FY2020 Trends in Fisheries

FY2021 Fisheries Policy

Summary

This document is a report on fisheries trends and the policy implemented during FY2020 in accordance with the provisions of Article 10, paragraph (1) of the Fisheries Basic Act (Act No. 89 of 2001) as well as the fisheries policy to be implemented in FY2021 in accordance with the provisions of paragraph (2) of said Article.

In order to indicate the relationship between fisheries and SDGs, the icon of the goal that has an especially deep connection with fisheries is attached. (Not all related goals.)

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Structure of "FY2021 Fisheries Policy"

Note: The maps in this document do not necessarily inclusively show Japan's territory.

Special Issue: Transform Fisheries into a Growth Industry with the Market-in Approach

○For Japanese fisheries to develop in the future while coping with depopulation and lifestyle changes, it is necessary to promote appropriate resource management toward recovery of living aquatic resources, while at the same time working to improve value and expand the market of fish and fishery products also under the impact of the spread of COVID-19. A factor of special importance for promotion of this movement is the approach called “market-in.”

Market-in and Product-out

Market-in

・Approach to identify demands and problems of consumers/customers and provide products and services that meet the needs

Example:
Fishermen improve the quality of fisheries products based on the demands of consumers and customers.

Product-out

・Approach to produce and provide better products/services from the viewpoint of the provider

Example:
Fishermen and fishery processors provide products with a focus on quality based on their idea of quality fish for consumers.

Section 1 Situation of Fishery Markets in Japan and Abroad
(1) Situation of Demand for Fish and Fishery Products in the World

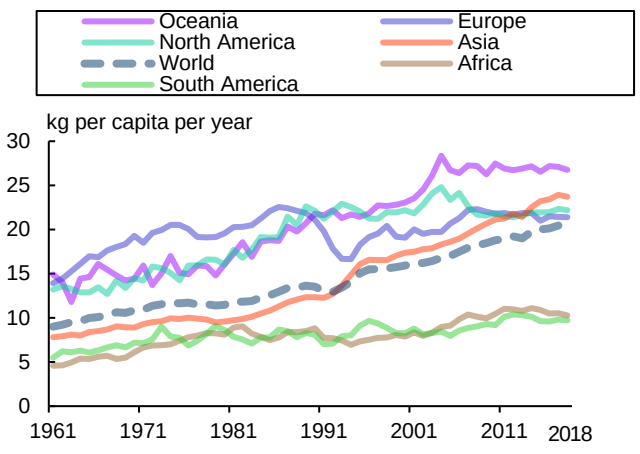
○The world’s per capita seafood consumption doubled in five decades, whereas Japan’s per capita seafood consumption fell to the level of about 50 years ago.

○Global aquaculture production and fishery product trade have expanded with the increase in demand for fishery products.

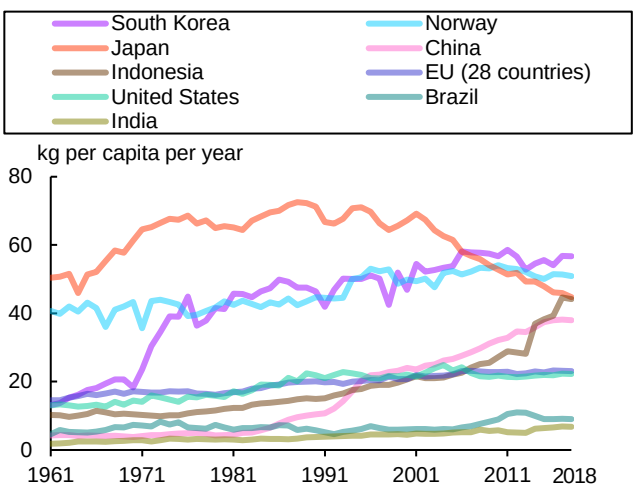
○Mobility limitation, etc. to address the spread of the COVID-19 is harsh conditions for Japan’s export of fishery products, which had been supported by eating out demand abroad.

