water flows and change the underwater sand distribution. Natural causes include an increase in water temperature and feeding damage caused by sea urchin, shellfish and fish. In addition, a decrease in the clarity of water due to muddiness or contamination was pointed out as another reason, according to a study on zosteria zones.

The biological oxygen demand (BOD) and the chemical oxygen demand (COD), which are representative indicators of organic contamination, show some water quality improvement in rivers and lakes and no improvement or deterioration in sea waters.

Large jellyfish that seriously affect fixed nets were seen in 2004 as in 2003, in waters ranging from the Sea of Japan to the Northern Pacific coastal areas of Honshu Island. In order to reduce fishing losses from large jellyfish, research and technology development have been implemented since FY 2004 to forecast the massive infestation of large jellyfish, and to prevent losses and make effective use of such jellyfish.

#### **(Current Status of inland waters)**

Inland waters play an important role in providing various freshwater fish and shellfish, such as Ayu (sweetfish), creating opportunities for people to enjoy recreational fishing and otherwise commune with nature, and preserving the natural environment.

However, inland waters are currently suffering fishery- and ecosystem-related damage due to predation of indigenous fish species by black bass and other alien species. Under such circumstances, the Invasive Alien Species Act was established for the purpose of regulating raising, carrying or importing of designated invasive alien species and exterminate such species. Based on the opinions presented at the Invasive Alien Species Expert Committee meeting held in January 2005, discussion has started aiming to designate four species including black bass as invasive alien species in the category of fish species.

The number of river cormorants has increased with their geographic distribution widening over the recent years. To prevent and reduce damage to fishing brought by river cormorants, efforts have been made to prevent them from coming to fishing grounds and exterminate a limited number of such birds.

Carp infected with the koi herpes virus (KHV) were identified in 39 prefectures by

the end of January 2005. The Ministry of Agriculture, Forestry and Fisheries has appropriately promoted measures against KHV outbreaks, including restrictions on transportation of infected carp, their disposal and disinfection of carp farms. In February 2004, the ministry inaugurated a conference of experts on the fishery quarantine system. In July 2004, the conference compiled a report on the present state and problems of aquatic animal quarantine measures and the direction of future measures.

## (2) Fishery product trade

Japan's fishery product imports in 2003 fell back both in volume (weight of products upon customs clearance, hereinafter the same) and value. In volume terms, the year's imports declined by 496,000 tons or 13% from the previous year to 3.325 million tons. In value, they dropped by 193 billion yen or 11% to 1,569.2 billion yen.

However, Japan has remained the world's largest fishery product importer both in volume and value, accounting for 14% of the world's total fishery product import volume and 22% of total import value (as of 2002). China has been the largest fishery product exporter to Japan since 1998. But such imports from China in 2003 decreased by 120,000 tons or 16% in volume terms from the previous year and by 22.9 billion yen or 7% in value terms.

On the other hand, Japan's fishery product exports in 2003 increased by 63,000 tons or 21% to 370,000 tons in volume terms from the previous year while decreasing by 1.1 billion yen or 1% to 135.4 billion yen in value.

**Table II-2 World Fishery Product Trade**

**(5 largest exporters and importers in value and volume terms in 2002)**

Unit: 1 million dollars in value, 10,000 tons in volume

Imports	Value Share (%)	World total 62,318 100	Japan 13,863 22	U.S.A. 10,150 16	Spain 3,867 6	France 3,237 5	Italy 2,917 5	
	Volume Share (%)	World total 2,774 100	Japan 382 14	China 248 9	U.S.A. 207 7	Spain 146 5	Denmark 140 5	
Exports	Value Share (%)	World total 58,500 100	China 4,601 8	Thailand 3,692 6	Norway 3,601 6	U.S.A. 3,319 6	Canada 3,052 5	Japan (23 <sup>rd</sup> ) 818 1
	Volume Share (%)	World total 2,742 100	Norway 210 8	China 206 8	Peru 186 7	U.S.A. 136 5	Denmark 127 5	Japan (28 <sup>th</sup> ) 31 1

Source: "Fishstat (Fisheries Commodities Production and Trade 1976-2002)," FAO

### **(3) Processing and marketing of fishery products**

#### **(Processing of fishery products)**

The production volume of major items of processed fishery products has been on the decline as fish cake and other steamed fish paste products, as well as salted salmon and other salted products have decreased despite an increase in frozen fishery products.

