Fisheries of Japan - 2006 / 2007

Fisheries Policy for FY2007

Executive Summary
This document reports the state of fisheries and the policy taken during FY2006 based on the provision of Article 10 (1) of the Basic Law on the Fisheries Policy (Law No. 89 of 2001) and the policy to be taken in FY2007 based on the provision of Article 10 (2) of the same law.
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Topics -- Fisheries in FY2006 --

1. New Basic Fisheries Plan
   -- Speed up structural reform process in fisheries industry --

Measures under the basic fisheries plan and changes in the self-sufficiency rate

Japan's fisheries policy has two basic principles -- securing stable supply of fishery products and sound development of the fisheries industry. These principles are enshrined in the Basic Law on the Fisheries Policy that was established in 2001. The law requires the Government to develop a basic fisheries plan to comprehensively and systematically promote fisheries measures.

The basic fisheries plan was developed in March 2002. Since then, the Government and relevant stakeholders have implemented various measures in production and consumption areas, including fishery resources restoration efforts that have begun to spread nationwide. Japan's self-sufficiency rate for fishery products for human consumption rose back from the bottom of 53% between FY2004 and 2002 to 57% in FY2005.

Changes in Japan's fisheries industry and fishing village situation

Since 2002, however, Japan's fisheries industry and fishing village situation has turned around. The fisheries policy is faced with new problems that should be solved urgently.

Japan's annual production of fishery products for human consumption remained around 4.5 million tons in the past several years after continuing a moderate decline. Factors behind the absence of growth in such production include depleted fishery resources in waters surrounding Japan. Such resources have been depleted as Japan's fishing grounds has been deteriorated by the decline of underwater plant beds and tidelands, despite some signs of restoration of resources. Another factor is that Japan's fisheries industry has been weakened by a decline in the number of fishery workers and their aging.

While fishery products are important for the Japanese dietary pattern that features well-balanced nutrition, Japan's consumption of such products has been declining fast since FY2001. Annual per capita supply decreased from 40.2 kg in FY 2001 to 34.4 kg in FY 2005 on a net food basis. Behind the decline, children have kept away from eating fish. Young people have been shifting away from fish quickly as fish are generally tough to cook. Fishery products production and supply in Japan have failed to meet changes in consumer needs, including a growing shift to easy eating.

Development of a new basic fisheries plan

In consideration of such changes in the situation and ratings for effects of past measures, the Government developed a new basic fisheries plan in March 2007 to reform the whole of the fisheries policy and promote fisheries measures comprehensively and systematically.

First, the new plan calls for improvement of resources productivity, and restoration and management of fishery resources in Japan's exclusive economic zone and for promotion of international management of fishery resources given that fishery resources in Japan's surrounding waters and high seas have been depleted.

The new plan also says Japan should create a sustainable fishery production system commensurate with sustainability resources through development of internationally competitive fishery operators and a vigorous working environment in order to secure stable supply of fishery products for the future, at a time when Japan's fierce...
competition with other countries for fishery product purchases is expected to affect its domestic fishery product supply on global growth in demand for such products. Specifically, the plan seeks to promote restructuring of fisheries using fishing vessels and introduce new stabilization measures for fishery operators who positively and systematically improve their ways of doing business.

In order to stably provide consumers with fresh, safe fishery products, the plan says, the Government should try to expand consumption of fishery products by enhancing producers' marketing capacity, restructuring processing and distribution sectors and developing a network to foster consumers' confidence in fishery products.

The new plan aims to boost Japan's self-sufficiency rate of fishery products for human consumption to 65% by 2017 through these policy reforms and efforts of fishery operators and consumers.

Promotion of roadmap-based policy reform

In order to steadily materialize and promptly implement the policy reforms, the plan calls on the Government to release a roadmap that would specify procedures for materialization of measures and timetables for their implementation to secure the transparency and predictability of these reforms for the people. The Government is urged to manage the reform process in line with specific goals.

Directions of Policy Reforms and Relevant Measures

- Promoting recovery of depleted fishery resources and responsible fishery management
  - Steady promotion of resources management and restoration plans
  - Enhancement of international resources management
  - Improvement of the living environment of aquatic animals and plants in sea and inland waters and promotion of fish propagation and farming

- Developing and diffusing new technologies to improve the future of fisheries industry
  - Development and diffusion of new technologies meeting workplace needs
  - Technology for developing and constructing energy-saving fishing vessels
  - Technology for production of bluefin tuna seedlings in hatchery
  - Refrigeration and deforestation technology to prevent deterioration of fish product freshness and quality
  - Promotion of utilization of biomass resources

- Fostering and securing internationally competitive fishery operators and developing a vigorous working environment for fishery workers
  - Promotion of restructuring of fisheries using fishing vessels
  - Introduction of new business stabilization measures
  - Promotion of new comers in fisheries

- Comprehensive development of fishing ports, grounds and villages, and demonstration of multiple functions of fisheries industry and fishing villages
  - Improvement of resources production capacity in exclusive economic zones
  - Development of fishery product supply infrastructure
  - Development of safe, vigorous fishing villages
  - Demonstration of multiple functions of fisheries industry and fishing villages

- Implementing processing, distribution and consumption measures to secure stable supply of fishery products
  - Development of distribution bases
  - Creation of various distribution channels linking consumers to foreshores
  - Positive implementation of fishery product export strategies
  - Promotion of food education and fish consumption

- Reorganizing fisheries industry groups
  - Promotion of organizational, management and business reforms for fisheries cooperatives
2. Say "No!" to Tuna Overfishing
-- Japan takes leadership in protecting dining table tuna --

(Factors behind tuna price hikes in summer 2006)

From the spring to the summer in 2006, tuna import prices rose after their stability at low levels. As Taiwan, which provides 40% of tuna imports into Japan, was forced to reduce tuna catches to correct its overfishing, news reports said tuna would disappear from dining tables in Japan. In and after August, however, tuna import prices turned down. Consumption-area market prices (in Tokyo) in December 2006 were some 10% higher than in the same month of the previous year, standing at levels similar to those in 2001.

Behind the price hike, concerns have spread about stable supply on depletion of resources while demand for tuna has been rising globally. In such situation, enhanced management of resources by regional fisheries management organizations¹ and the like has grown more important.

(Regional fisheries management organizations enhancing management of resources)

As for tuna and other highly migratory fish stocks, regional fisheries management organizations for these stocks' respective migratory ranges have been created to manage resources by setting total allowable catches (TAC), country-by-country fishing quotas and limits on the number of fishing vessels in operation through cooperation among relevant countries, based on regional resources and fishing operations.

In 2006, these regional fisheries management organizations decided to reduce catches for fish stocks subjected to deterioration of resources. The International Commission for the Conservation of Atlantic Tunas (ICCAT)² decided to gradually reduce total allowable catches of Atlantic and Mediterranean bluefin tuna for the coming years, extend fishing moratoriums, and toughen regulations on small-fish catches.

The Commission for the Conservation of Southern Bluefin Tuna (CCSBT)³ decided to tentatively cut total allowable

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¹ Regional fisheries management organizations are international organizations that have been created under conventions for fisheries management in specified waters.

² International Commission for the Conservation of Atlantic Tunas (ICCAT) The number of ICCAT member countries stood at 42 in addition to the European Commission as of December 2006.

³ Commission for the Conservation of Southern Bluefin Tuna (CCSBT) Four countries have acceded to this commission, with Taiwan taking part in an enlarged committee as of December 2006.
catches of southern bluefin tuna in view of deteriorating resources. Japan accepted the cut in a bid to make maximum positive contributions to restoration of southern bluefin tuna resources. The CCSBT also introduced vessel-by-vessel catch quotas and enhanced inspections at designated landing ports.

