Fisheries of Japan – 2008 / 2009
Fisheries Policy Outline for FY2009
(White Paper on Fisheries)
This document reports the state of fisheries and the policy taken during FY2008 based on the provisions of Article 10 (1) of the Fisheries Basic Act (Act No. 89 of 2001) and the policy to be taken in FY2009 based on the provisions of Article 10 (2) of the same Act.
Main Points of the White Paper

- Expanding efforts to enhance fisheries to secure the stable supply of fishery products
  - The role of Japan’s fisheries is to stably supply the people with fishery products. However, fishery production has declined due to such factors as a slump in resource levels and a decline in overseas fishing grounds for Japan. Japan’s fishery production structure has also grown more vulnerable on a decline in the number of fishery workers, their aging, and deterioration of fishery business management. The portion of fishery products provided through the market has declined on the upstream sector’s growing leadership in pricing of fishery products and an increase in fishery product imports. At the same time, we now see the emergence of such problems as the falling sales competitiveness of domestic fishery products, consumers’ shift away from fish, and a slump in fish prices.
  - In order to improve the capacity to supply domestic fishery products, Japan should develop fishery resources and a rich marine environment to nurture them, a vigorous work environment where undertakers of fisheries and sound fishery operators are trained and secured, a system where fishery products are processed and efficiently distributed according to consumer needs, and technologies supporting each of these.
  - It is important to step up these measures to enhance fisheries to secure the stable supply of fishery products.

- Building the future of fish eating that nurtures children through family efforts and cooperation to develop food for children and through enterprise, regional community, and school efforts to support a new environment for what children eat.
  - In recent years, children have growingly shifted away from fish against the backdrop of environmental changes including shorter cooking times and the growing trend for children to eat alone. It is feared that children’s shift away from fish will affect their healthy growth and damage the sound development of Japan’s fisheries industry in a long run.
  - Fishery experts’ provision of food preparation methods and other information, food processing and distributing companies’ efforts to reduce home cooking burdens, fish producers’ provision of added value, and other efforts are required to increase reasons to cook at home. Efforts are also required to promote families to eat together at home.
  - It is necessary for local communities to enhance their alliance and unity to provide local fishery products for school lunches.

- Promoting the management of fishery resources and the conservation of the marine environment. Securing fishery workers’ business stability and developing a vigorous work environment. Improving fishing villages’ living conditions, enhancing their disaster prevention capacity and promoting the use of regional resources to build fishing villages.
  - Half of the fishery resources in the waters surrounding Japan have declined to low levels. Resource restoration plans should be implemented steadily. The living environment for aquatic animals and plants should be improved for sea and inland waters. It is important to promote the international management of resources including those in international waters. Controls should be enhanced on foreign fishing boats in Japanese waters.
  - Japan should train undertakers of fisheries and develop a vigorous work environment for fishery workers. Fishery business stabilization programs will be implemented to secure fishery workers’ business stability. It is important to improve profitability through structural reforms of fishing boats and fisheries.
  - Fish processing, distribution, and consumption measures should be developed to secure the stable supply of fishery products. Efforts to secure the safety of fishery products and consumers’ confidence in such safety are important.
  - It is important to improve living conditions for fishing villages and enhance their disaster prevention capacity. It is also important to take advantage of regional resources to demonstrate multiple functions of fishing and farming villages and invigorate local communities.
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### 1 Securing Consumers' Confidence in Foods -- Including Fishery Products

- The year 2008 saw a series of scandals affecting citizens' confidence in foods. Regarding fishery products, a dummy company was found to have falsely labeled grilled eel as produced in Isshiki, dealing a great shock to the eel production area.
- In the face of these scandals, the government has instructed the relevant parties to comply with food labeling requirements, based on the Japan Agricultural Standards Law.
- While government agents in charge of food labeling have been carrying out their surveillance and control on inappropriate labeling, the government has been implementing measures to secure food companies’ compliance with laws, regulations, and ethics.

### Changes in Number of Instructions Based on JAS Law

![Graph showing changes in number of instructions based on JAS Law]

Source: Ministry of Agriculture, Forestry and Fisheries

### 2 For the Sustainable Use of Tuna Resources

- Some tuna resources have deteriorated due to IUU (illegal, unreported, and unregulated) disorderly fishing operations outside international frameworks, rising pressures for expanding catches, and other factors. Concerns exist about the adverse effects of tuna farming on resources.
- The International Commission for the Conservation of Atlantic Tunas (ICCAT) and the Western and Central Pacific Fisheries Commission (WCPFC) have reduced their tuna catch quotas. ICCAT has created a system for ICCAT observers to inspect round haul netters and farming facilities to verify the quantity of Atlantic bluefin tuna catches being transferred to farming facilities.
- The government promotes efforts to reduce the number of tuna longline fishing boats in far and adjacent seas by 87.
- It is important to make efforts to preserve tuna resources for sustainable use over a long period of time.

### Tuna Resources

![Diagram showing resource levels and changes in tuna resources across different international commissions]

Source: “FY2008 International Fish Resources,” Fisheries Agency and Fisheries Research Agency
3 Toward the Sustainable Use of Whale Resources

- Japan has implemented measures for the sustainable use of marine resources including whales.
- At its 60th annual meeting, the International Whaling Commission agreed to create the Small Working Group on the future of the IWC. The SWG and IWC chairs prepared their views as a proposal for consideration at an intermediate meeting, and the SWG prepared views on the future of the IWC. Japan has been making efforts to normalize the IWC on the precondition of continued whaling for research purposes.
- In February 2009, the anti-whaling group Sea Shepherd conducted dangerous sabotage actions against Japan’s whaling research fleet, throwing bottles containing chemicals onto a ship and leading its boat to collide with a whaling research ship. The government has asked the relevant countries, including the country where the ship in question was registered, to take responsibility. The relevant Japanese government agencies are cooperating to secure safe whaling research operations.

4 Progress in Research -- Major Progress Made Toward Improving Eel Production Technology

- In June and August 2008, researchers successfully caught four mature Japanese eels (two males and two females) and baby eels in the middle layer of waters in the southern West Mariana Ridge, achieving great progress in research into migration and spawning of parent eels for improving eel farming technology.

5 Wild Fluctuations in Fuel Prices

- Prices of fuel oil for fishing rose sharply (the price of fuel oil A soared from 42.5 yen per liter in March 2004 to 124.6 yen per liter in August 2008), exerting a serious impact on fishery business management.
- On July 15, 2008, fishery workers throughout Japan suspended operations in a bid to demonstrate that fuel oil price spikes were causing a crisis in Japan's fishing industry.
- In July 2008, the government implemented a package of emergency measures for fisheries affected by fuel oil spikes, including an emergency program to ease fuel oil price hikes. It also took advantage of a supplementary budget for FY2008 to implement various measures against fuel oil spikes.
- It is important to enhance the fishing industry to make it invulnerable to such fluctuations.

![Changes in the Price of Fuel Oil A for Fishing](image)

<table>
<thead>
<tr>
<th>(Dec)</th>
<th>2006</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small trawlers</td>
<td>23.8</td>
<td>30.1</td>
</tr>
<tr>
<td>Gill netters</td>
<td>15.8</td>
<td>20.6</td>
</tr>
<tr>
<td>Offshore trawlers</td>
<td>23.6</td>
<td>29.9</td>
</tr>
<tr>
<td>Coastal squd fishing boats</td>
<td>30.7</td>
<td>38.1</td>
</tr>
</tbody>
</table>

Source: Fisheries Agency
Chapter 1 Highlight 1: New Efforts to Maintain a Stable Supply of Fishery Products

Section 1. Toward Securing the Stable Supply of Fishery Products

- In order to improve the capacity to supply domestic fishery products, Japan should develop fishery resources and a rich marine environment to nurture them, a vigorous work environment where the undertakers of fisheries and sound fishery operators are trained and secured, a system where fishery products are processed and efficiently distributed according to consumer needs, and technologies supporting all of these. Supporting these efforts are fishing villages and other regional communities, and the infrastructure for fishery product production and provision.