Most processed fishery product producers have the problem of sluggish sales, reflecting a decline in household purchases of processed fishery products. As concerns have grown about the quality and safety of fishery products for food, these producers are being called on to make hygiene management efforts including the introduction of the hazard analysis and critical control point (HACCP) system. But these efforts, which require equipment investment, are difficult for these producers, which are mostly small in size.

#### **(Marketing of fishery products)**

In 2003, fish and other aquatic animal catches (excluding shellfish and sea weed) landed at major Japanese fishing ports and listed in a nearby local market increased by 8% from the previous year. Their average price was 180 yen per kilogram, down 17%. Japan now has about 900 local fish markets that have failed to work well due to a decline in catches both in volume and value. Each prefectural government is trying to integrate these markets.

In 2003, the trade volume at major markets in consuming site (central wholesale markets in 10 cities) declined by 3% from the previous year and 9% from five years earlier. The average price came to 763 yen per kilogram, down 4% from the previous year and 10% from five years earlier. Auctions declined while negotiation transactions increased.

The Wholesale Market Law was revised in June 2004 to develop a safer and more reliable and effective distribution system meeting consumer needs and taking into account relevant social and economic changes.

### **(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.

Since July 2000, the label of each fresh food product among all foods and beverages including fishery products for ordinary consumers consumption has been required to show the name and place of origin under the Japan Agriculture Standards Law. Since

April 2001, the label of each processed food product has been required to indicate the name, the ingredients, the use-by date and others. Regarding processed fishery products, the “labeling standards for processed foods” were revised in September 2004 to require place of origin to be indicated for main ingredients of all the processed foods close to fresh foods in addition to six products to which such requirement has been already applied including salted mackerel.

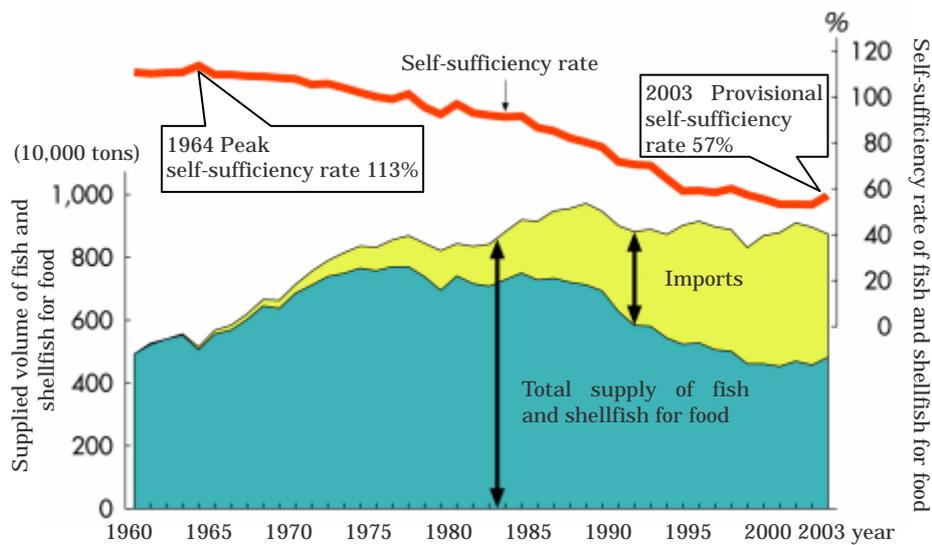
The national and prefectural governments have implemented the surveillance and guidance regarding food labels by conducting on-site inspections and regular monitoring surveys at food stores, and by establishing a nationwide telephone number for food labeling inquiries to collect food labeling information from a wide range of people.

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

In 2003, the fish and shellfish (on an original weight basis) supplied for domestic consumption decreased 2% to 10.98 million tons from the pervious year, of which about 80% was supplied for human consumption, down 2% to 8.39 million tons. Per capita annual fishery product consumption came to 65.7 kilograms on a crude food weight basis and to 36.2 kilograms on a net weight basis.