The resources management measures as decided on at the ICCAT and CCSBT are to reduce catches for the immediate future. But they are aimed at restoring resources while continuing to utilize them over a long term. It is important for relevant countries to comply with these regulatory measures.

Taiwan's reduction of tuna catches was strongly requested at the ICCAT and other regional fisheries management organizations. Japan also urged Taiwan to cut tuna catches. As a result, Japan and Taiwan agreed in June 2006 to substantially reduce the number of Taiwanese fishing vessels for catching tuna. This reduction is expected to have a favorable impact on resources.

(Enhancing management of farmed tuna)

As for purse seines to catch bluefin tuna for farming, it is difficult to identify catches. Management of these catches has thus become a problem at regional fisheries management organizations. In a bid to enhance management of tuna farming, the ICCAT has introduced a positive list system to approve bluefin tuna imports only at officially registered farms. At a meeting in 2006, the ICCAT produced an agreement as arranged by Japan to send neutral observers for checking the volume of tuna put into farming ponds and collect data on tuna deaths between catching and transfer to farming ponds and during farming. The CCSBT agreed that Australia, suspected of underestimating catches for its southern bluefin tuna farming, should verify catches and growth rate.

Through these measures by regional fisheries management organizations, improvements of controls on catches are expected to make progress, including enhanced transparency of farming.

(Joint meeting of regional tuna stock management organizations)

Tuna stocks have been exposed to overfishing pressures at many locations, while demand for tuna has been rising globally. We have also seen emerging global problems such as the excessive number of fishing vessels and IUU (illegal, unreported and unregulated) fishing that regional fisheries management organizations alone cannot address. In this respect, Japan hosted the first joint meeting of five regional tuna fishing management organizations (IATTC*, ICCAT, IOTC*, WCPFC* and CCSBT) in Kobe on January 22-26, 2007, to consider their cooperation.

An "Action Plan," as adopted at the meeting, includes enhanced controls on purse seine and other fishing capacity as well as anti-IUU measures that are indispensable for management of tuna resources. In the future, it is important to steadily implement the "Action Plan." As a responsible fish catching and consuming country, Japan will make positive efforts to have specific measures introduced at these regional fisheries management organizations for implementing the "Action Plan," in order to secure appropriate management of tuna resources and stable supply to consumers.

*4 IUU stands for illegal, unreported and unregulated.
*5 Inter-American Tropical Tuna Commission IATTC The number of IATTAC member countries stood at 15 as of December 2006.
*6 Indian Ocean Tuna Commission IOTC The number of IOTC member countries stood at 23 in addition to the European Commission as of December 2006.
*7 Western and Central Pacific Fisheries Commission WCPFC The number of WCPFC member countries stood at 22 in addition to the European Commission and Taiwan as of December 2006.
3. Promotion of Fishery Product Exports
-- Exporting tasty, high-quality Japanese agriculture, forestry and fishery products --

Over the recent years, chances have grown for expanding exports of high-quality Japanese agriculture, forestry and fishery products thanks to globally growing popularity of Japanese meals and an increase in the number of wealthy people in economic development in Asian developing countries. Japan's fishery products exports in 2006 totaled 170.3 billion yen (excluding pearl) up 18% from the previous year. The expansion of agriculture, forestry and fishery products exports can lead to exploration of demand and increased income for Japanese agriculture, forestry and fishery workers and contribute to Japan's food security through enhanced domestic production capacity. This can also make great contributions to invigoration of rural communities and overseas diffusion of Japanese meal culture, giving encouragement to agriculture, forestry, fishery and other relevant workers.

Since the export expansion is expected to have positive effects on Japan, including recovery of regional economies, the Government in 2005 set a goal to double exports of agriculture, forestry and fishery products and foods in value in five years.

In 2006, Prime Minister Shinzo Abe in his policy speech said: "As industries that support the local regions, agriculture, forestry, and the fisheries have significant potential as strategic industries suitable for the new century. In order to break the stereotype that Japanese agriculture, forestry, and fishery products including foodstuffs are exclusively for domestic use, I aim to raise the scale of exports of delicious and safe Japanese products to one trillion yen by 2013." In order to achieve the goal of the Abe Cabinet, the Government has been cooperating with stakeholders in collecting and analyzing information about foreign countries' imports, distribution and consumption of these products, developing export promotion logo marks, sending information overseas about Japanese meals and food materials, opening permanent overseas shops for Japanese products and sponsoring seminars for Japanese meal cooks.

*Efforts at Japan-China export and import promotion council in Kitamatsu, Nagasaki*

Fishery workers are also exploring sales channels on their own. Small mackerel caught through purse seine fishing are priced low as they cannot be made available as fresh food within Japan. But fishery groups in Matsuura, Nagasaki...
Prefecture, have created a Japan-China import and export promotion council for Nagasaki Prefecture's Kitamatsu region to explore channels for exporting small mackerel as food to China, paying attention to rising overseas demand for fishery products. At export destinations, they have hosted seminars on fish and nutrition, and cooking workshops and tasting parties for Japanese home meals using mackerel in a bid to stimulate local demand for small mackerel and diffuse Japanese fish-eating culture. In 2006, they took advantage of the export promotion program of the Ministry of Agriculture, Forestry and Fisheries to conduct surveys on improved management of freshness at shops and possible transportation of live fish, develop dishes meeting Chinese consumers' preferences and propose school lunch dishes, making positive efforts to diffuse Japanese eating culture and promote sales.

As moves to explore overseas markets spread nationwide, Japan's mackerel exports in 2006 jumped 3.3-fold from the previous year in volume. Particularly, demand has grown in Africa for small Japanese mackerel that are cheaper than European products. Frozen mackerel exports to Africa, including those from Choshi of Chiba Prefecture and Hasaki of Ibaraki Prefecture, rose from only about 2,000 tons in 2005 to 40,000 tons in 2006.

(Export promotion at Hokkaido Federation of Fisheries Cooperative Associations)

The Hokkaido Federation of Fisheries Cooperative Associations has sponsored a Hokkaido fair at a general merchandise store in Shanghai and exported scallop to the United States and the European Union and Alaska Pollack to South Korea. In 2006, the Federation took advantage of the MAFF export promotion program to conduct market research in the United States and the EU toward expansion of export channels for kelp and salmon roe. As fake Hokkaido-brand scallop was seen in Hong Kong and Taiwan, the federation changed package materials, conducted campaigns against counterfeit products and called for local distributors' suspension of sales of fake products in order to protect its intellectual property rights.

In order to maintain and expand Japan's fishery product supply capacity, the Government hopes to see fishery workers stepping up innovative export-promotion efforts throughout Japan.

### Fishery Product Export Cases (uses in export destinations)

<table>
<thead>
<tr>
<th>Needs in export destinations</th>
<th>Fishery product export cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Hong Kong, Taiwan] Demand for dried scallop as a luxury material for Chinese dishes</td>
<td>Scallop exports (10.9 billion yen), dried scallop exports (11.6 billion yen) Hokkaido and Aomori export dried scallop to Hong Kong and Taiwan and live, fresh and frozen scallop to the United States and EU. (Scallop is used for Chinese dishes in Hong Kong, for sushi and other seafood dishes in the United States and for French dishes in the EU. Japanese scallop has been praised for its excellent quality and taste.)</td>
</tr>
<tr>
<td>[U.S., EU] Demand for scallop for eating raw and as a luxury material for French dishes</td>
<td>Hokkaido Pollack exports (7.8 billion yen) Hokkaido exports Alaska pollack to South Korea. (Fresh and frozen Alaska pollack are used for kimiti Korean pickle and pot dishes and have grown popular.)</td>
</tr>
<tr>
<td>[South Korea] Demand for fresh Alaska Pollack as a material for kimchi Korean pickle and pot cooking</td>
<td>Bonito exports (7.6 billion yen) Exports to Thailand and Indonesia have increased on bountiful catches. (Thai-made canned bonito is consumed in Thailand and exported to Europe, North America, Australia and Africa.)</td>
</tr>
</tbody>
</table>
Note: Export values are for 2005.
4. Toward Normalization of IWC

-- 58th annual IWC meeting --

At the 58th annual meeting of the International Whaling Commission (IWC)*8 in the Caribbean island Federation of Saint Christopher and Nevis (known as St. Kitts and Nevis) on June 16-20, 2006, the St. Kitts and Nevis Declaration was adopted by a majority vote.