Trends in the World’s Annual Per Capita Seafood Consumption (gross food based)

<By region>

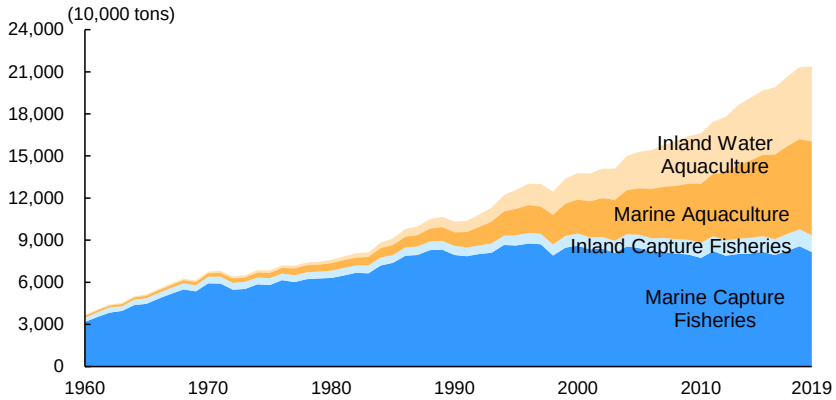


<By country and region>



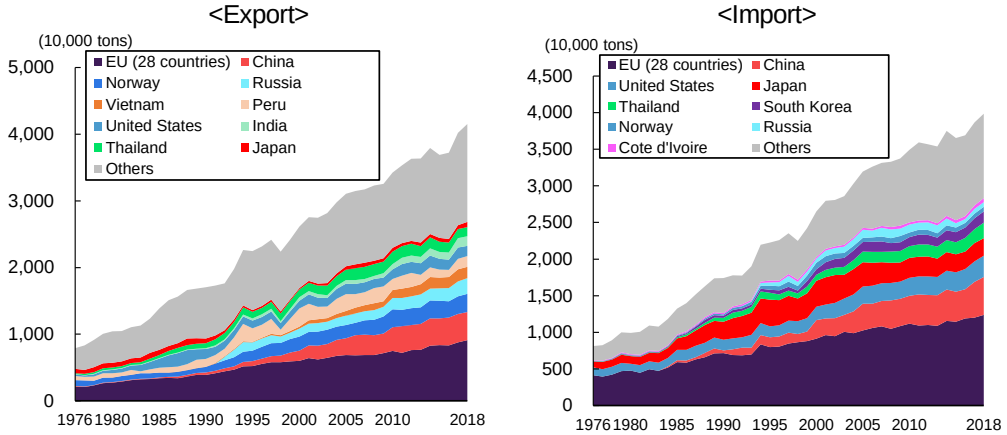
Sources: “FAOSTAT (Food Balance Sheets)” (FAO) and “Food Balance Sheet” (The Ministry of Agriculture, Forestry and Fisheries)
Note: “Gross food” refers to the quantity of seafood including disposal volume.

Trends in the Production of World Fisheries and Aquaculture



Source: Prepared by the Fisheries Agency, based on the Fishstat (Capture Production, Aquaculture Production) (FAO) (without Japan), Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries) (Japan)

Trends in the Trade Volumes of Fish and Fishery Products



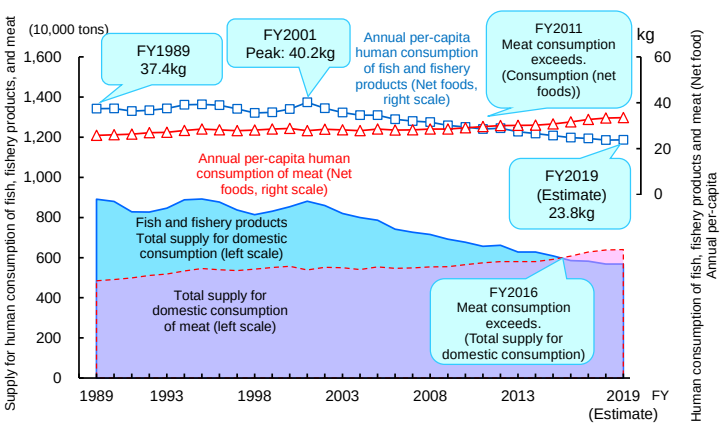
Source: Fishstat (Commodities Production and Trade) (FAO)
Note: The volume of EU imports and exports includes the volume of trade within the EU.

(2) Conditions of Supply and Demand of Fishery Products in Japan

○Per capita seafood consumption in Japan has been on the decrease from the peak of 40.2kg in FY2001 to 23.8kg (estimate) in FY2019.