The self-sufficiency rate of fish and shellfish for food consumption in 2003 rose by 4 percentage points to 57% as domestic production increased with imports decreasing (see Figure II-1).

**Figure II-1 Changes in Self-Sufficiency Rate of Fish and Shellfish for Food**



Source: “Food Balance Sheets,” Ministry of Agriculture, Forestry and Fisheries

## **2. International developments surrounding Japan's fisheries**

### **(1) Bilateral fishery relations**

Japan and Korea conduct their fishing operations in each other's waters under the Agreement between Japan and the Republic of Korea on Fishing. Japan and China similarly conduct fishing operations in each other's waters under the Agreement between Japan and the People's Republic of China on Fishing.

Based on the Japan-Soviet Union Adjacent and Offshore Fishery Agreement, Japan and Russia conduct their fishing operation in each other's 200-mile zone. Japan also catches Russian salmon under the Japan-Soviet Union Fishery Cooperation Agreement and conducts fishing operations in waters within 12 miles from the Four Northern Islands under the Framework Agreement Concerning the Operations of Japanese Fishing Vessels in the Waters around the Four Northern Islands, which was concluded on a precondition that Japan's basic stance that the four islands are Japan's inherent territory not be affected.

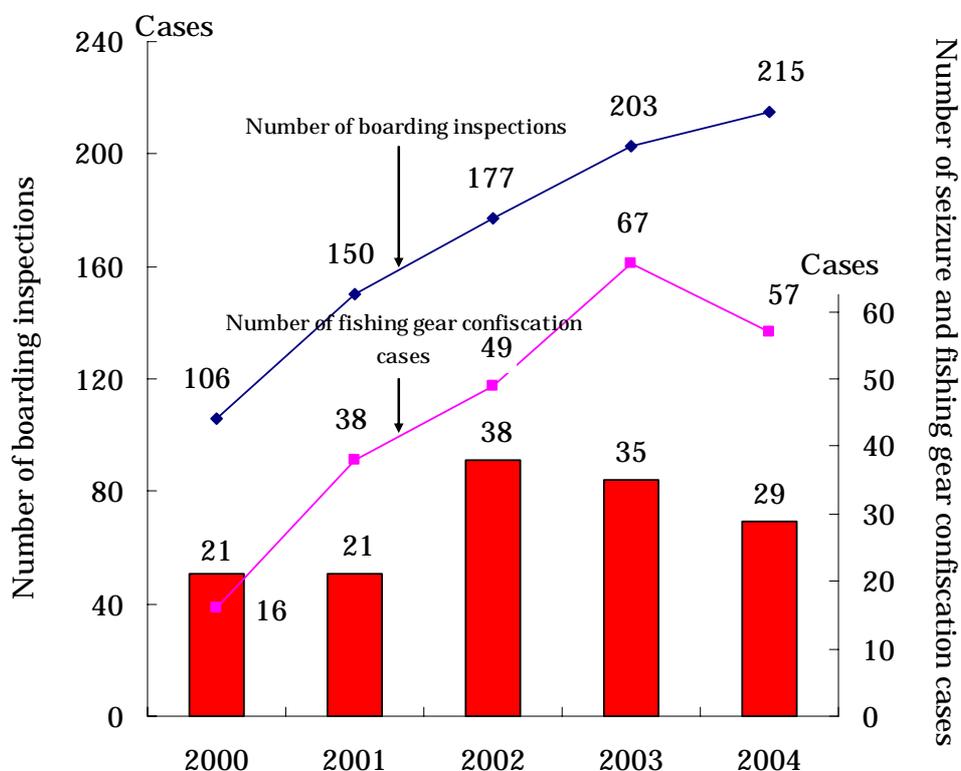
Japanese fishing vessels also operate in the 200-mile zones of Pacific island and African countries under bilateral government-to-government or private-level agreements.

### **(2) Crackdown on illegal foreign fishing vessels**

Japan monitors and cracks down on foreign fishing vessels' illegal activities in its exclusive economic zones, etc.