The St. Kitts and Nevis declaration was proposed jointly by the IWC meeting host of St. Kitts and Nevis, Japan, and 28 other countries supporting sustainable use of whales. It described the moratorium on commercial whaling as no longer necessary and called for normalization of the IWC which has become dysfunctional as an international body to manage whale stocks. Thirty-three countries voted for the declaration, 32 voted against it and one abstained. Even though by such a slim majority vote, a proposal by supporters of sustainable whale use was adopted for the first time since the commercial whaling moratorium was imposed. This came as a great shock to anti-whaling countries.

The IWC has remained abnormal. At a meeting of a working group on the revised management system (RMS)*9 in February 2006, 10-year-old discussions on the RMS development came to an effective halt. The IWC should be normalized as a body for appropriate management of whale stocks to resume sustainable whaling.

In this respect, 35 countries attended a meeting for normalization of the IWC that took place in Tokyo on February 13-15, 2007. Japan had invited all IWC member countries to participate in the meeting, irrespective of whether they support sustainable use of whale stocks or oppose whaling. Regrettably, however, most anti-whaling countries refused to take part in the meeting. Participants in the meeting had vigorous discussions on promotion of confidence-building efforts between countries for sustainable use of whales and those against whaling, secured equality in information, respect for cultural diversity, and interpretation of the International Convention for the Regulation of Whaling. The chair's report on these discussions will be submitted to the 59th annual IWC meeting in Anchorage, Alaska in May.

*8 The International Whaling Commission (IWC) was created to sustainably use whale stocks while conserving and managing them. The number of IWC member countries stood at 72 (as of February 2007).

*9 The revised management system (RMS) is a framework of whaling under international management including quotas and surveillance, based on scientific grounds.
Chapter I Highlight: In Order to Preserve Japan's Fish-eating Culture

Section 1 Japan as a top fish-eating country --Fishery products support a sound Japanese dietary pattern--

(1) Global interests growing in nutritional features of fishery products

Fishery products account for 40% of the animal protein intake (20% of the total protein intake) of Japanese people. Japan is one of the biggest fishery products consumers in the world and has the world's greatest longevity. It would not be an exaggeration to say that the fish-eating culture is one of the key factors for Japan's greatest longevity in the world.

Relationship between Per Capita Annual Fish Consumption and Average Longevity in Major Countries

Fish and seaweed are full of important nutrients including calcium, minerals and vitamins. Over the recent years, docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) have attracted global attention toward brisk research into their efficacy.

<table>
<thead>
<tr>
<th>Functional components</th>
<th>Major functions</th>
<th>Major fishery products containing functional components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Docosahexaenoic acid (DHA)</td>
<td>Helping develop or maintain brain and nerve system functions, working against allergy and inflammation</td>
<td>Tuna, bonito, red sea bream, yellowtail, mackerel, salmon, Japanese pilchard</td>
</tr>
<tr>
<td>Eicosapentaenoic acid (EPA)</td>
<td>Preventing blood clots and vascular constriction, reducing blood lipid</td>
<td>Squid, oyster, octopus, abalone, scallop, prawn, salmon</td>
</tr>
<tr>
<td>Taurine</td>
<td>Adjusting blood pressure, eliminating cholesterol, improving liver functions, maintaining eyesight</td>
<td>Squid, oyster, octopus, abalone, scallop, prawn, salmon</td>
</tr>
<tr>
<td>Calcium</td>
<td>Forming bone, adjusting blood pressure and nerve systems</td>
<td>Small fish</td>
</tr>
<tr>
<td>Iron</td>
<td>A main component of blood erythrocyte (hemoglobin), helping maintain human body functions</td>
<td>Laver, hizikia, lam</td>
</tr>
</tbody>
</table>


Note: Per capita annual fish consumption and average longevity are for 2004.

Source: Fisheries Agency
(2) From Top Fishing Country to Top Fish Importer

- While human consumption of fishery products per capita daily supply on a net food basis increased on a population rise in the 1965-1974 period, Japan's self-sufficiency rate of fishery products for human consumption remained above 100% with domestic output expanding substantially on an increase in fish catches through far sea fishery operations.

- Fish catches through far sea fishery operations declined considerably on a shift to the 200-mile economic zone system in the 1975-84 period. Japanese pilchard catches increased fast, but were used for other purposes than human consumption. The self-sufficiency rate continued declining, slipping below 100% in 1976.

- From around 1985, Japan's fishery product imports increased quickly in a manner to make up for domestic production shortages. The self-sufficiency rate fell as low as 59% in 1994.

- Since 2001, human consumption of fishery products has decreased. Meanwhile, domestic output for human consumption slowed its decline. As a result, the self-sufficiency rate rose back to 57% in 2005 following the bottom of 53% for 2000-2002. But Japan still depends on imports for more than 40% of fishery product supply.


Note: As there are exports and inventory changes, supply for domestic human consumption does not match a combination of domestic output and imports.
Section 2 A fast-growing "shift away from fish" -- A change in a top fish-eating country --

(1) An unprecedented "shift away from fish" is going on

- Per capita daily intake declined for fishery products while leveling off for meat for all age brackets in Japan from 1995 to 2004. An unprecedented "shift away from fish" has emerged.


- Aging effects are seen for people who were born between 1935 and 1955. But no such effects are seen for younger people.

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Changes in Meat and Fish Intake by Age Bracket (1995-2004)

Per Capita Fresh Fish Purchases by Householder Age

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"Annual Report on the Family Income and Expenditure Survey" Two-or-more-person households excluding agriculture, forestry and fishery households
(2) Factors behind a "shift away from fish"

- According to a survey by the Japan Fisheries Association, those who eat more meat than fish are 56% for main dishes, 62% for gaishoku eating-out meals and 65% for nakashoku ready to eat meal. Irrespective of meal types, people who eat more meat than fish are more than those who eat more fish than meat.

- Reasons cited in the survey for preferring meat to fish:
  
  Family members (children for 68%) do not like fishery products: 32%, Fish is more expensive than meat: 31%, Cooking fish is bothersome: 25%, Washing fish grills is troublesome: 20%

![Reasons for Preferring Meat to Fish](image)

Source: "Survey on Food Materials" FY2005 Japan Fisheries Association

(Children's "stay away from fish")

- Family members who do not like fishery products are cited as child/children by about 70%, indicating children's preference has affected meal choices. Fish dishes are ranked top among school lunch dishes that elementary and junior high school students do not like. Children's stay away from fish is a big problem.

(Fish is more expensive than meat)

- Until 1976, the average 100-gram fresh fish price was 40-60% of the average 100-gram fresh meat price. While the meat price has remained stable since then, the fish price has soared. Since 1989, no gap has existed between the fish and meat prices. This change might have led people to feel fish is more expensive than meat.