Elements necessary for the stable supply of fishery products

Fishery resources
Marine environment

Vigorous work environment where the undertakers of fisheries and sound fishery operators are trained and secured

System for processing and distribution according to consumer needs

Technologies

Section 2. Factors and Structures Affecting the Stable Supply of Domestic Fishery Products

(1) A Slump in Resources Levels

- Japan’s fish catches have halved from their peak due to Japan’s withdrawal from fishing grounds in foreign countries’ 200-mile fishing zones and a fast decline in Japanese pilchard stocks that repeat fluctuations in a large cycle.

Changes Japan’s Fish Production and Imports

Half of the fishery resources subject to assessment in the waters surrounding Japan are at low levels. Various factors are behind the decline in resources, including changes in the marine environment such as temperatures, a decline in seaweed beds and tidelands for the spawning and growth of fish through coastal development, and overfishing exceeding recovery potential for some resources.

It is important to secure the management of resources, the preservation of seaweed beds and tidelands, and the rational use of fishery resources.

### Status of Resource Levels in the Waters Surrounding Japan in FY2008 (Overview)

<table>
<thead>
<tr>
<th>High level</th>
<th>Medium level</th>
<th>Low level</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 stocks</td>
<td>28 stocks</td>
<td>42 stocks</td>
</tr>
</tbody>
</table>

Source: “Assessment of Fishery Resources in Japan’s Surrounding Waters,” Fisheries Agency and Fisheries Research Agency

### Changes in the Area of Seaweed Beds and Tidelands

- **Area of underwater plant beds**
  - **1978**: 205,000 ha (20.5)
  - **1998**: 145,000 ha (14.5)
  - **2007**: 125,000 ha (12.5)

- **Area of Tideland**
  - **1945**: 8,300 ha (8.3)
  - **2008**: 4,900 ha (4.9)

Decreased by 40% in 30 years

Sources: “Basic Survey on Natural Environment Conservation,” Ministry of the Environment; Fisheries Agency surveys (2007)

### (2) Fishery Production Growing More Vulnerable

- Fishing operation costs fluctuated wildly due to sharp hikes in fuel oil and production materials prices.

### Changes in Fisheries Production Material Price Indicators

- **Corporate Goods Price Index**
  - **Mar. 2004**: 108.6
  - **Mar. 2009**: 112.6

- **Fuel oil A**
  - **Mar. 2004**: 100.0
  - **Mar. 2009**: 120.0

- **Fishing nets**
  - **Mar. 2004**: 100.0
  - **Mar. 2009**: 120.0

- **Ropes**
  - **Mar. 2004**: 100.0
  - **Mar. 2009**: 120.0

- **Plastic products (unsaturated polyester resin)**
  - **Mar. 2004**: 100.0
  - **Mar. 2009**: 120.0

- **Continuous glass fiber products**
  - **Mar. 2004**: 108.6
  - **Mar. 2009**: 112.6

- **Paints**
  - **Body of a fishing vessel**

Sources: “Price Indexes Annual” and “Price Indexes Monthly,” Bank of Japan
Fishery workers have been declining and aging. Japan's number of fishery workers in 2007 stood at 204,000. Of male fishery workers, those aged at or above 65 accounted for 37.4%. New fishery workers numbered 1,081.

Changes in the Number of Fishery Workers

Of fishery workers, those who say that they have a successor slip below 20%. It is feared that a shortage of young fishery workers will bring about a decline in the vitality of fisheries in the future.

Replacements of fishing boats have failed to make progress due to the deterioration of fishing business performance. Fishing boats have been aging.

Japan should enhance fisheries by developing and securing fishery operators that can withstand materials price fluctuations as seen over the recent years and by realizing efficient and highly profitable fisheries.

(3) Changes in the Pricing and Distribution of Fishery Products

- Fish prices usually fall on a rise in fish catches and rise on a fish catch decline. While fish catches declined from 1991 to 2006, no major hikes were seen in fish prices. Price gaps were seen between species.
- Various factors have combined in a complicated way to cap fish prices, including an increase in cheaper fishery product imports, mismatches between demand and production, and the growing presence of mass retailers requiring fish producers to keep prices at certain levels.

**Changes in Fish Catches and Real Prices in Landing Areas**

**Changes in Japanese Horse Mackerel and Pilchard Catches and Real Prices in Landing Areas**

Source: Prepared by Fisheries Agency based on “Fishery Product Distribution Statistics” by Ministry of Agriculture, Forestry and Fisheries

- Fishery products are distributed through two markets – a landing area wholesale market and a consumption area market. The wholesale market allows various fishery products from various landing areas to be auctioned for appropriate pricing under the basic principles of openness, equity, and fairness and provided to consumers promptly, efficiently, and stably.
- Amid the diffusion of freezing and processing technologies, an increase in output from fish farms, the development of distribution and information technologies, and other changes, transactions on wholesale markets handling domestic products and their share of overall fishery product trades in Japan have gradually declined.

**Changes in Wholesale Market Transactions and Their Share of Overall Fishery Product Trades in Japan**

Source: “Wholesale Market Data (FY2008)
(Changes in Consumption Trends)

- As consumers have increased their inclination for lower prices and simplicity, they have shifted from products for limited-volume, wide-variety production, seasonal products, fresh goods, and complete fish to products for large-volume, limited-variety production, non-seasonal products available throughout the year, frozen goods, and fillets.

(Relationship between Cost Hikes and Retail Prices)

- While fishery product consumption has been declining, it is feared that any addition of production and distribution cost hikes to fishery product prices will reduce the frequency of consumers’ fish purchases. Therefore, it is difficult to substantially raise retail prices.

Changes in the Consumer Price Index (Nationwide)

- Business performance is relatively stable for small trawlers, scallop farmers, and large fixed-net operators that feature stable catches of relatively higher priced fishery products. Coastal squid fishing and far sea longline tuna fishing operations are vulnerable to fuel price fluctuations.

(Need for Enhancing Sales Capacity at Fish Landing Areas)

- Fish landing areas should enhance their sales capacity through efforts to take advantage of little-used resources for developing commercial products by increasing added value and introducing advice from downstream-sector consumers and outside experts.

(4) Changes in Fishery Business Performance

- Business performance is relatively stable for small trawlers, scallop farmers, and large fixed-net operators that feature stable catches of relatively higher priced fishery products. Coastal squid fishing and far sea longline tuna fishing operations are vulnerable to fuel price fluctuations.

(5) Flexible Responses to Changes in Social and Consumption Structures

- Japan’s fishery product production, processing, and distribution structures should respond flexibly to changes in social and consumption structures.
Section 3. Toward Enhancing Fisheries

(1) What Japan’s Fisheries Are Being Asked to Do

As changes in the fish supply structure through falling fishery production and growing fishery imports have been coupled with changes in the consumption structure, the division of labor among producers, processors, and distributors has been changing.

Roles of Producers and Distributors Supplying Fishery Products

(2) Specific Cases

a. Toward Improvement of Domestic Production Capacity – Producers’ Efforts

Efforts to use resources sustainably have made progress, including fishery workers’ management of resources and the introduction of the eco-label system. Structural fishing boat operation reforms have been implemented at various locations to improve profitability. Efforts have been made to train people undertaking fishing.

Leaving common fresh water clam resources in Lake Shinji to the next generation [Shimane Prefecture]
Management of common fresh water clam resources through restrictions on daily harvests, harvesting operation hours and locations, and a four-day workweek system. Lake bed cultivation and planting have been implemented throughout the lake. There are many successors.