In 2004, Japan seized 29 foreign fishing vessels, conducted boarding inspections on 215 vessels and confiscated fishing gear from 57 vessels (see Figure II-2). Recently, foreign fishing vessels' malicious actions have stood out. Some foreign fishing vessels have hit Japanese patrol vessels. Japan has thus been trying to enhance its enforcement activities such as surveillance against foreign fishing vessels.

**Figure II-2 Fisheries Agency's Boarding Inspections of Foreign Fishing Vessels, etc.**



**Breakdown of seized fishing boats by nationality**

<b>Korea</b>	16	17	25	23	14
<b>Taiwan</b>	-	1	-	-	7
<b>China</b>	5	3	12	12	5
<b>Russia</b>	-	-	1	-	2
<b>Cambodia</b>	-	-	-	-	1
<b>Total</b>	21	21	38	35	29

Source: Fisheries Agency

**(3) Multilateral fishery relations**

**(Developments with regard to tuna and skipjack fisheries)**

Each of the International Commission for the Conservation of Atlantic Tuna (ICCAT) and other regional fisheries management organizations have made positive list of fishing vessels that have received official fishing permits from member countries of the respective organization and are trying to exclude catches of any unlisted fishing vessels from international trade.

At an annual ICCAT meeting in 2004, Japan filed complaints against Taiwanese fishing vessels' falsification of facts concerning waters for their fishing activities and their names, and China's over catch. These actions came under fire from other countries as well. The ICCAT plans to consider trade restrictions for Taiwan if no improvement is

made by the next annual meeting.

**(Food and Agriculture Organization of the United Nations--FAO)**

At a governmental technical meeting in June 2004 on fishing capacity and IUU (illegal, unreported and unregulated) fishing, the FAO members agreed to take emergency action, including a ban on the introduction of any more large tuna fishing vessels in fishing countries and a restriction on acceptance of large foreign tuna fishing vessels' operations in their respective waters.

**(Conference of the Parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora – CITES)**

At the meeting of the Conference of the Parties in October 2004, Japan's proposals (the draft resolution to request early completion of the IWC Revised Management Scheme (RMS) and the transfer from Appendix I (commercial trade prohibited) to Appendix II (regulated trade permitted) of northern hemisphere common minke whale stocks) were voted down but received the largest-ever number of votes in support. The Japanese government will continue persistent efforts to gain understanding throughout the world about the sustainable use of marine living resources based on scientific grounds.

**(International Whaling Commission – IWC)**

At an annual IWC meeting in July 2004, Japan's proposals (relief measures for coastal regions affected seriously by the commercial whaling moratorium and quotas on common minke and other whale catches for RMS demonstration tests) were voted down. But number of countries supporting the sustainable utilization of whale stocks and anti-whaling countries competed each other. Japan will continue efforts to have commercial whaling resumed.

**3. Fishery business management**

**(1) State of fishery business management**

**(Coastal fishery operators)**

In 2003, average fishery income at coastal fishing households decreased by 4.8% from the previous year to 2.16 million yen. The details of the financial conditions of each fishery operator differs greatly depending on the conditions of the respective area they operate in (For example, the fishery earnings in Hokkaido waters was 2.89 million yen,

while that in the East China Sea was 1.6 million yen).

In FY 2003, aquaculture operators saw their earnings drop 5% from the previous year to 5.71 million yen based on weighted average for all types of aquaculture. By species for aquaculture, earnings from yellowtail and mother-of-pearl oyster production recovered, but earnings from sea bream production declined due to price drops and resulted in losses.

**(Small and medium sized fishery operators)**

Small and medium sized fishery operators' earnings in FY 2003 deteriorated further, posting an average loss of 2.81 million yen. Fishery income remained unchanged while fishery costs increased by 2.6% due to a rise in oil costs, etc.

Among tonnage groups, even the less-than-50-ton group which gained a profit in the previous year incurred a loss.

**More natural disasters seen in 2004**

In 2004, a record 10 typhoons struck Japan, damaging fishing ports, aquaculture facilities, cultured fishery products, fixed nets, fishing vessels, etc.

The Niigata-Chuetsu earthquake in October 2004 seriously affected nishikigoi carp breeding, hitting the Chuetsu region including Ojiya and Yamakoshi known for large-scale nishikigoi production.