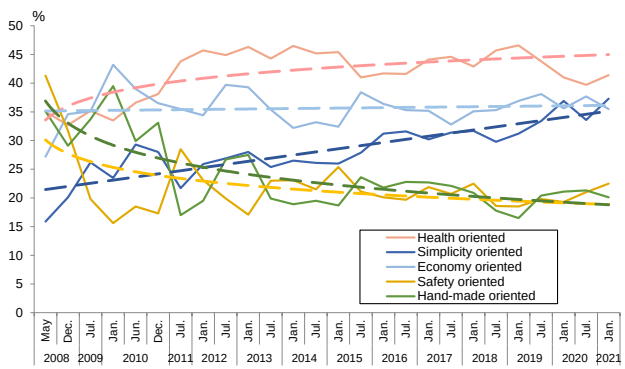
○Causes of continued decrease of fishery product consumption include high prices and cooking difficulty, etc. With increasing health consciousness, about 60% of consumers say they want to eat more fish more frequently in the future, but there are also changes in diet orientation, including a simplified diet due to the increase of dual-career families.

Change of Supply for Domestic Human Consumption of Fish and Fishery Products and Annual Consumption per Capita



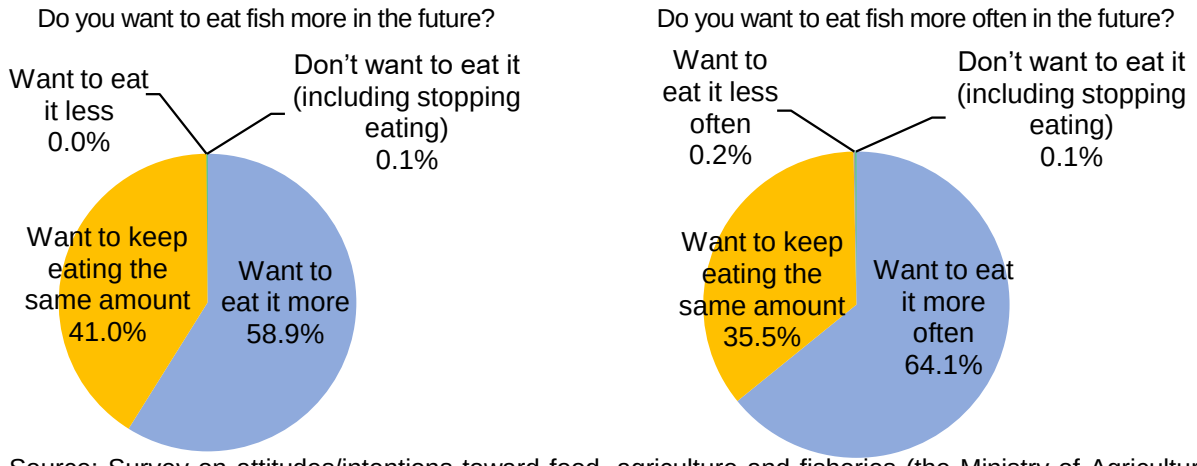
Source: Food Balance Sheet (the Ministry of Agriculture, Forestry and Fisheries)

Trends of Consumers' Current Food Preferences (Top)



Source: Prepared by the Fisheries Agency, based on the Food Orientation Survey (Japan Finance Corporation)
Note: The dashed line is an approximate curve or line.

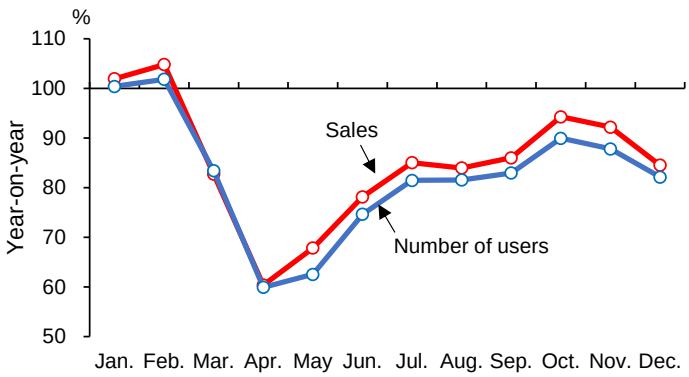
Intention regarding quantity and frequency of eating seafood



Source: Survey on attitudes/intentions toward food, agriculture and fisheries (the Ministry of Agriculture, Forestry and Fisheries) (conducted on 987 consumer monitors from December 2019 to January 2020 with a response rate of 90.7%)