Production and distribution reforms to invigorate local fisheries [Hachinohe, Aomori Prefecture]
In April 2008, a mini-fleet of a carrier with search functions and a net fishing boat with transportation functions was adopted to reduce crew members and fuel costs.

Eco-label system expected to contribute to the sustainable use of resources
Snow crab resources in the Sea of Japan have been increasing thanks to fishermen’s voluntary controls. In September 2008, snow crab and flathead flounder fishing operations by the Kyoto Prefecture federation of trawling fishermen received certification under an overseas eco-label system. In December 2008, red snow crab fishing operations in the Sea of Japan received the first certification under Japan’s eco-label system.

As students come to know the condition of fishing through fishing experiences, their dreams to become fishermen grow [Ibaraki Prefecture]
At a Kaiyo High School and Ose fisheries cooperative in Ibaraki Prefecture, a local fisheries experiment station and a local education board cooperate in conducting practical fishing training programs to develop future fishermen.
Fish producers convey seasonal tastes to consumers [Saeki, Oita Prefecture]

Ten fishery workers in charge of fixed-net fishing, yellowtail and amberjack farming and Japanese flounder farming have founded a company, creating a joint fish processing facility to develop and produce local fish dishes. They also attend cooking training sessions.

Fish producers convey the taste of familiar fish to consumers [Gamagori, Aichi Prefecture]

Company P has acquired the right to take part in a fish landing area market. It now buys fish through auctions and cooperates with fish producers to improve market prices. It devises methods to cook unused fish and proposes them at its retail shops. Fish producers have tried to keep fish fresh, contributing to improving fish prices.

Pursuing a multifaceted distribution system to meet the diversification of eating habits [Sendai, Miyagi Prefecture]

A distribution center has been created outside the market to allow shippers to send goods directly to retailers through electronic commerce. Voice-entry and other systems have been introduced. Personnel costs and working hours have been reduced.

Retailers’ cooperation with fish producers through direct transactions (Shimane Prefecture)

The JF Shimane fishery cooperative has started direct transactions with food retailer I. The retailer purchases all catches at designated fixed nets in Shimane Prefecture once a month. The diversification of distribution channels is expected to shorten the distance between fish producers and consumers.

Using outsiders to improve business capacity and fish prices [Atami, Shizuoka Prefecture]

Fishery Company A has cooperated with Company N to improve business operations. When the pre-fixed minimum prices are not achieved, Company A buys all the products. Fishermen pack products according to their own unified standards for sales through channels explored by Company N. Fish prices have risen and earnings have improved.

(3) Conclusion

- In order to lead the people to make effective use of resources, Japan should improve its capacity to provide fishery resources through the introduction of new technology and ideas and should use domestic fishery resources to provide safe and reliable products that meet consumer needs.
- To this end, Japan should promote the management of resources and develop more profitable fisheries by training and securing fishery operators through energy-saving and labor-saving fishing operations and the replacement of fishing boats. These efforts should be used to build a vigorous work environment. Fishery products’ added value should be increased and the distribution efficiency improved.
- Each change for the better should be allowed to spread as a large wave throughout Japan. Japan’s fisheries have reached a turning point. A bright future for Japan’s fisheries will depend on current efforts.
Chapter 1 Highlight 2: The Japanese Dining Table as Seen by Children
-- The Future of Fish-Eating Habits that Nurture Children --

Section 1. A Growing Shift Away from Fish and the Impact of Children's Shift Away from Fish

(1) Fish Intake Slips below Meat Intake

- A shift away from fish has been taking place. While fish intake has continued on a downtrend, meat intake has leveled off. In 2006, fish intake ended up slipping below meat intake.
- Fish intake has declined for all ages. From 1997 to 2007, fish intake decreased by more than 20% for the 1 to 19 age group and by more than 30% for the 30 to 49 age group.

Changes in Fish and Meat Intake (through the years)

![Graph showing changes in fish and meat intake over the years](image)

Changes in Fish and Meat Intake (comparison between age groups)

![Graph showing changes in fish and meat intake by age group](image)


(2) Why the Shift Away from Fish is Accelerating

a. Environmental Changes Involving Children’s Eating Habits

- Not all children dislike fish. Sushi is very popular among children.
- The reasons cited for disliking fish are as follows: “There are bones.” “Fish are difficult to eat.” “Eating fish is time-consuming.” “I dislike fishy smells.”

Who is the first to say “let’s eat sushi”?

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Child(ren)</th>
<th>Oneself (wife)</th>
<th>Husband</th>
<th>Grandparents</th>
<th>Other</th>
<th>Unclear</th>
</tr>
</thead>
<tbody>
<tr>
<td>43.4%</td>
<td>30.2%</td>
<td>24.7%</td>
<td>1.3%</td>
<td>0.2%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: “Survey on Recognition of and Contacts with Sushi,” Mizkan Group Corp.

Do children like or dislike fish dishes?

Source: “Survey on Consumption Including Fishery Products,” Japan Fisheries Association

- Like, 45.9%
- Neither like nor dislike, 43.0%
- Dislike, 10.6%

Who is the first to say “let’s eat sushi”?

Source: “Survey on Recognition of and Contacts with Sushi,” Mizkan Group Corp.

Sushi fish favored by children

- Tuna (lean meat) 61.5%
- Salmon roe 54.9%
- Salmon 47.7%
- Fatty tuna 44.5%
- Sashimi 41.7%
- Omelets 39.1%
- Nigiri 35.3%
- Alaskan pink shrimp 34.9%
- Negi-toro 34.5%
- Natto 33.3%
- Cooked tuna 24.7%

Source: “Survey on Recognition of and Contacts with Sushi,” Mizkan Group Corp.

Reasons for disliking fish

- It has bones 72.5%
- It’s a bother to eat 37.6%
- It takes too much time to eat 15.6%
- I don’t like the smell 14.2%
- It looks gross 9.6%
- I don’t like the taste (it’s too dry) 8.7%

Source: “Survey on Consumption Including Fishery Products,” Japan Fisheries Association

- The percentage of children going to cram schools has increased. Of all children, 27.6% go to cram schools or take lessons and return home at or after 9 p.m. Opportunities have declined for children to eat together with other family members. The percentage of children who eat without their parents or alone has risen.

Changes over Time in the Percentage of Cram School Goers by Grade

<table>
<thead>
<tr>
<th>Grade</th>
<th>1993</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>6th grade</td>
<td>37.8</td>
<td>41.7</td>
</tr>
<tr>
<td>5th grade</td>
<td>33.3</td>
<td>33.1</td>
</tr>
<tr>
<td>4th grade</td>
<td>26.2</td>
<td>23.6</td>
</tr>
<tr>
<td>3rd grade</td>
<td>21.4</td>
<td>17.5</td>
</tr>
<tr>
<td>2nd grade</td>
<td>19.3</td>
<td>14.1</td>
</tr>
<tr>
<td>1st grade</td>
<td>15.9</td>
<td>12.1</td>
</tr>
</tbody>
</table>


Time for Returning Home from Cram Schools or Lessons

- Before 6 p.m. 21.4%
- 6-7 p.m. 23%
- 7-8 p.m. 14.3%
- 8-9 p.m. 11.4%
- 9-10 p.m. 17.7%
- After 10 p.m. 9.9%
- Unknown 2.3%

b. Environmental Changes Involving Parents’ Eating Habits

- As the time for cooking has declined, people have tended to shift away from fish that are considered difficult to cook. The percentage of those who cannot clean a fish is higher for younger generations. Some people may complain that post-cooking cleanup for fish is a bother and that it is difficult to deal with fish food scraps. Parents tend to provide dishes meeting children’s preference for meat rather than fish. These factors might have reduced the chances for parents to cook fish at home.