- Fishery products include components that are not available for eating. As far as components available for eating are concerned, fish may be more expensive than meat. The fact that fish dishes are not filling may also be a factor leading people to view fish as more expensive than meat.
(Cooking fish is bothersome)

- Of housewives in their 30s, 70% do not cook fish. Reasons include the absence of knowledge about how to cook fish, bothersome post-cooking cleanup and bothersome cooking. They avoid from food materials that are difficult to cook.

<table>
<thead>
<tr>
<th>Percentage for Housewives in Their 30s Who Do Not Cut Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you cut fish on your own? (Choose one alternative)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>I do so frequently</td>
</tr>
<tr>
<td>I do so sometimes</td>
</tr>
<tr>
<td>I do so little</td>
</tr>
<tr>
<td>No.</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>48</td>
</tr>
<tr>
<td>23.4</td>
</tr>
<tr>
<td>31.4</td>
</tr>
<tr>
<td>69.8%</td>
</tr>
</tbody>
</table>

Source: "Dinners of Housewives in their 30s -- How working or childcare affects eating practices (1st Consumer Trend Survey in FY2006)," Agriculture, Forestry and Fisheries Finance Corporation

(3) Fishery product consumption may fall back to 1965-74 level

- Per capita daily fishery product consumption can be expected to decline to 87 grams in 2017.
- If the shift away from fish goes on at the present pace, per capita daily fishery product consumption may fall back to the level around 1970. This is feared to seriously affect the people's sound dietary pattern.

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

Note: Per capita daily supply on a net food basis is total annual supply of fishery products net food for human consumption as divided by total population estimated on October 1 annually and the number of days in a relevant year.
Section 3 Global growth in fishery product demand and Japan's "Kaimake" possible loss of purchases to others -- Age for scramble for fishery products --

(1) Top fishery product importer Japan's "Kaimake"

○ In recent years, demand has grown globally for fishery products, leading to an unprecedented race to import fishery products. Rising international prices have forced Japanese importers to be defeated in a price-raising race, a phenomenon better known as "Kaimake".

(Case for Pacific Cod)

○ Demand for Pacific cod has grown mainly in Europe and the United States where consumers favor white fish. U.S. exports to Japan have declined fast, while those to China and Portugal have expanded rapidly. China processes imported Pacific cod for re-exporting to the EU. Behind growing demand, import prices have risen fast from 300 yen per kilogram in 1999 to 533 yen in November 2006.

U.S. Pacific Cod Exports (frozen, refrigerated or fresh) and Export Destinations

Demand for Pacific cod has grown mainly in Europe and the United States where consumers favor white fish. U.S. exports to Japan have declined fast, while those to China and Portugal have expanded rapidly. China processes imported Pacific cod for re-exporting to the EU. Behind growing demand, import prices have risen fast from 300 yen per kilogram in 1999 to 533 yen in November 2006.

(2) Global growth in fishery product demand behind "Kaimake"

- Fishery product consumption, though slackening in Japan, has been growing globally.
- Demand has shifted to fishery products in Europe and the United States due to growing consciousness about health and meat insecurity amid BSE (bovine spongiform encephalopathy) and bird influenza incidents. In China, demand for fishery products has expanded among wealthy people on fast economic growth in coastal regions. Distribution infrastructure development has contributed to rising demand for freshwater fishery products and farming even in inland regions.

Changes in Supply of Fishery Products for Human Consumption

- Japan's share of fishery product trade in the world fell from 16% in 1995 to 12% in 2004.
- Bound-for-Japan exports' shares of total fishery product exports by major exporters to Japan have also declined.

(3) Age of scramble for fishery products may come in future

- According to a report by the U.N. Food and Agriculture Organization, 52% of marine fishery resources are subjected to full utilization, one quarter to overutilization or depletion, and another quarter to appropriate, low or no utilization.
- The FAO predicts the world average per capita demand for all seafood to rise from 16.1 kg (1999-2001) to 19.1 kg (2015). As marine fishing slackens, the future increase in consumption may depend on farming. But supply shortages are expected to expand from 4 million tons in 1999/2001 to 11 million tons in 2015.
- The supply-demand relationship for fishery products will grow even tighter, leading to price hikes. We could see an age of a scramble for fishery products.
Section 4 For the preservation of fish-eating culture and people's health

-- Fish landing area and distribution reforms to meet consumer needs --

(1) Do Japanese really dislike fish now?

- More than 50% of people are willing to eat fish dishes more frequently. Two-thirds of mothers with children hope to have their children eat fish fillets more frequently. Japanese people are still oriented toward fish-eating culture.

- While an increase in obesity and lifestyle-related diseases has become a problem, young people are trying to introduce LOHAS (lifestyles of health and sustainability). Growing interest in health may be a factor to help expand fishery product consumption.

- Some 90% of consumers are willing to select domestic products among fresh and processed fishery products. Major reasons for such willingness include "safety," "high quality" and "tastiness."

Would you like to increase or reduce fish dishes?

- I would like to eat fish dishes less frequently, 0.2%.
- I would like to eat fish dishes more frequently, 54.1%.
- I would like to make no change, 45.6%.

Would you like to have your children eat fish fillets more frequently?

- I would not like to do so, 10.0%.
- I would like to do so, 11.0%.
- I cannot say yes or no, 22.0%.
- I would like to do so to a lesser degree, 47.3%.
- I would like to do so, 18.4%.

Source: "A Survey on Fishery Product Consumption (FY2005)," Japan Fisheries Association

Feelings and Hopes Regarding Consumption of Domestic Fishery Products

Source: "Survey on Feelings and Hopes Regarding Consumption of Domestic Fishery Products" (as released on October 30, 2006):
Ministry of Agriculture, Forestry and Fisheries
(2) Protecting fish-eating culture with stable fishery product supply meeting consumer needs
(Positive efforts to diffuse fish-eating culture and implement fish education to stop a shift away from fish)

- In order to protect fish-eating culture and people's sound dietary pattern, we should expand information on attractions of seasonal fish, nutritional features of fish and how to make tasty dishes using fish and train experts in these areas to enlighten consumers about fishery products.
- We should positively promote food education through utilization of local fishery products for school lunches and provision of opportunities to experience fishery-related operations.

(Landing area and distribution reforms meeting consumer needs)

- While a shift away from fish is feared, rotating sushi bars are popular among children. Fisheries industry and other people should develop and provide fishery products meeting consumer needs that widely vary depending on age group and lifestyle.
- Consolidation of fish-landing area markets, releasing of rights to bid in market auctions and diversification of distribution channels through development of direct deals with consumers should be implemented to increase the efficiency of fishery product distribution and enhance fish-landing areas' sales capacity.
- Fishery product producers should provide information on nutritional features and safety of their products and develop friendly relations with consumers through close exchanges.

(Stable supply of fishery products to support fish-eating culture)

- As demand for fishery products has grown globally, Japanese importers occasionally lose fishery product purchases to other countries. Japan can no longer easily depend on imports for fishery product supply.
- Utilization of fishery resources that could be used permanently under appropriate management, as well as consumers' requests and moves for protecting sound and affluent dietary patterns and eating culture, is required to efficiently exploit limited resources and protect and develop Japan's fisheries.
- In line with the new basic fisheries plan, the Government should steadily implement fisheries policy reforms including promotion of restoration and management of fishery resources and development of internationally competitive fishery operators.