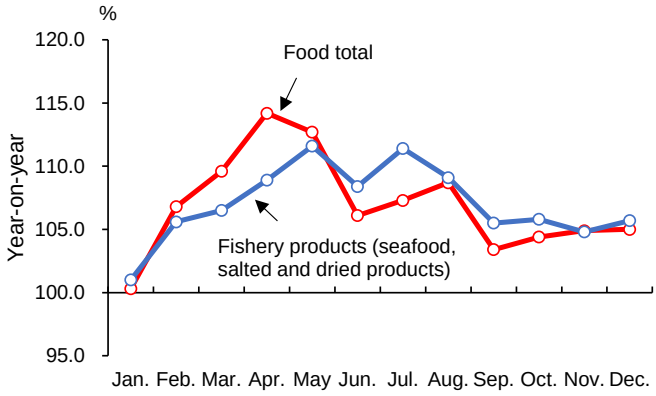
- Eating out greatly decreased since March 2020 owing to the expansion of the COVID-19.
- Increase of eating at home (eating in) on the other hand, led to an increase in purchases at supermarkets and other retail stores and through websites as well as use of delivery services and takeout from restaurants.

Year-on-year Comparison of Total Sales and Number of Users of the Food Service Market (2020)



Source: Survey of Market Trends in Eating and Drinking Services (Japan Foodservice Association)

Year-on-year Comparison of Total Sales of Supermarkets (2020)



Source: Current Survey of Supermarket Sales (National Supermarket Association of Japan, the Japan Supermarket Association and the All Japan Supermarket association)

(3) Rise in the Awareness of Food Safety and Sustainable Fisheries and Aquaculture in Japan and Abroad

- The United Nations adopted Sustainable Development Goals (SDGs) in 2015 and companies introducing SDGs in their goals and strategies are increasing in number in Japan and abroad.
- In this context, the use of the Marine Eco-Label is globally spreading to inform consumers and customers that the labeled products are produced with consideration to sustainable use of resources and to the environment.

Marine Eco-Label Certificates mostly used in Japan

Certificates from foreign countries

MSC Certificate

<UK>
[Number of certificates in Japan]
10 fisher organizations
-Scallop (Hokkaido Pref.)
-Skipjacks (Miyagi and Shizuoka Prefs.)
-Albacore (Miyagi and Shizuoka Prefs.)
-Oyster (Okayama Pref.), etc.
300 enterprises (distributors and processors)

ASC Certificate

<Netherlands>
[Number of certificates in Japan]
13 aquaculture organizations (68 fish farms)
-Oyster (Miyagi Pref.)
-Japanese yellowtail (Miyazaki, Oita, Kagoshima and other Prefs.)
-Purplish amberjack (Kagoshima Pref.), etc.
151 enterprises (distributors and processors)

Fisheries

Aquaculture

MEL Certificate

<Japan>
[Number of certificates in Japan]
7 fisher organizations
-Salmon (Hokkaido Pref.)
-Chub mackerel, spotted mackerel (Fukushima Pref.)
-Shijimi freshwater cram (Aomori Pref.)
-Red queen crab (Tottori Pref.), etc.

41 aquaculture organizations
-Greater amberjack (Ehime and Kagoshima Prefs., etc.)
-Japanese yellowtail (Kumamoto, Kochi and Kagoshima Prefs., etc.)
-Red sea bream (Mie, Ehime and Kagoshima Prefs., etc.)
-Silver salmon (Miyagi and Tottori Prefs.)
-Yellowtail amberjack (Ehime and Kagoshima Prefs.), etc.

58 enterprises (distributors and processors)

Certificate from Japan

*The number of certificates is that as of March 31, 2021 (according to Fisheries Agency).

(4) Problems Involved in Making Market-In Efforts

○Circumstances around the market of fishery products in Japan and the world continue to change. Recently, consumers' lifestyles are changing due to the impact of the spread of the COVID-19. In order to improve the value of fishery products and expand their sales under the circumstances, it is important to take the market-in approach, which takes advantage of regional strengths based on the regional conditions.

○Market-in activities face the following problems: 1) insufficient grasping of needs; 2) insufficient efforts to provide fishery products according to needs, and; 3) work for initiatives to identify latent needs of consumers.