Dinner Cooking Time

<table>
<thead>
<tr>
<th>Time</th>
<th>FY2005</th>
<th>FY1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 minutes or less</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>10-20 minutes</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>21-30 minutes</td>
<td>26</td>
<td>21</td>
</tr>
<tr>
<td>31-40 minutes</td>
<td>21</td>
<td>29</td>
</tr>
<tr>
<td>41-50 minutes</td>
<td>25</td>
<td>28</td>
</tr>
<tr>
<td>51-60 minutes</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>61 minutes or more</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Who is Given Priority in the Selection of Dinner Dishes?

- Recent findings say that functional factors DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid), which are contained in fish fat and only minimally synthesized in human bodies, can play a key role in the developing brains of fetuses and children.
- Fine motor skills are required for eating fish because bones have to be removed. Only a half of students studied were able to hold chopsticks in a way that has long been considered functional (see figure 5 below). Fish dominate New Years’ dishes. The shift away from fish is feared to reduce the opportunity for parents to convey Japan’s traditional eating habits to their children.
- The frequency of children’s contact with the sea and fish has declined. Opportunities have decreased for children to know the good taste of very fresh fish, how to clean a fish and their relationship with fish and fishermen.
- Over the long run, it is feared that children’s shift away from fish will affect the fishing industry’s pursuit of sustainable development.

(3) Impact of Children's Shift Away from Fish

- Recent findings say that functional factors DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid), which are contained in fish fat and only minimally synthesized in human bodies, can play a key role in the developing brains of fetuses and children.
- Fine motor skills are required for eating fish because bones have to be removed. Only a half of students studied were able to hold chopsticks in a way that has long been considered functional (see figure 5 below). Fish dominate New Years’ dishes. The shift away from fish is feared to reduce the opportunity for parents to convey Japan’s traditional eating habits to their children.
- The frequency of children’s contact with the sea and fish has declined. Opportunities have decreased for children to know the good taste of very fresh fish, how to clean a fish and their relationship with fish and fishermen.
- Over the long run, it is feared that children’s shift away from fish will affect the fishing industry’s pursuit of sustainable development.

How to Hold Chopsticks for Eating (elementary school students)

- Recent findings say that functional factors DHA (docosahexaenoic acid) and EPA (eicosapentaenoic acid), which are contained in fish fat and only minimally synthesized in human bodies, can play a key role in the developing brains of fetuses and children.
- Fine motor skills are required for eating fish because bones have to be removed. Only a half of students studied were able to hold chopsticks in a way that has long been considered functional (see figure 5 below). Fish dominate New Years’ dishes. The shift away from fish is feared to reduce the opportunity for parents to convey Japan’s traditional eating habits to their children.
- The frequency of children’s contact with the sea and fish has declined. Opportunities have decreased for children to know the good taste of very fresh fish, how to clean a fish and their relationship with fish and fishermen.
- Over the long run, it is feared that children’s shift away from fish will affect the fishing industry’s pursuit of sustainable development.
Section 2. Sound Eating Habits Developed through Family, Enterprise, Local Community, and School Ingenuity and Efforts -- Fish for Children --

(1) Information on New Value

- Fish are rich in DHA, EPA, taurine, calcium, and iron.
- Information on nutritional characteristics should continuously be given to consumers.

<table>
<thead>
<tr>
<th>Functional components</th>
<th>Major functions</th>
<th>Major seafood containing functional components</th>
</tr>
</thead>
<tbody>
<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>

Nutritional Characteristics of Fish

- Taurine: Aiding blood pressure, eliminating cholesterol, improving liver functions, maintaining eyesight
- Calcium: Forming bone, adjusting blood pressure and nerve systems
- Iron: A main component of blood erythrocyte (hemoglobin), helping maintain human body functions

Source: Table of Standard Japanese Food Components (5th edition)

(2) Diffusion Cooking Methods for Home Cooks and Reducing Their Burden

- More than 80% of mothers are “willing to increase the opportunities for children to eat fish.”
- It is important to diffuse knowledge about dishes, eating habits, and cooking methods. Fish-handling methods, and semi-finished and finished fish dishes should provided. Cooking information should be given through face-to-face sales and new fish dishes should be proposed.

Are You Willing to Get Your Child to Eat More Fish?

- More than 80% of mothers are willing to have children eat more fish.
- [Data charts showing different percentages of willingness]

Source: “Survey on Consumption Including Fishery Products” (2008), Japan Fisheries Association
(3) Proposals Sought from Fish Landing Areas

Fish landing areas are expected to add value to fish and undertake the primary processing of fish. It may be effective for fish landing areas to provide their traditional fish cooking and eating methods. These areas are also expected to develop new products using abundant and little-used fishes.

Cases of New Efforts

Problems
- Amount cannot be guaranteed
- Some shapes are difficult to process
- Large amount is available for a limited season
- Only limited ways to eat
- Less known to public

Minced meat
- Utilization of small/unused fish for school lunches
- Japanese horse mackerel
- Arabesque greenling, etc.

Development of processed food
- Suggestion of new menus
- Yellowtail shabu-shabu

Utilization of refrigeration technology
- Commodities such as ready-to-eat products
- Pink salmon
- Japanese surfsmelt, umibō salmon, etc.

Cases of New Efforts

Rediscovering traditional dishes
- Diffuse limited regions’ traditional dishes
- Grind without removing bones
- Snow crab, etc.

Soup, seasoning
- Processing and diffusion of unusual-sourced or unique
- Fish sauce made from salmon soft roe

Not wasting resources
- Minced meat
- Soup, seasoning

Learn from traditional cuisine
- New technology
- “Limited” products
- Release products to limited regions or in limited quantity even if the amount is not so large
- Small/unused fish for school lunches
- Snow crab, etc.

For tourism resources
- Utilize resources with limited harvesting area or that lose freshness quickly as resources for tourism
- Japanese grenadier
- Snow crab, etc.

Utilization as resources for tourism
- Utilize resources with limited harvesting area or that lose freshness quickly as resources for tourism
- Japanese grenadier
- Snow crab, etc.

Examples of “Eating Together”

Our family always eats breakfast together

Breakfast

Our family motif
- Early to bed and early to rise
- Plenty of Japanese cuisine and rice
- Lots of vegetables

Lunch box contains the same menu as what the rest of the family eats.

Bringing meals

Cooking with our children

We go to the beach and fishing villages on holidays and eat fresh seafood.

Our family prepares dinner together.

(4) Eating Together to Preserve the Fish-Eating Culture -- Techniques to Deepen Family Relationships

Eating together means that family members take their meals together. Families and local communities may have to increase their techniques and efforts to promote eating together in a manner to meet social changes including the increase in double-income households and cram school goers.
(5) Domestic Fish for School Lunches

- School lunches are designed to promote a proper understanding of meals and desirable eating habits and secure the healthy growth of students through nutritionally balanced meals. Recent school lunches cover local farm and fishery products and local dishes to promote food education for the conveyance of local farming, fishing, and eating cultures to children.
- School lunches are believed to play a key role in increasing children’s fish intake. Landing areas and local communities are expected to enhance their cooperation and relationships to increase techniques and efforts to improve processing and cooking methods for relatively cheap and nutritionally rich seasonal fishery products and less used fish, and to develop fish dishes that children like.

Daily Meat and Fish Intake (elementary school students)

![Graphs showing daily meat and fish intake among boys and girls in different settings: total, cities, and agricultural villages with and without school lunch provided.](image)


(6) Fish-Eating Culture Learned through Various Experiences

- Nonprofit organizations and fishermen have taken leadership roles in implementing programs to provide fishing experience, environmental learning, and other opportunities for children to have contact with the sea. These programs allow children to realize fishermen’s efforts and ingenuity, the joy of harvesting, and nature’s support for our meals, and to thank nature for such support.