(Case example: A local community united for gyoshoku (fish-eating) education -- Combine fisheries with a local community through food education -- Ainan Town, Ehime Prefecture)

An Ainan Town gyoshoku diffusion promotion council has implemented "gyoshoku (fish-eating) education" including school classes on local fisheries and cooking workshops using local fishery products, and won an outstanding performance award in the "2006 community-based food education contest." The council has also developed a card game for people to understand the importance of gyoshoku.
Chapter II Review of Japanese Fisheries since FY2005

Section 1 Supply and demand of fishery products in Japan

(1) Domestic fishery production

a. Fishery and aquaculture production volume and value

- In 2005, Japan's fishery production volume (including fish and seaweed) leveled off from the previous year to 5.76 million tons. The fishery production value (including fish and seaweed) also leveled off to 1,600.7 billion yen.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Marine fishery</th>
<th>Fishery</th>
<th>Far sea fishery</th>
<th>Offshore fishery</th>
<th>Coastal fishery</th>
<th>Aquaculture</th>
<th>Inland water fishery</th>
<th>Fishery</th>
<th>Aquaculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>6,126</td>
<td>6,009</td>
<td>4,753</td>
<td>749</td>
<td>2,459</td>
<td>1,545</td>
<td>1,256</td>
<td>117</td>
<td>62</td>
<td>56</td>
</tr>
<tr>
<td>2002</td>
<td>5,880</td>
<td>5,767</td>
<td>4,434</td>
<td>686</td>
<td>2,258</td>
<td>1,489</td>
<td>1,333</td>
<td>113</td>
<td>61</td>
<td>51</td>
</tr>
<tr>
<td>2003</td>
<td>6,083</td>
<td>5,973</td>
<td>4,722</td>
<td>602</td>
<td>2,543</td>
<td>1,577</td>
<td>1,251</td>
<td>110</td>
<td>60</td>
<td>50</td>
</tr>
<tr>
<td>2004</td>
<td>5,776</td>
<td>5,670</td>
<td>4,455</td>
<td>535</td>
<td>2,406</td>
<td>1,514</td>
<td>1,215</td>
<td>106</td>
<td>60</td>
<td>46</td>
</tr>
<tr>
<td>2005</td>
<td>5,765</td>
<td>5,669</td>
<td>4,457</td>
<td>548</td>
<td>2,444</td>
<td>1,465</td>
<td>1,212</td>
<td>96</td>
<td>54</td>
<td>42</td>
</tr>
</tbody>
</table>

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 covers trout, Ayu (sweetfish), carp and eel at 148 major rivers and 28 lakes between 2001 and 2003 and at 106 major rivers and 24 lakes in and after 2004.

b. Conditions of fishery resources in Japan's surrounding waters

- According to the results of a resources assessment conducted in 2006, the levels of fishery resources are low for more than half of the fish species or stocks.
- Fifty-one resource recovery plans for 76 fishes have been being implemented or are being worked out. In 2006, a multi-species resource recovery plan was developed.
- The resource recovery plan was developed for Kitaura of Kasumigaura and Lake Biwa, becoming the first such programs for inland waters in Japan.

Note: Region A waters: West from Toyama Prefecture
c. Japan's surrounding marine environment

- Large jellyfish emerged in waters close to Sea of Japan and Sanriku coasts in 2006, as seen in the previous year, affecting fishery operations. The Government took advantage of relevant funds authorized under a FY2005 supplementary budget to support surveys on conditions for large jellyfish's emergence, provision of relevant information, removal of these jellyfish in waters, introduction of improved fishing gear and disposal of landed jellyfish.

- Measures were implemented to prevent or ease damage caused by, longheaded eagle ray, steller sea lions, and cucumaria echinata (a kind of sea cucumber) to fisheries.

- Research was conducted into causes of red tide and dysoxic waters developed in coastal waters. Efforts were made to develop technologies to prevent or eliminate red tide and dysoxic waters.

- For development and conservation of underwater plant beds and tidelands, installation of seaweed substrates and cultivation was implemented.

- A panel of relevant government agencies on drifting trash considered how to deal with trash sources and dispose such trash.

e. Inland water conditions

- Thirteen fish species, including largemouth bass, and four genera of six species of invertebrates were designated as invasive alien species for prevention or elimination.

- In order to prevent and ease damage to fisheries caused by river cormorants, measures were taken to frighten them away on a large scale to prevent them from coming to fishing grounds and eliminate them.
Fishery product trade

(Fishery product imports)

- Japan's fishery product imports in 2005 decreased by 4% over the previous year in volume to 3.34 million tons and increased by 2% in value to 1,669.1 billion yen.

| Changes in Fishery Product Import Volume and Value by Major Item |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                  | 2001            | 2002            | 2003            | 20047           |
| Total import volume of fishery products | 3,824           | 3,821           | 3,325           | 3,485           |
| Total import value of fishery products  | 17,237          | 17,622          | 15,692          | 16,371          |
| Shrimp            | 3,022           | 2,974           | 2,481           | 2,380           |
| Tuna/marlin      | 2,268           | 2,434           | 2,229           | 2,337           |
| Salmon/trout     | 1,101           | 1,046           | 1,016           | 1,036           |
| Crab             | 816             | 898             | 854             | 807             |
| Cod roe          | 720             | 511             | 523             | 598             |
| Note: Volume indicates the weight in the product form upon customs clearance.

- Japan remained the world's largest fishery product importer both in volume and value, accounting for 19% of the world's total fishery product import value and 12% of total import volume (as of 2004). But the nation's fishery product imports have been declining in recent years.

- China has raised its position as a fishery product exporter in recent years. It became the world's top exporter both in value and volume in 2004.

(Fishery product exports)

- Japan's fishery product exports in 2005 expanded by 10% from the previous year in volume to 470,000 tons and by 18% in value to 174.8 billion yen. Salmon and prepared scallop ligament exports increased substantially. Efforts are going on to further boost fishery product exports (see Topic 3).

| Changes in Fishery Product Export Volume and Value by Major Item |
|-----------------|-----------------|-----------------|-----------------|-----------------|
|                  | 2001            | 2002            | 2003            | 2004            |
| Total export volume of fishery products | 313             | 307             | 370             | 424             |
| Total export value of fishery products  | 1,352           | 1,365           | 1,354           | 1,482           |
| Pearl            | 375             | 332             | 243             | 275             |
| Salmon/trout     | 39              | 37              | 74              | 91              |
| Prepared scallop ligament | 92             | 95              | 77              | 65              |
| Scallop          | 55              | 91              | 121             | 62              |
| Tuna/marlin      | 108             | 86              | 78              | 89              |
| Note: Volume indicates the weight in the product form upon customs clearance.
(3) Processing and distribution of fishery products

- Production of major processed fishery products in 2005 decreased slightly from the previous year in volume.
- In 2005, the volume of products landed at major Japanese fishing ports leveled off from the previous year to 289 tons. Their average price was 182 yen per kg, down 5%. Consolidation of local fish markets, releasing of rights to make bids in auctions, and other regionally devised measures are being taken to enhance market functions.
- Trade in fishery products at markets in consumption areas is on a decline in volume. Their average price turned up in 2005 after hitting bottom in 2004.

Changes in Volume of Fishery Products Landed at Major Japanese Fishing Ports

Changes in Fishery Product Trading Volume and Prices at Central Wholesale Markets

Source: "Annual Fishery Product Distribution Statistics," Ministry of Agriculture, Forestry and Fisheries

<CASE EXAMPLE: A tie-up between fishery and agricultural products to advertise production areas (Otake, Hiroshima Prefecture)>

Through their exchange, Otake of Hiroshima Prefecture and the JA Tottori Chuou agriculture cooperative (formerly JA Tohaku) in Kotoura of Tottori Prefecture have combined Otake's kaki oyster and Kotoura's kaki persimmon into a product called "Kaki Kaki (oyster-persimmon) Club." This is a case for a tie-up between fishery and agricultural products to expand sales.

A leaflet for a special plan to combine production areas (right)
(4) Securing safety of fishery products and enhancing their labeling

- In order to provide consumers with safe and reliable fishery products, fishery product processing plants and landing area markets have introduced the HACCP (hazard analysis and critical control point) system for persistent quality control covering production, processing and distribution phases.