○Considering the expected rise in the awareness of food safety and sustainable fisheries and aquaculture in Japan and abroad, efforts for food safety, including the implementation of HACCP and acquisition of Marine Eco-Label certification, are also required.

Section 2 Market-in Efforts in Fisheries

(1) Efforts to Grasp Needs

○For market-in activities, it is most important to grasp market needs. In addition to information gathering through information media including newspapers, television and the Internet, it is also necessary to obtain information through communication with related parties through sales promotion to consumers, business activities to customers, and business meetings, for example.

Case Example **An example in offshore trawl net fishery (Karo, Tottori Prefecture)**

Tottori Fishery Cooperative in collaboration with Karo Fresh Fish Brokerage Association and Karo Central Seafood Market worked for high-freshness distribution of offshore trawl net catch (from FY2008 to FY2013). Specifically, responding to the needs of brokers who valued freshness and color, catch was cooled with crushed ice, and tags of ships with high-freshness treatment were attached to the fish boxes.
As a result, the price of fresh queen crab increased from 2,907 yen/kg to 4,256 yen/kg, and the price of Japanese sand fish increased from 269 yen/kg to 290 yen/kg. Furthermore, the initiative generated demand for higher-priced sashimi-quality Japanese sand fish, fathead flounder and other fish that used to be purchased only for boiling/processing.

Name tag of ships with high-freshness treatment

Case Example

Changing business model to grasp needs (De Mer Corporation)

Before the Great East Japan Earthquake, a fishery processing company named De Mer of Hachinohe (Aomori Prefecture) used to leave the marketing of its products to wholesalers. After the disaster, however, the company radically changed its business model in order to regain the lost market. It grasped retailers' needs by building good relationships through visits to their shops, etc., and used the obtained information for product development.
In spring 2016 the company developed a pickled mackerel product based on a proposal by a mass retailer and sold the product in a package incorporating appeal points based on hints from consumer response. The product won the MAFF Minister Award at the 27th national examination meeting of comprehensive quality of processed fishery products.

Products that won the MAFF Minister Award at the 27th national examination meeting of comprehensive quality of processed fishery products

Case Example

Change in The Way of Thinking to Find Needs for Okinawa Fish in Overseas Markets (Kizasu Corporation)

The main business of Kizasu is direct selling of fresh fish from Okinawa to restaurants in Singapore, Taiwan, Thailand, Hong Kong, etc. In Japan, most people think fatty fish from the northern sea is tastier. Moreover, fish species around Okinawa are little known in Japan northward from Kyushu and, therefore, difficult to sell outside Okinawa.
For this reason, the company paid attention to overseas markets southward from Okinawa. People in Southeast Asia are familiar with fish species from Okinawa and appreciate the tastiness of fatty fish near their northern limit. Thanks to rising needs for tasty foods in Asian countries, export sales of the company have rapidly increased.

Cooking miibai (Malabar Grouper)
Picture provided by Kizasu Corporation

(2) Providing Fishery Products According to Needs

○One of the important factors that consumers and customers demand from fishery products is tastiness. To respond to the needs, various efforts to maintain freshness, which include icing, blood draining, spinal cord removal and quick freezing are widely made in fisheries and aquaculture industries.

Case Example

Aquaculture Production According to Demand (Uwajima Project Corporation)

Uwajima Project of Uwajima city (Aichi Prefecture), jointly with local fish farmers and Ehime Research Institute of Agriculture, Forestry and Fisheries, developed and branded Mikan Buri, which combines citrus and cultured fish that are both local resources, pursuing attractiveness for food service industries and consumers, including a reduction of the fishy smell and addition of citrus flavor in addition to prevention of browning of dark red meat. Because surveys found favorable response, especially from women, the company further developed Mikan Bream and Uwajima Salmon (mikan silver salmon) targeting women.
These products are directly sold to domestic food-service chains and other customers. The products are also exhibited at overseas food exhibitions with high evaluation from visitors.
In 2016 the project obtained the first halal certification in Japan for cultured tuna and black skipjack with the aim of developing a market in the Middle East. The project invited buyers of local restaurants interested in Uwajima Salmon and other products to visit Japan for better understanding of the products through observation of aquaculture production and processing, and it established a system to ship the products in the quantity according to needs. Producers also visited the customers to understand market needs.