Providing marine harvests from Hachijojima Island to many children [Tokyo]
The women’s division of the Hachijojima fishery cooperative federation has taken a leadership role in producing minced fish for school lunches using nonstandard Japanese horse mackerel and flying fish that had been little used. The minced fish are delivered to elementary schools in Tokyo. The division has devised fish hamburgers that have been popular among children. Pictures of the island and samples of fish for mincing are are sent to schools to promote students’ understanding about fishing.

![Image of children making minced fish hamburgers.](image)

Nurturing children’s understanding about eating in a “Food Country” [Obama, Fukui Prefecture]
The city of Obama has enacted a “food town building ordinance” to position food education as a key policy, and opened the “Kids’ Kitchen” cooking course using local food materials. Children are being led to clean locally harvested jack mackerel and bigfin reef squid by themselves.

(7) Conclusion – The Future of Fish-Eating Habits that Nurture Children

- We are responsible for ensuring children’s sound eating habits, understanding Japan’s rich “fish-eating culture,” and conveying the culture to children, supporting the next generation.
- Families should cooperate with efforts to nurture children’s eating habits, while enterprises, local communities, and schools should support a new environment for what children eat. These efforts are expected to help build the future of fish-eating habits that nurture children.
Chapter 2 Review of Japanese Fisheries since FY2007

Section 1 Fishery resources and the marine environment

(1) Management of fishery resources in the waters surrounding Japan
(Resourse management in the waters surrounding Japan)

○ As of March 2009, 49 resource recovery plans for 74 fish species, as well as 19 comprehensive resource recovery plans that focus on the fishery type, are being implemented or worked out.

○ Improvement efforts were proposed regarding the Total Allowable Catch (TAC) system, including improvements in transparency, efforts not to exceed the Allowable Biological Catch (ABC) as much as possible taking into consideration business conditions, and efforts to make interim revisions a rule. While the introduction of individual quota and individual transferable quota systems is not appropriate at present, future utilization of the individual quota system will be studied in line with actual fishery conditions. For fisheries that have introduced this system, the appropriateness of quota transfers and other issues will be considered.

(Crackdown on illegally operating foreign fishing vessels)

○ The nature of offenses has become increasingly sophisticated in recent years. Japan has been enhancing its monitoring of and crackdowns on foreign fishing vessels, in collaboration with the relevant agencies and countries.

Fisheries Agency's Boarding Inspections and Other Actions

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of seizure cases</th>
<th>Number of fishing gear confiscation cases</th>
<th>Number of boarding inspections</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>Cambodia</td>
<td>12</td>
<td>49</td>
</tr>
<tr>
<td>2003</td>
<td>Cambodia</td>
<td>25</td>
<td>20</td>
</tr>
<tr>
<td>2004</td>
<td>Cambodia</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td>2005</td>
<td>Cambodia</td>
<td>148</td>
<td>188</td>
</tr>
<tr>
<td>2006</td>
<td>Cambodia</td>
<td>128</td>
<td>150</td>
</tr>
<tr>
<td>2007</td>
<td>Cambodia</td>
<td>94</td>
<td>114</td>
</tr>
<tr>
<td>2008</td>
<td>Cambodia</td>
<td>20</td>
<td>35</td>
</tr>
</tbody>
</table>

(2) International fishery resource conditions

○ In recent years, marine fishery production volume growth has stagnated. Since the 1990s, aquaculture has supported the increase in overall production volume.

Changes in World Fishery and Aquaculture Production Volume

Regarding marine fishery resources, 19% were overexploited, 8% were depleted, and 1% was recovering from depletion. Approximately half (52%) were fully exploited, while 20% were moderately exploited or underexploited.

Changes in World Fishery Resource Conditions (Left) and Examples of Resource Conditions (Right)

<table>
<thead>
<tr>
<th>Condition</th>
<th>Examples of resources</th>
</tr>
</thead>
</table>
| Overexploited or depleted | Bluefin tuna (Atlantic Ocean)  
Pacific Cod (Western Atlantic Ocean)  
Anchovy (Southeastern Pacific Ocean)  
etc. |
| Fully exploited | Saithe* (Northwestern Atlantic Ocean)  
Sockeye salmon (Northwestern Pacific Ocean)  
Banana prawn (Western and Central Pacific Ocean) |
| Moderately exploited or underexploited | Bonito (Indian Ocean)  
Squid (Southeastern Pacific Ocean)  
Yellowfin tuna (Indian Ocean) |

* Saithe: A type of codfish  

(3) Foreign countries’ fishery resource management

- The Magnuson-Stevens Fishery Conservation and Management Act, the basic law governing fisheries management in the United States, was amended in January 2007 for the first time in 10 years. The amended Act stipulates strengthened resource management efforts, including eradication of overfishing, enhanced stock recovery, promotion of market-based management tools, and the expanded role of science in the decision-making process.
- In the European Union (EU), resources are managed through a combination of the Common Fisheries Policy, a framework shared by all EU member countries, and individual fisheries management systems of each member country.

(4) Japan’s bilateral fishery relations

- Japan conducts its fishing operations in the waters off South Korea and China, and they in the waters off Japan, under its bilateral fishery agreements with the two countries.
- Japan conducts its fishing operations based on three intergovernmental agreements with Russia:
  1. The Agreement between the Government of Japan and the Government of the Union of Soviet Socialist Republics Concerning the Mutual Relations in the Field of Fisheries off the Coasts of the Two Countries
  2. The Agreement between the Government of Japan and the Government of the Union of Soviet Socialist Republics on Cooperation in Fishery
  3. The 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 fishing zones of the Pacific island countries and African countries under bilateral government-to-government or private-level agreements.

(5) Japan’s multilateral fishery relations

- At the annual meeting of the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Total Allowable Catch for bluefin tuna in the Eastern Atlantic, including the Mediterranean, was decided at 22,000 metric tonnes for 2009, 19,950 metric tonnes for 2010 and 18,500 metric tonnes for 2011.
- The annual meeting of the Western and Central Pacific Fisheries Commission (WCPF) agreed on measures by fishery type, with the aim of reducing the catch of bigeye tuna by 30% in the three years from 2009.

(6) Current conditions of overseas 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 imparts techniques and know-how to fishery operations of coastal countries. Japan also provides support to the Southeast Asian Fisheries Development Center (SEAFDEC).
(7) State of the marine environment

- Concerns are growing over the effects of global warming. At the G8 Hokkaido Toyako Summit in 2008, Japan agreed to consider and work towards the adoption of a goal to cut global emissions of greenhouse gases by at least a half of current levels by 2050, under the Framework Convention on Climate Change.

- Development of an optimal laver management method was promoted in response to laver color-fading damage.
- In March 2008, three vessels collided offshore near Kobe City in an accident that caused one freighter to sink. Ways to remove oil from the ship were studied and educational activities for the prevention of oil pollution accidents were promoted.
- Ways to deal with the sources and disposal of drifting trash and driftwood, including those from overseas, were studied.
- The Japanese government finalized the “Guidelines for countermeasures against rocky-shore denudation,” identifying causes of rocky-shore denudation and summarizing concrete countermeasures. Seaweed substrates were installed and underwater plant beds were created. Conservation activities led by fishermen were conducted.

**Long-Term Trends in Average Sea Surface Temperatures in Seas off Japan (Annual Average) (ºC/100 years)**

The annual average seawater temperatures in waters around Japan—in Kyushu and Okinawa waters, the central and southern Sea of Japan, and waters south of Japan—are rising at a rate of 0.7-1.7ºC every 100 years. This is 1.4 to 3.4 times the rate of annual average sea surface temperature rise of 0.5ºC for all seas.