Regionally-Based Collective Trademark system launched

Under the trademark law as revised in April 2006, a local fisheries or agricultural cooperative can register a brand consisting of geographical and product names as a regional organization trademark if the brand is known in multiple prefectures. The first such trademark was registered in October 2006. As of March 30, 2007, there were 177 registered regional organization trademarks including 18 for fishery products. The system has attracted attention as a measure to take advantage of local fishery products to enhance regional industries' competitiveness and invigorate regional economies.

<table>
<thead>
<tr>
<th>Regionally-Based Collective Trademarks for fishery products (as of March 20, 2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mukawa Shishamo</strong> (smelt)</td>
</tr>
<tr>
<td><strong>Habomai Konbu Shoyu</strong> (kelp soy sauce)</td>
</tr>
<tr>
<td><strong>Odawara Kamaboko</strong> (steamed fish paste)</td>
</tr>
<tr>
<td><strong>Matsuba Saba</strong> (mackerel)</td>
</tr>
<tr>
<td><strong>Wakasa Karei</strong> (flounder)</td>
</tr>
<tr>
<td><strong>Yamaoka Hoso Kanten</strong> (gelatin made from seaweed)</td>
</tr>
<tr>
<td><strong>Surugawan Sakura Ebi</strong> (Suruga Bay spotted shrimp)</td>
</tr>
<tr>
<td><strong>Yui Sakura Ebi</strong> (spotted shrimp)</td>
</tr>
<tr>
<td><strong>Yaizu Katsuobushi</strong> (dried bonito)</td>
</tr>
<tr>
<td><strong>Maizuru Kamaboko</strong> (steamed fish paste)</td>
</tr>
<tr>
<td><strong>Taiza Gani</strong> (crab)</td>
</tr>
<tr>
<td><strong>Susami Kenken Katsuo</strong> (bonito)</td>
</tr>
<tr>
<td><strong>Shimonoseki Uni</strong> (sea urchin)</td>
</tr>
<tr>
<td><strong>Kitaura Uni</strong> (sea urchin)</td>
</tr>
<tr>
<td><strong>Saga Nori</strong> (dried laver seaweed)</td>
</tr>
<tr>
<td><strong>Seki Aji</strong> (jack mackerel)</td>
</tr>
<tr>
<td><strong>Seki Saba</strong> (mackerel)</td>
</tr>
</tbody>
</table>

<Case example: "Uozu Osakana (fish) Land" to provide consumers with safe and reliable fishery products [Uozu, Toyama Prefecture]>

The "Uozu Osakana Land" is a sanitary distribution facility that features an enclosed structure and a high floor and introduces the HACCP system. It is trying to develop a fishery product provision system securing safety and reliability. Since the facility went on stream, fish prices have risen. In a bid to increase sales channels, the Uozu Fisheries Cooperative and four fish processing companies have founded a limited liability partnership to undertake processing and sales under contracts.

Photo: A clean auction market

In order to provide consumers with safe and reliable fishery products, fishery product processing plants and landing area markets have introduced the HACCP (hazard analysis and critical control point) system for persistent quality control covering production, processing and distribution phases.
(5) Consumption of fishery products and self-sufficiency rate

- In 2005, fishery products supplied for domestic consumption decreased by 2% from the previous year to 10.27 million tons (on an original weight basis). Fishery products for human consumption declined 2% to 7.82 million tons, accounting for some 80% of the total supply for domestic consumption. Per capita annual fishery product supply for human consumption came to 61.2 kg on a gross food basis and to 34.4 kg on a net food basis.
- The self-sufficiency rate of fishery products for human consumption in 2005 rose by 2 percentage points from the previous year to 57% (as estimated).

![Fishery Product Supply/Demand Situation](image)

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

![Changes in Self-sufficiency Rate of Fishery Products for Human Consumption](image)

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

- In some cases, local fishery products are used for school lunches to promote citizens' understanding about local eating culture.

**Case example: Locally produced rainbow trout used for school lunches (Kai, Yamanashi Prefecture)**

The prefecture's fish-farming cooperative ships rainbow trout for school lunches to elementary and junior high schools within the prefecture. The prefecture is divided into three districts for local supply and storage to secure stable supply. Children are taught on the nutrients of rainbow trout. The rainbow trout school lunch program contributes to food education and local production for local consumption.

Photo: A school lunch exhibition
Section 2 International developments surrounding Japan's fisheries

(1) Bilateral fishery relations

- Japan conducts its fishing operations in waters of South Korea and China, and vice versa, under its bilateral fishery agreement with the two countries.
- Japan conducts its fishing operations based on three intergovernmental agreements:
  1. Agreement between the Government of Japan and the Government of the Union of Soviet Socialist Republics Concerning the Mutual Rerations in the Field of Fisheries off the Coasts of the Two Countries
  2. Agreement between the Government of Japan and the Government of the Union of Soviet Socialist Republics on Cooperation in Fishery
  3. Agreement between the Government of Japan and the Government of the Russian Federation on some matters of cooperation in the field of fishing operations for marine living resources
- Japanese fishing vessels 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 foreign fishing vessels in illegal operations

- Japan monitors and cracks down on foreign fishing vessels' illegal operations in its exclusive economic zone and territorial waters. In 2006, the Fisheries Agency seized 10 foreign fishing vessels, conducted boarding inspections on 128 vessels and confiscated fishing gear from 35 vessels. Recently, foreign fishing vessels' malicious actions have stood out. Some foreign fishing vessels have rejected boarding inspections and fled from Japanese patrol boats. Japan has thus been enhancing its monitoring and crackdown activities.

Russia's seizure of Japanese fishing vessel in waters off Nemuro

In August 2006, the Russian border guard authorities shot fire on and seized a Japanese crabbing boat in waters near Kaigara Island, killing one crewman. The Japanese government filed a strong protest against the attack and seizure with the Russian government and demanded Russia's early release of other crewmen and the vessel. The body of the crewman killed in the incident was delivered to Japan and the other crewmen were released. Japan asked Russia to prevent such an incident from occurring again and enhanced the guidance for Japanese fishery workers in efforts to secure safe operations of Japanese fishing vessels and maintain the fishing order.

Source: Fisheries Agency
(3) Multilateral fishery relations

A. Developments regarding bonito and tuna fisheries

- Japan acceded to the Western and Central Pacific Fisheries Commission (WCPFC) in July 2005, becoming the world's first country to join all regional tuna fishing management organizations.
- In order to counter IUU (illegal, unreported and unregulated) fishing activities and operations by countries other than parties to tuna fishing regulation conventions, Japan, through regional tuna fishing management organizations, has taken such measures as a ban on imports of tuna other than those produced through justifiable procedures.
- In January 2007, Japan hosted the first ever joint meeting of the five regional tuna fishing management organizations in Kobe (see Topic 2).

B. Other International Organizations

- In November 2006, the United Nations adopted a sustainable fishing resolution urging the U.N. members to urgently address the problem of dragnet and other fishing methods' adverse effects on deep-water ecosystems in high seas.
- At its 58th annual meeting, the International Whaling Commission adopted the St. Kitts and Nevis Declaration calling for normalization of the dysfunctional IWC (see Topic 4).

(4) Current situation of international fisheries cooperation

- Japan implements grant aid for fisheries and technical cooperation with other countries through the Japan International Cooperation Agency (JICA).
- The Overseas Fishery Cooperation Foundation transfers technologies and know-how to fishery operations of coastal countries.
- Japan provides support to the Southeast Asian Fisheries Development Center (SEAFDEC).