Unit: 100 million yen

Disaster	Loss	Major devastated areas	Major devastated facilities, etc.
Typhoon No. 6	25	Mie, Wakayama, Kochi	Fishing ports, fixed nets
Typhoon No. 15	83	Hokkaido, Aomori, Akita, Yamagata, Niigata, Ishikawa, Shimane	Fishing ports, fixed nets
Typhoon No. 16	140	Okayama, Hiroshima, Kagawa, Ehime, Kochi, Miyazaki, Kagoshima	Fishing ports, aquaculture products
Typhoon No. 18	311	Hokkaido, Aomori, Hiroshima, Yamaguchi, Nagasaki, Kumamoto, Kagoshima	Fishing ports, fixed nets, aquaculture facilities, aquaculture products
Typhoon No. 21	17	Mie, Ehime, Kagoshima	Fishing ports, aquaculture facilities, aquaculture products
Typhoon No. 23	211	Wakayama, Hiroshima, Ehime, Kochi, Nagasaki, Oita	Fishing ports, aquaculture facilities, aquaculture products
Niigata-Chuetsu earthquake	65	Niigata	Aquaculture facilities, aquaculture products
Total	852		

Source: Fisheries Agency

As of March 15, 2005

## **(2) State of fishery workers**

### **(Fishery workers)**

While fishery workers have decreased and aged, some people have recently aspired to move from non-fishery industries to the fisheries industry. Fisheries cooperative associations and fishing households are trying to accept new fishery workers to secure people willing to engage in fishing.

### **(Workers on fishing vessels)**

With workers on fishing vessels aging and the relative decline in their income compared to other industries, the number of Japanese workers employed for offshore and distant water fishing declined over a period of five years by 28% to 25,000 in 2003. Due to personnel shortages of Japanese workers who are willing to work on fishing vessels, foreign workers have been allowed to work on Japanese fishing vessels under the “maru-ship system.” “Maru-ship” refers to a Japanese ship manned by non-Japanese crew to a certain percentage of the whole crew. “Maru” indicates Japanese ships, whose names often end with “maru.”

## **(3) Fisheries cooperative associations**

### **(Current Status of fisheries cooperative associations)**

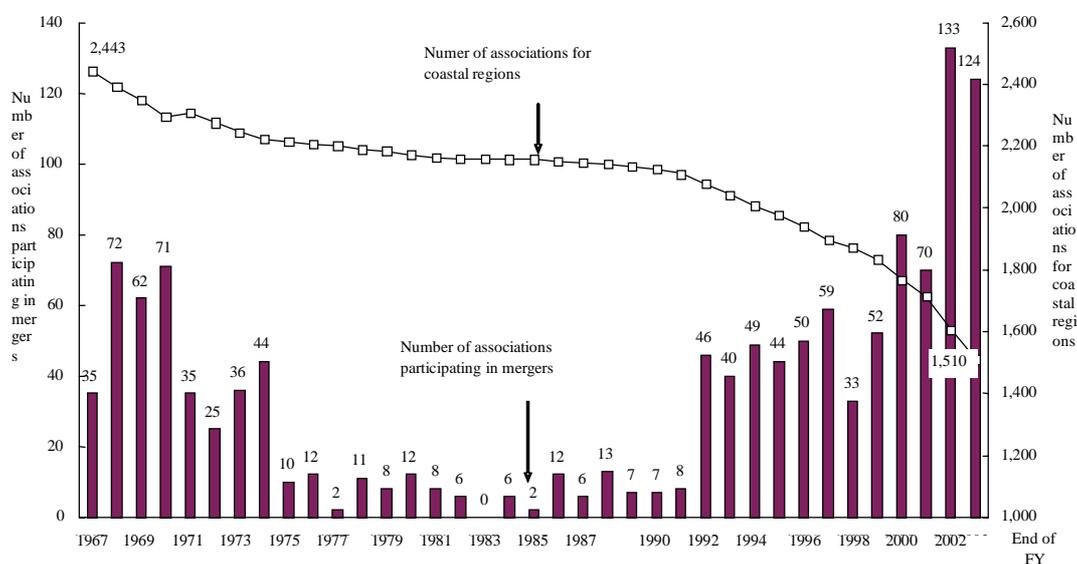
At the end of FY 2003, Japan had 2,566 fisheries cooperative associations, including 1,510 for coastal regions, 878 for inland waters and 168 sector-specific associations.