The rise in water temperatures may not be attributed solely to global warming since the waters in question are small in area and thus are prone to be influenced by natural fluctuations. Nevertheless, it is a fact that the rise in sea surface temperatures in waters around Japan exceeds the world average.

Source: “2008 Marine Health Examination—Long-Term Trends in Sea Surface Temperatures (in Seas off Japan),” Japan Meteorological Agency

**Marine Forests Recovered from Denudation following Efforts Led by Fishermen**

- Damage was done to fisheries by giant jellyfish which emerged in coastal waters in the Sea of Japan, off the coast of Sanriku, etc. The government took advantage of the relevant funds to conduct surveys and provide information on the emergence of such jellyfish, and implement control measures on the sea.

- Feeding damage to clams and fan-mussels by longheaded eagle rays, and damage to fishing equipment and feeding damage to catch, etc., by steller sea lions occurred. Measures were implemented to prevent and mitigate such damage to fisheries.

- Damage to fisheries by river cormorants preying on ayu (sweetfish), Japanese dace, etc., became an issue. The “Act on Special Measures for the Prevention of Wildlife Damage” came into effect in February 2008. Measures such as mass repelling and extermination of river cormorants’ nests were implemented, depending on the local situation.

- Epidemic prevention technology against ayu (sweetfish) coldwater disease and koi herpesvirus disease were developed.
Section 2 Developments surrounding Japan’s fisheries industry

(1) Fishery and aquaculture production volume

- In 2007, fishery and aquaculture production volume in Japan (including fish and seaweed) was 5.72 million tons, almost the same level as that of the previous year. The production volume for marine fishery dropped by 73,000 tons, while that for marine aquaculture increased by 60,000 tons. The production value stood at 1.6539 trillion yen.

![Change in Fishery and Aquaculture Production Volume and Value](chart.png)

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

(2) Developments surrounding Japan’s fishery

(Creating a dynamic employment structure)

- Amid the global economic downturn, Japan’s employment conditions have also deteriorated. In order to secure and nurture new fishery workers, means such as the FY2008 supplementary budget were utilized to provide job information, conduct practical, on-site training, and bring in new workers from fields other than the fisheries industry.

Launch of “The Ryoshi’s” (The Fishermen)

“The Ryoshi’s” (The Fishermen), made up of members who made the move to being fishermen from other industries, was formed to increase the number of potential candidates to become future fishermen and to communicate the joys of the fisheries industry and fishing village lifestyle.

Reviving the local community and its people (Nanao City, Ishikawa Prefecture)

The Ishikawa Prefecture fisheries cooperative’s Sazanami branch has made various efforts aimed at forming fishermen’s characters and improving their skills. These have included providing training programs in which people from other professions, such as models, were invited as instructors. The “Freshness Plaza: Sazanami Market” and fixed netting excursions have also been organized.
(State of fishery business management)

- In 2007, fishing income per coastal fishing household (coastal fishing households with fishing vessels, marine aquaculture households, and households with small-scale stationary nets) was 3.27 million yen.

Changes in Fishery Household Income

<table>
<thead>
<tr>
<th>Year</th>
<th>Average fishery income per coastal fishery household (10,000 yen)</th>
<th>Coastal fishery household with fishing vessel (10,000 yen)</th>
<th>Marine aquaculture household (10,000 yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>299.5</td>
<td>225.7</td>
<td>686.9</td>
</tr>
<tr>
<td>2002</td>
<td>287.1</td>
<td>226.7</td>
<td>602.3</td>
</tr>
<tr>
<td>2003</td>
<td>271.1</td>
<td>215.6</td>
<td>570.8</td>
</tr>
<tr>
<td>2004</td>
<td>282.3</td>
<td>215.3</td>
<td>626.2</td>
</tr>
<tr>
<td>2005</td>
<td>280.1</td>
<td>214.3</td>
<td>611.4</td>
</tr>
<tr>
<td>2006</td>
<td>296.9</td>
<td>246.6</td>
<td>507.6</td>
</tr>
<tr>
<td>2007</td>
<td>326.6</td>
<td>274.2</td>
<td>538.4</td>
</tr>
</tbody>
</table>

Source: Prepared by Fisheries Agency based on “Fishery Business Management Survey Report” by Ministry of Agriculture, Forestry and Fisheries

- Corporate fishery operators using 10-ton or larger powered fishing vessels saw reduced losses on fishery operations. However, they still depended on borrowings for most of their capital spending and suffered problems with short-term cash flow.
- Projects under the new Fishery Business Management Stabilization Measures began in FY2008. Structural reform measures for fisheries using fishing vessels were implemented.

Changes in business conditions of corporate fishery operators (those using fishing vessels)

(Strengthening the organizational structure of fisheries cooperatives)

- Efforts were made to merge fisheries cooperatives in order to enhance their organizational and business infrastructures. The “Fisheries Cooperatives Management Reform Support Fund” was established to support the reconstruction of struggling fisheries cooperatives.

Changes in fisheries cooperatives’ total gross profits, administrative expenses and net profits

Source: “Statistics of Fishing Industry Cooperatives,” Fisheries Agency
(3) Developments surrounding aquaculture

- The fishing income of marine aquaculture households in 2007 increased from the previous year to 5.38 million yen, thanks to improved management in red sea bream and pearl aquaculture.

- The production of bluefin tuna through aquaculture is growing each year. New efforts are being made, including onshore aquaculture and expansion of overseas markets. Job creation and economic ripple effects are expected following financial and other assistance from enterprises.

<table>
<thead>
<tr>
<th>Fishery Household Income</th>
<th>(unit: 10,000 yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>687</td>
</tr>
<tr>
<td>Amberjack</td>
<td>404</td>
</tr>
<tr>
<td>Red sea bream</td>
<td>1,198</td>
</tr>
<tr>
<td>Pearl</td>
<td>117</td>
</tr>
<tr>
<td>Mother-of-pearl</td>
<td>149</td>
</tr>
<tr>
<td>Oyster</td>
<td>832</td>
</tr>
<tr>
<td>Scallop</td>
<td>942</td>
</tr>
<tr>
<td>Laver</td>
<td>889</td>
</tr>
<tr>
<td>Seaweed</td>
<td>294</td>
</tr>
</tbody>
</table>

Source: Prepared by Fisheries Agency based on “Fishery Business Management Survey Report” by Ministry of Agriculture, Forestry and Fisheries

(4) Processing and distribution of fishery products

- Production of processed fishery products decreased, reflecting a decline in the consumption of fishery products and a drop in the number of fishery operators. Efforts were made to strengthen business infrastructures and develop domestically-processed products that precisely meet consumers’ needs.

![Changes in marine aquaculture household income](image)

Changes in the production of processed fishery products and the number of manufacturing businesses

Source: Prepared by Fisheries Agency based on “Fishery Business Management Survey Report” by Ministry of Agriculture, Forestry and Fisheries

- In order to enhance the competitiveness of domestic fishery products, it is necessary to develop diverse distribution channels that connect the fish-landing areas and consumers, as well as to streamline distribution bases.

A “Fresh Fish Train” that links the fish-landing area and consumption area

The Federation of Ise-Shima Fish Peddlers' Associations’ group reserved train has been running since 1963 for peddlers delivering fishery products landed in Mie Prefecture to Nara and Osaka Prefectures.

Promoting consumption of local fishery products and reducing CO₂ emissions through Fish Mileage

(Shimonoseki City, Yamaguchi Prefecture)

In December 2008, five restaurants in Shimonoseki City launched the Fish Mileage Campaign by incorporating the concept of food mileage. Seafood dishes with a shorter distance between the fish-landing area and the restaurant were given greater “fish miles.” Customers collecting a certain amount of miles could take part in a drawing for a meal voucher. The campaign was aimed at expanding consumption of local products as well as preserving the environment.
Section 3 Supply and demand and consumption of fishery products

(1) Supply and demand of fishery products in Japan

○ In FY2007, fishery products supplied for domestic human consumption decreased by 170,000 metric tonnes from the previous year to 7.25 million metric tonnes (on the basis of the original weight). The per capita annual fishery product supply for human consumption came to 56.7 kg on a gross food basis and 31.9 kg on a net food basis.