Source: "FY2005 Present Conditions of World Fishery Resources," Fisheries Agency and Fisheries Research Agency
Section 3 Fishery business management

(1) Trends of fishery operators

- In 2005, the number of operators of sea-water fisheries and aquaculture declined by 4% from the previous year to 125,000. Of these, 95% are family-based coastal fishery operators.

(2) State of fishery business management

- In 2005, fishery income per coastal fishery household (coastal fishery households with fishing vessels, marine aquaculture households, and households with small scale stationary nets) leveled off from the previous year to 2.8 million yen. Fishery household income including non-fishery income was 5.84 million yen, down 3.9% from the previous year.

- Small and medium-sized fishery operators continued to suffer losses on fishery operations in FY2005. They offset these losses with non-fishery and non-operating profits.
- On deterioration of their business performance in recent years, they have tried to reduce labor costs and capital spending on fishing vessels and gear. They have also scaled down their production operations. In FY2005, they reduced fishery spending and income by more than 30% from FY1989. On the other hand, their fuel costs soared on price hikes. They are required to introduce and diffuse energy conservation technologies and shift to a profit-first approach.
- They still depend on borrowings for most of their capital spending. They have even had short-term cash flow problems.

Changes in Fishery Household Income

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishery household income</td>
<td>610</td>
<td>608</td>
<td>584</td>
</tr>
<tr>
<td>Fishery income</td>
<td>271</td>
<td>282</td>
<td>280</td>
</tr>
<tr>
<td>Dependence on fishery income (%)</td>
<td>44.4</td>
<td>46.4</td>
<td>47.9</td>
</tr>
</tbody>
</table>

Source: "Fishery Business Management Survey Report," Ministry of Agriculture, Forestry and Fisheries

Note: Coastal fishery households mean family-based fishery operators using 10-ton or smaller fishing vessels.

<Rising fishmeal import prices>

Fishmeal prices have risen globally as the supply-demand relationship for fishmeal for aquaculture has tightened on development of aquaculture mainly in China. The price hike is not viewed as a temporary phenomenon. It is important for Japan to develop diffuse new aquaculture feed replacing fishmeal.

Changes in Earnings of Small and Medium-sized Fishery Operators

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishery household income</td>
<td>-2</td>
<td>-1.5</td>
<td>-1.2</td>
<td>-1.0</td>
<td>-0.8</td>
<td>-0.6</td>
<td>-0.4</td>
<td>-0.2</td>
<td>0.0</td>
<td>0.2</td>
<td>0.4</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
<td>1.2</td>
</tr>
<tr>
<td>Fishery business profit</td>
<td>-1.5</td>
<td>-1.2</td>
<td>-1.0</td>
<td>-0.8</td>
<td>-0.6</td>
<td>-0.4</td>
<td>-0.2</td>
<td>0.0</td>
<td>0.2</td>
<td>0.4</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Non-fishery business profit</td>
<td>-1.5</td>
<td>-1.2</td>
<td>-1.0</td>
<td>-0.8</td>
<td>-0.6</td>
<td>-0.4</td>
<td>-0.2</td>
<td>0.0</td>
<td>0.2</td>
<td>0.4</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
<td>1.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Recurring profit</td>
<td>-1.5</td>
<td>-1.2</td>
<td>-1.0</td>
<td>-0.8</td>
<td>-0.6</td>
<td>-0.4</td>
<td>-0.2</td>
<td>0.0</td>
<td>0.2</td>
<td>0.4</td>
<td>0.6</td>
<td>0.8</td>
<td>1.0</td>
<td>1.2</td>
<td>1.4</td>
</tr>
</tbody>
</table>

Sources: "Fishery Business Management Survey Report (for corporations)" (in and before FY2000) and "Fishery Business Management Survey Report" (in and after FY2001), Ministry of Agriculture, Forestry and Fisheries

Note: Recurring profit = Fishery business profit + non-fishery business profit + non-operating profit

Fishery Business Costs

Sources: "Fishery Business Management Survey Report (for corporations)" (FY1989) and "Fishery Business Management Survey Report" (FY2005), Ministry of Agriculture, Forestry and Fisheries
3. State of fishery workers

- In 2005, the number of fishery workers declined by 4% from the previous year to 222,000. These workers aged further. Those aged above 64 accounted for 35.7% of fishery workers, up 1.2 percentage points from the previous year. It is necessary to recruit and train new fishery workers.

<table>
<thead>
<tr>
<th>Year</th>
<th>Females</th>
<th>Males</th>
<th>Aged above 64</th>
<th>Aged 60 to 64</th>
<th>Aged 40 to 59</th>
<th>Aged 25 to 39</th>
<th>Aged 15 to 24</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>(22.7)</td>
<td>(15.7)</td>
<td>(12.4)</td>
<td>(9.8)</td>
<td>(8.2)</td>
<td>(5.2)</td>
<td>(3.2)</td>
</tr>
<tr>
<td>2000</td>
<td>(26.0)</td>
<td>(13.9)</td>
<td>(12.3)</td>
<td>(9.6)</td>
<td>(7.9)</td>
<td>(6.0)</td>
<td>(3.0)</td>
</tr>
<tr>
<td>2001</td>
<td>(25.2)</td>
<td>(13.3)</td>
<td>(12.6)</td>
<td>(9.2)</td>
<td>(7.2)</td>
<td>(6.5)</td>
<td>(3.2)</td>
</tr>
<tr>
<td>2002</td>
<td>(24.3)</td>
<td>(13.0)</td>
<td>(12.9)</td>
<td>(9.0)</td>
<td>(6.8)</td>
<td>(6.2)</td>
<td>(3.3)</td>
</tr>
<tr>
<td>2003</td>
<td>(23.8)</td>
<td>(12.6)</td>
<td>(12.1)</td>
<td>(8.7)</td>
<td>(6.5)</td>
<td>(6.0)</td>
<td>(3.4)</td>
</tr>
<tr>
<td>2004</td>
<td>(23.1)</td>
<td>(12.3)</td>
<td>(12.3)</td>
<td>(8.4)</td>
<td>(6.2)</td>
<td>(5.8)</td>
<td>(3.5)</td>
</tr>
<tr>
<td>2005</td>
<td>(22.2)</td>
<td>(12.1)</td>
<td>(12.2)</td>
<td>(8.3)</td>
<td>(6.0)</td>
<td>(5.7)</td>
<td>(3.6)</td>
</tr>
</tbody>
</table>

Sources: "Annual Statistics on Fishery Industry" (until 2001), "Annual Statistics on Fishery Workers" (2002), "Fishery Census" (2003), and "Survey Report on Fishery Workers" (from 2004), Ministry of Agriculture, Forestry and Fisheries.

- In 2005, the number of Japanese workers employed for offshore and far-sea fishing declined by 27% from five years ago to 25,000.
- The number of fishing vessels involved in marine accidents in 2006 stood at 892, up 83 from the previous year.

4. Fisheries cooperatives

- At the end of FY2005, Japan had 2,377 fisheries cooperatives, including 1,349 for coastal districts, 874 for inland water districts and 154 sector-specific cooperatives.
- Reflecting the recent deterioration in the environment surrounding the fisheries industry, fisheries cooperatives' operations leveled off or declined. Three-quarters of fisheries cooperatives posted operating losses.
- Efforts are being made to merge fisheries cooperatives in order to enhance their organization and business infrastructure. In FY2005, a record 149 fisheries cooperatives took part in mergers. Seven prefectures unified fisheries cooperatives. Considerable efforts are required to achieve the target of about 250 fisheries cooperatives nationwide by the end of FY2007.
- The fishery mutual aid system's coverage of fishery workers has been rising in terms of production value, but it is still limited to 50%.
Section 4 Development of safe, vigorous fishing villages and demonstration of fishing villages’ multiple functions

(1) Improvement of living environment and enhancement of anti-disaster capacity for fishing villages

- A total of 6,291 fishing villages (as of 2003) exist in Japan's coastal regions. They have lagged behind urban regions in infrastructure development. National and local governments have been cooperating with relevant organizations in developing sewage facilities and other infrastructure systems in fishing villages.