Business operations of fisheries cooperative associations range widely from guidance for fishery management and credit extension to purchases of necessities for fishers, sales of catch and harvest and mutual relief. Reflecting the recent deterioration in the environment surrounding the fisheries industry, these operations have leveled off or shrunk in scale. The business management of fisheries cooperative associations has been deteriorating.

### **(Improvement and enhancement of fisheries cooperative associations)**

Federations of fisheries cooperative associations have systematically promoted mergers of associations under their voluntary policies to enhance the organization and business infrastructure of these associations. In FY 2003, 124 fisheries cooperative associations took part in mergers (see Figure II-3).

**Figure II-3 Changes in Number of Coastal Fisheries Cooperative Associations and Number of Associations Participating in Mergers**



Source: Fisheries Agency

#### 4. Efforts to revitalize fishing villages

##### (1) Measures to improve the living conditions of fishing villages and revitalize them (Measures to improve the living conditions of fishing villages)

Fishing villages are located mostly on small pieces of land surrounded by sea and mountains and have lagged behind urban regions in developing modern living facilities. Since FY 2000, the national government, local governments, and related organizations have, in collaboration, commenced the Fishing Village Life Environment Improvement Movement (Fishing Village Refresh Movement).

Fishing village populations have been aging, with 27% of fishing household members aged above 65 in 2003. In the improvement of the living conditions, consideration should be given to elderly people, allowing them to positively engage in fisheries work over their entire lifetime.

##### (Measures to revitalize fishing villages)

In June 2004, a group of experts selected 30 leading projects to develop autonomous, business-oriented villages for agriculture, forestry and fisheries in Japan. They are called “Tachiagaru nousangyoson.”

In 2003, women fishery workers numbered 40,000, accounting for 16% of the 238,000 fishery workers. The women’s departments of fisheries cooperative associations

undertake not only association-related operations but also a wide range of local community activities including the promotion of seafood consumption and eating education through cooking workshops, playing a key role in revitalizing local communities.

Since FY 2001, groups of willing young fishery workers (partners of core fishery workers) have been making efforts to improve fishery business management and revitalize local communities. At the end of January 2005, 92 groups in 33 prefectures were working for the revitalization through various measures including introduction of new technology and equipment, taking into account local conditions.

## **(2) Coexistence and exchanges between cities and fishing villages**

Fishing villages are trying to revitalize local communities by providing city dwellers with healthy recreational opportunities and children with experiential learning opportunities about fishery.

Broad range of organizations including private companies, NPOs, local governments and individuals have jointly established the “Committee to Promote Coexistence and Exchanges between Cities and Agricultural, Mountainous, and Fishing Villages” (nicknamed “All Right! Nippon Committee”) to implement campaigns for promoting “coexistence and exchanges between cities and villages,” as a national movement.

## **Conclusion**

As reviewed in Special Feature 1, fishing households' financial situation has grown more difficult over the recent years. Small and midsize fishery operators' earnings have deteriorated. Slackening fish prices are cited as one factor behind this deterioration. Why have fish prices declined? The special feature focused on changes in consumption of fishery products and distribution channels for clues to analyzing the reasons. We now have found that per capita purchases of fishery products for food have remained stable in volume while purchase prices have declined by more than 10% over the past decade, that spending on instant meals has increased (indicating clear changes in consumption patterns) and that age groups differ sharply in fishery product consumption. A key challenge for producers and suppliers, in their quest to improve their profitability, is to appropriately meet such changes in consumers' needs.

Special Feature 2 indicates that the fisheries industry and fishing villages have multiple functions including not only the stable provision of quality fishery products but also materials recycling, environmental conservation and the protection of human lives and properties. The healthy development of the fisheries industry and fishing villages is important for these multiple functions to be fully maintained in the future.

To allow the annual report to contribute to the people's understanding of Japanese fisheries industry developments, we plan in future as well to provide easy-to-understand explanations of important themes in this industry. We would be happy if this report helps to promote discussions or dialogue regarding the future development of fishery industry policy.

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