○ The self-sufficiency rate of fishery products for human consumption in FY2007 rose by two percentage points from the previous year to 62% (as estimated). The self-sufficiency rate of seaweed came to 71% (as estimated).

Conditions of Fishery Product Supply and Demand

<table>
<thead>
<tr>
<th></th>
<th>FY2007</th>
<th>FY2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic production</td>
<td>508</td>
<td>513</td>
</tr>
<tr>
<td>For human consumption</td>
<td>448</td>
<td></td>
</tr>
<tr>
<td>For non-human consumption</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Imports</td>
<td>516</td>
<td>571</td>
</tr>
<tr>
<td>For human consumption</td>
<td>346</td>
<td></td>
</tr>
<tr>
<td>For non-human consumption</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>82</td>
<td>79</td>
</tr>
<tr>
<td>Supply for domestic non-human consumption</td>
<td>228</td>
<td>48</td>
</tr>
<tr>
<td>Inventory increase</td>
<td>-10</td>
<td>16</td>
</tr>
<tr>
<td>Per capita annual fishery product supply for human consumption</td>
<td>56.7 kg (58.0 kg)</td>
<td>31.9 kg (32.8 kg)</td>
</tr>
</tbody>
</table>

Per capita annual fishery product supply for human consumption (gross food basis, right axis)

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

Changes in the Self-Sufficiency Rate, etc., of Fishery Products for Human Consumption

Self-sufficiency rate (%) = Domestic production / Supply for domestic consumption

* Supply for domestic consumption = Domestic production + Imports
  - Exports ± Inventory increase or decrease

A national campaign aimed at improving Japan’s food self-sufficiency rate, “FOOD ACTION NIPPON,” was launched in October 2008.
(2) World supply and demand of fishery products and fishery product trade

- The world fishery product supply for human consumption nearly quadrupled in the 40 years from 1963 to 2003. However, Japan’s share of the world’s total supply decreased from 16.9% in 1961 to 8.0% in 2003.

- Japan’s fishery product imports in 2008 decreased by 4% from the previous year to 2.77 million metric tonnes in volume and by 4% to 1.5644 trillion yen in value. Imports of tuna and marlin, shrimp, and salmon and trout saw declines.

(3) Japan’s fishery product trade

- Japan’s fishery product imports in 2008 decreased by 4% from the previous year to 2.77 million metric tonnes in volume and by 4% to 1.5644 trillion yen in value. Imports of tuna and marlin, shrimp, and salmon and trout saw declines.

Source: “Trade Statistics,” Ministry of Finance
In recent years, Japan’s fishery product exports have increased on the back of growing global demand. However, in 2008, exports decreased for the first time in six years due to a drop in domestic production of salmon and other fishery products, the global economic downturn and the yen’s appreciation. Japan’s 2008 fishery product exports decreased by a 15% volume from the previous year to 520,000 metric tonnes and by 12% in value to 208.6 billion yen.

Aiming to attain an annual export level of one trillion yen for agricultural, forestry and fishery products by 2013 as a national goal, the government enhanced sanitary control by introducing the EU-HACCP (Hazard Analysis Critical Control Point) system and made preparations for a system to issue export certificates.

(4) Ensuring the safety of fishery products and the trust of consumers

Efforts are made to ensure the proper use of fisheries medicine for aquaculture. The JAS (Japanese Agricultural Standard) production information disclosure system was introduced in aquacultured fish.

In order to ensure the safety of fishery products and the trust of consumers, efforts are made to utilize and spread the HACCP system and enhance traceability.

### Changes in Japan’s Fishery Product Exports and Export Value Breakdown

![Changes in Japan’s Fishery Product Exports and Export Value Breakdown](chart.png)

Source: “Trade Statistics,” Ministry of Finance

### Labeling Methods for Aquacultured Fish under the Production Information Disclosure System

**Aquacultured fish under the production information disclosure system**
- Red sea bream (Aquaculture)
- Landed in Mie Prefecture
- Identification number: 1234567890
- Price (Yen)
- Processor: XXX Co., Ltd.
- Storage temperature: 4°C or lower
- Production information disclosure method: [http://www.xxx.co.jp](http://www.xxx.co.jp)

The first JAS certification for aquacultured fish (Kushimoto Town, Wakayama Prefecture)

Marine product company O, which engages in aquaculture of red sea bream and longtooth grouper in Wakayama Prefecture, received the first JAS production information disclosure certification for aquacultured fish in June 2008. The company had accumulated detailed information on feed and fisheries medicine used.

Farm inspections and exchanging views on aquacultured fish (Shizuoka Prefecture)

The Shizuoka Prefecture Marine Aquaculture Association and Uchiura fisheries cooperative invited 45 consumers from Tokyo for a tour of red sea bream farms. They exchanged views on aquaculture methods and the safety of aquacultured fish.
Section 4 Development of Attractive Fishing Villages with the Use of Local Resources

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

- In view of delays in the development of an infrastructure for daily living as well as the rapid progress of the aging society in fishing villages compared with urban areas, the Government promotes measures to establish sewage facilities and other community facilities. Efforts are being made by fishing regions to cooperate to enhance anti-disaster capacity under the “Guideline to develop disaster-resistant fishing regions.”

(2) 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.

To raise awareness of the importance of seaweed beds and tidelands, where fry are reared [Miyako, Miyagi Prefecture]

Under the initiative of fishery operators and local administrative bodies, activities were launched to protect fry and fish eggs. In 2006, with the aim of raising the public awareness about the importance of seaweed beds and tidelands, they held gatherings to observe creatures living on seaweed beds and tidelands and workshops to experience fixed net fishing.
Fishing villages are full of diverse resources, such as fresh fishery products, rich nature, and beautiful scenery. In various places nationwide, activities are being carried out within the collaborative framework among agriculture/forestry/fisheries, commerce, and the manufacturing industry, as well as women’s groups. Efforts are being made toward invigorating local economies, with a focus on the industry of creating and maximizing the value of local resources retained in the sea and fishing villages (generally called marine industry).

Product development with the use of nonstandard fish [Sasebo, Nagasaki Prefecture]
The fish market in Sasebo, in cooperation with the fisheries cooperative, began processing minced fish, using nonstandard horse mackerel. A freezer manufacturer cooperated with the fish market to introduce an automated processing system covering the steps from filleting to vacuum packaging.

Providing consumers with specialties from the island with the refreshing sea air [Shimonoseki, Yamaguchi Prefecture]
The women’s division of the fisheries cooperative produces and sells locally caught fish and wakame seaweed at Shiokaze-no-Sato Tsunoshima, a facility consisting of a processing factory, shops, and a restaurant.

Aquaculture activities as the bridge between the intellectually disabled and the local community [Unzen, Nagasaki Prefecture]
Akatsuki Gakuen, a welfare facility for people with intellectual disabilities, provides the opportunity to breed fish such as red sea bream and yellow jack. Participants carry out all that they can in this work, from conveying and mixing feed to feeding and shipping fish. This program has promoted their exchange with the local community.

Invigorating the local community through collaboration between the fisheries industry and the tourism industry [Himaka Island, Aichi Prefecture]
Based on a proposal by the tourist association, Himaka Island has been advertised as an “island of octopus and fugu (blowfish),” thereby successfully raising the price of fish as well as increasing the number of visitors. Fishery operators engage in intermediate breeding of fugu and provide fishing-experience events. Fisheries and tourism have continued to have a good collaborative relationship.