- Fishing villages behind fishing ports could be isolated when earthquakes are accompanied by tsunami tidal waves. Anti-drift facilities against tsunami at fishing ports, quake-proof piers, and evacuation routes and shelters for fishing villages are being developed. In March 2006, the Government produced a guideline compiling disaster management and prevention ideas for fishing regions.

<table>
<thead>
<tr>
<th>Status of infrastructure development</th>
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<tbody>
<tr>
<td>0 20 40 60 80 100%</td>
</tr>
<tr>
<td>Small cities</td>
</tr>
<tr>
<td>Fishing villages</td>
</tr>
<tr>
<td>Sewage diffusion rate</td>
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<tr>
<td>Ratio of roads available for automobiles</td>
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(2) Exploitation of local resources for invigoration of fishing villages

- Measures are implemented to exploit local resources of fishing villages for providing children with opportunities for learning through fishing experiences to help invigorate these villages.

- The Government selects "the Rural Areas Revitalizing" as forerunning cases for development of autonomous farming, forestry or fishing villages backed by efficient business management.

- Female fishery workers play key roles in invigorating local communities by processing and selling unexploited resources and by providing goods for morning markets.

A selected case for "the Rural Areas Revitalizing"

"Ajishima Adventure School" on Aji Island, Miyagi Prefecture

"Old children" (elderly residents on the island) as teachers and "future adults" (children coming from outside the island) experience old summer holidays. A variety of activities include sea kayaking, craftwork using driftwood, and fishing.

"Anagonuki" (the island's unique method for catching sea eel)
(3) Multiple functions of fisheries industry and fishing villages

- The fisheries industry and fishing villages have multiple functions in addition to their primary function to supply fishery products. These functions include conservation of natural environments, protection of people's lives and properties, provision of places for people to live and exchange, and formation and preservation of local communities.

(4) Pursuing invigoration of local fisheries

- Efforts are going on to develop new products and promote efficient fishery business management.

<Emperor's Cup awarded to Sugiyo Co. in Ishikawa Prefecture>

Sugiyo has developed the "kani fumi kamaboko" steam fish paste that looks and tastes like crab leg muscles. By selling the product worldwide, the firm has contributed to invigorating the fishery processing industry.

<Prime Minister Prize awarded to Makurazaki Fisheries Cooperative in Kagoshima Prefecture>

The cooperative produces the "ikijime B1 bonito" by bleeding bonito one by one immediately after catching. The cooperative integrally covers catching, processing and sales.
FY2007 Fisheries Policy

I Promoting recovery of low-level fishery resources & responsible fishery management

1. Promoting surveys and research on fishery resources

- Improving resources estimation and projection accuracy
- Elucidating effects of global climate change on fishery resources
- Ensuring transparency of data availability of resources

2. Resources management in Japan's exclusive economic zone

- Promoting practical operation of fisheries management systems and rational utilization of resources
- Promoting the resource recovery plans
- Enhancing measures for prevention of poaching and other illegal operations and promoting smooth fishery adjustments
  (Toughening penalties, tightening administrative actions, promoting government-led fishery adjustments)

3. Promoting international resources management in waters including high seas

- Enhancing cooperation and building appropriate fishery relations with neighboring countries and regions
- Promoting resources management utilizing regional fisheries management organizations
- Implementing responsible fishing operations as a responsible fishing country

4. Conserving and developing overseas fishing grounds and promoting international cooperation

- Implementing feasibility studies on new fishing ground development and securing fishing operations based on bilateral or multilateral agreements
- Developing overseas fishery cooperation emphasizing resources management

5. Improving living environments for aquatic animals and plants in sea and inland waters and promoting aquaculture

- Promoting forest, river and marine environment conservation
- Promoting measures for prevention of wildlife-inflicted damage to fisheries
- Promoting aquaculture harmonized with environments and ecosystems
- Promoting sustainable aquaculture production
- Promoting aquaculture in inland waters
II Fostering and securing internationally competitive fishery operators and developing vigorous working environment for fisheries

1. Developing future perspectives of Japan's fisheries industry

   - Presenting future perspectives of coastal fishery production systems
   - Presenting future perspectives of fishery business management as models for major fishery operations

2. Intensifying measures to foster and secure internationally competitive fishery operators

   - Promoting structural reform of fisheries using fishing vessels
   - Considering introduction of business management stabilization measures
   - Expanding business management support measures including loans and credit guarantees

3. Promoting rationalization of production, distribution and utilization of fishery production equipment

4. Appropriate operation of fishery insurance systems

5. Developing a vigorous working environment for fisheries

   - Promoting new workers and participants in fisheries, and fostering and securing successors to fishery workers
   - Improving fishing know-how and business management capacity
   - Improving the working environment for fisheries
   - Expanding education on fisheries
   - Promoting women's participation and elderly people's operations in fisheries
III Developing processing, distribution and consumption measures to secure stable supply of fishery products

1. Enhancing sales capacity of fish-landing areas, and improving and upgrading distribution
   - Developing market-oriented distribution bases
   - Creating various distribution channels linking consumers to foreshores
   - Improving and upgrading fishery product distribution
   - Implementing appropriate preparation and storage of fishery products

2. Improving value added through processing of fishery products

3. Enhancing retailers
   - Providing relevant information and expanding assistance measures to help secure human resources

4. Securing fishery product imports and developing export strategies positively

5. Promoting expansion of fishery product consumption and food education through development of confidence-based networks linking producers to consumers
   - Securing safety and consumers' confidence in fishery products
   - Expanding information services to consumers
   - Promoting food education

IV Developing and diffusing new technologies to improve the future of fisheries industry

1. Developing and diffusing new technologies meeting workplace needs
   - Demonstrating effects of energy conservation technologies introduced for fishing vessels and supporting efforts to diffuse these technologies
   - Promoting development of technology for production of bluefin tuna seedlings in hatchery
   - Developing freezing, blood removal and other technologies to improve the quality of fishery products and contribute to branding of products

2. Promoting exploitation and utilization of biomass resources

3. Creating, protecting and exploiting intellectual properties
V Comprehensive development of fishing ports, grounds and villages, and demonstration of multiple functions of fisheries industry and fishing villages

1. Integral development of fishing ports and grounds for creation of powerful production areas
   - Improving resources production capacity in Japan's surrounding waters
   - Developing fishery product supply infrastructure to enhance international competitiveness

2. Developing safe, vigorous fishing villages
   - Enhancing disaster-prevention capacity
   - Improving living environments
   - Exploiting local resources for developing fishing villages and for promoting harmonized relations and exchanges between urban regions and fishing villages

3. Promoting harmony between fisheries and marine recreation in the use of sea waters
   - Spreading rules and manners meeting recreational fishing methods
   - Fostering and supporting recreational fishing instructors
   - Implementing surveys on fish catches by recreational fishing vessels and pleasure boats

4. Demonstration of multiple functions of fisheries industry and fishing villages
   - Demonstrating multiple functions through reinvigoration of isolated-island fisheries
   - Conducting surveys and demonstrations for development of measures to promote environment and ecosystem conservation

VI Reorganizing fisheries industry groups

1. Organizational, management and business reforms at fisheries cooperatives
   - Promoting mergers to enhance organizational infrastructure
   - Promoting management and business reforms

2. Reorganizing other fisheries-related groups