Revitalizing the seashore region through the Octopus Box Owner Program [Hokkaido]
As a publicity event to increase popularity of locally caught octopus (octopus dofleini), the Octopus Box Owner Program was launched in FY2007. Gatherings have been held to provide the owners the chance to actually see their own octopus boxes.

Changing the handicaps of a remote island into a business opportunity [Satsumasendai, Kagoshima Prefecture]
Koshikijima Fisheries Cooperative introduced a special quick-freezing system to improve the quality of kibinago (banded blue sprat) to prevent them from quickly losing their freshness, thereby making possible their stable shipment. Cooking lessons using kibinago are also held.

(Productive Fisheries Developed through Collaboration with Local Communities)

[Awarded the Emperor’s Cup] Tanaume Honten (Tanabe, Wakayama Prefecture)
This company manufactures chewy and elastic kamaboko (steamed fish paste), using domestic white fish, eso and guchi, and applying its original manufacturing method. It carries out various activities to contribute to the local community, such as donating fish cakes to children’s homes, accepting elementary school students to visit its factory, providing junior high school students with work experience, and implementing training programs for participants in employment support seminars arranged by Hello Work (Employment Service Agency).

[Awarded the Prime Minister’s Prize] Kitaura Pacific Mackerel Aquaculture Cooperative Business Unit (Nobeoka, Miyazaki Prefecture)
People engaging in aquaculture of fish, mainly great amberjack, have established a cooperative business unit and launched a project to breed Pacific mackerel. They have successfully earned stable profits.

[Awarded the President’s Prize of the Japan Agriculture, Forestry and Fisheries Promotion Association] Kanedai (Kesennuma, Miyagi Prefecture)
The company manufactures fish pickled in sugared vinegar by quickly freezing fresh saury and adding the yuzu (Chinese lemon) flavoring. It also contributes to the local community by planting trees.
Fisheries Policy for FY2009 (Executive Summary)

Based on the Basic Fisheries Plan developed in March 2007, the Government will work to establish sustainable and strong fisheries by promoting the restoration and management of fishery resources, reinforcing fishery business management through measures such as the restructuring of fisheries using fishing vessels, and by fostering and securing people who will engage in fisheries and creating employment.

I Promoting the restoration and management of low-level fishery resources
1. Promoting surveys and research into fishery resources
2. Resource management in Japan’s Exclusive Economic Zone, etc.
3. Promoting international resource management in waters, including the high seas
4. Conserving and developing overseas fishing grounds and promoting international cooperation
5. Improving the living environment for aquatic animals and plants in sea and inland waters and promoting aquaculture

II Fostering and securing internationally competitive fishery operators and developing a vigorous working environment for fisheries
1. Intensifying measures to foster and secure internationally competitive fishery operators
   ○ For the purpose of promoting the reinforcement of fishery business management, the government will support efforts to shift to energy-saving fishery operations and increase profitability.
   ○ In particular, the government will provide support for efforts by fishery operators’ groups to acquire the equipment necessary to reduce fuel consumption or increase productivity, through the introduction of energy, labor, and power-saving operations and advanced quality-control methods, as well as initiatives to search for common fishing grounds so as to introduce energy-saving operation systems. Furthermore, targeting fisheries using fishing vessels whose production systems have become fragile due to delays in the replacement of fishing vessels, the government will implement projects focusing on the restructuring of fisheries using fishing vessels and promote fishery business management reorganization through the introduction of fishing operation and production systems, prioritizing profitability, and the acquisition of energy- and labor-saving alternative vessels, etc.
   ○ In addition, with the objective of developing the fishery structure in accordance with resources levels, the government will strengthen assistance for fishery operators who suspend fishing or reduce fishing vessels.
2. Promoting the rationalization of production, and the distribution and utilization of fishery production equipment
3. Appropriate operation of fishing insurance systems

Overall Projects for the Enhancement of Fisheries

Overall project for restructuring fisheries using fishing vessels
- Promoting the shift to new operation and production systems
- Ex. Downsizing of the fleet of round haul netters

Project for reinforcing fishery business management
- Promoting the introduction of equipment conducive to energy saving and increases in productivity
- Ex. Automated feeding

Project for promoting and supporting measures for energy saving and the restoration of resources
- Supporting fishery operators who suspend fishing or reduce fishing vessels so as to develop the fishery structure in accordance with resource levels
- Suspended fishing

Reinforce business management and increase profitability
4. Developing a vigorous working environment for fisheries

- For the purpose of arousing interest among students to encourage them to make their future occupation in the fisheries industry, the government will support activities to provide them with the opportunity to experience stationary net fishing and aquaculture. The government will also provide those who wish to engage in the fisheries industry with job information from fisheries nationwide, and hold preliminary seminars where they can learn the basic knowledge necessary for engagement in the fisheries industry as well as job consultation meetings where they can meet fisheries cooperatives and fishery operators who need potential workers in the fisheries industry.

- Furthermore, the government will assist the implementation of a long-term on-site training program (up to one year) for those who wish to engage in the fisheries industry and have found jobs provided by fisheries cooperatives and fishery operators. The government will also help them learn skills in accounting and tax management necessary for the fisheries industry.

- Governmental support is also available for the initiatives to start businesses covering the whole process of fishery operations, from production to processing, distribution, and sale, by making use of know-how of different industries concerned.

Projects for Securing and Fostering Fishery Workers

III Developing processing, distribution and consumption measures to secure a stable supply of fishery products

1. Enhancing the sales capacity of fish-landing areas, and improving and upgrading distribution

- To connect the fish-landing areas which need various sales channels for fishery products landed on different foreshores, with consumers who demand fresh and safe fish products, the government will aim to establish various distribution channels, including those for direct delivery from fish-landing areas. The government will also support activities to provide them with the opportunity to experience stationary net fishing and aquaculture. The government will also provide those who wish to engage in the fisheries industry with job information from fisheries nationwide, and hold preliminary seminars where they can learn the basic knowledge necessary for engagement in the fisheries industry as well as job consultation meetings where they can meet fisheries cooperatives and fishery operators who need potential workers in the fisheries industry.

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3. Enhancing retailers
4. Securing fishery product imports and developing export strategies positively
5. Promoting the expansion of fishery product consumption and fish-eating education through the development of confidence-based networks linking producers to consumers

IV Developing and diffusing new technologies to improve the future of the fisheries industry
1. Developing and diffusing new technologies to meet workplace needs
2. Promoting the 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 the creation of powerful production areas
2. Developing safe, vigorous fishing villages
3. Promoting harmony between fisheries and marine recreation in the use of sea waters
4. Demonstration of multiple functions of fisheries industry and fishing villages

- The government will establish a new subsidy scheme to support activities, led by fishery operators, to protect the environment and ecosystem, such as maintenance and management of seaweed beds and tidelands. The government will also work to publicize examples of good practice and provide technical support.

VI Reorganizing fisheries industry organizations
1. Management and business reforms at fisheries cooperatives
2. Reorganizing other fisheries-related organizations

VII Other important measures
1. Promoting biodiversity conservation measures
2. Efforts to promote WTO negotiations
3. Efforts to promote economic cooperation, including Economic Partnership Agreements (EPAs) and Free Trade Agreements (FTAs)
4. Promoting the development and utilization of statistics to meet policy needs

VIII Efforts to promote measures on fisheries comprehensively and systematically
1. Building well-organized and easy-to-understand policy structures and securing transparency
2. Developing measures from the perspective of public interest, taking into consideration the viewpoints of consumers and citizens
3. Promoting the demonstration of originality and ingenuity of business operators and fishery production areas
4. The effective and concentrated operation of financial measures
5. Improving reform roadmap control and reform measures, and building a system of promoting measures effectively and efficiently