Cultured fish favorably received for its citrus flavor in Japan and abroad
Photo provided by Uwajima Project Corporation

Case Example

Sell Biwako's treasure "Biwa Trout" with Cooperation of Friends Across the Country! (The new active group improving the fishery industry of Lake Biwa "BIWAKO STYLE")

Biwa Trout is an endemic species of Lake Biwa. It is said to be very tasty with high-quality fat in summer, which is its best season. Because most producers used to sell the fish only to specific customers in a limited area, it was little known in other parts of Japan. In this context, its prices fell due to the spread of the COVID-19.
To address this situation, interested people across Japan launched the new active group improving the fishery industry of Lake Biwa "BIWAKO STYLE" and reinforced retail sales on its website and E-commerce websites. The group developed high-quality frozen filet products through blood draining, spinal cord removal and liquid freezer freezing. The products are highly regarded by customers and the group rapidly attracted attention.
As a result of the activities, the group increased the sales by 300 to 400% compared to the fishing season of the previous year and is improving fishery processing facilities toward business expansion next year.

Biwa Trout – endemic species of Lake Biwa – most delicious in summer

Case Example

Selling Local Fish Abroad through Processing According to Needs (SOL JAPAN Corporation)

SOL JAPAN of Shimane Prefecture is a fish processing company that processes fish and fishery products of the prefecture and sells them in Japan and abroad. Responding to requests from its exporting customers, the company provides products of seasonal fish purchased in the local market, cut for sashimi, vacuum sealed in individual trays and quickly frozen.
This way SOL JAPAN can provide very fresh sashimi in the needed amount when needed in overseas markets.
Toward revitalization of the local fisheries and further taking-in of market needs, the company is trying to develop frozen sashimi of deep-sea porgy in its original shape because prices of the fish tend to be low due to unstable catch.

Vacuum-sealed and frozen sashimi slices of yellowtail amberjack (Photo provided by SOL JAPAN)

Case Example

Efforts in set net fishery to make catch according to demand (Manazuru Town Fishery Cooperative)

In set-net fishery of Manazuru Town Fishery Cooperative in Kanagawa Prefecture, daily catch fluctuated due to the characteristics of the fishing method and fish prices fell at big catches. Japanese jack mackerel, Japanese common squid and other fish species are highly demanded in direct sales stores in the prefecture and direct sales to restaurants outside of the prefecture, but the cooperative sometimes could not fill orders due to unstable catch. It was a challenge to balance demand and supply.
To address the challenge, the cooperative undertook a reform including review of places to set nets. As a result, the ratio of much demanded fish species increased from 14% to 33% and frequency of direct sales also increased. In addition, by installing fish preservation nets in set nets to preserve live fish for shipping adjustment at the time of big catch, the cooperative maintained stable supply and increased the average price of catch from 98 yen/kg to 233 yen/kg.

(3) Efforts to Identify Latent Needs

○In recent years, supermarkets and other players aiming to create distinctive sales corners are making efforts to expand sales of domestic seafood.

○Concrete examples are: people familiar with seafood cooking providing an opportunity to eat tasty fish according to needs through face-to-face selling; providing local fresh seafood under the slogan of local production and local consumption; and online sales through e-commerce and other websites in response to the spread of the COVID-19.

Case Example

Communicate Real Tastiness of Fish to Consumers by Strengthening Procurement and Face-to-face Sales (Kakujoe Gyorui Holdings Co., Ltd.)

Kakujoe Gyorui Holdings has gained popularity also in inland areas where people eat less fish and is increasing sales by selling a variety of highly fresh fish at affordable prices.
Fresh fish procured by experienced buyers at markets in the morning are delivered to stores around the noon of the day. Store personnel explain how to eat the fish and provide pretreatment service through face-to-face selling. In this way, the company provides opportunities to eat tasty fish according to consumer needs.

Corner for face-to-face selling of fresh fish

Case Example

Expanding EC Service for Business to EC Service for Consumers in Response to the Spread of the COVID-19 (Haneda Market Corporation)

Haneda Market provided fish and fishery products with ultimate freshness through air transportation to retailers and restaurants. However, when the food-service industry was affected by the spread of the COVID-19, the company lost almost all sales around April 2020.
To break through the situation, the company launched an e-commerce website to sell products for business to consumers, in May of the same year. The site became widely known through the Internet and SNS. The project fit in with eating-in demand and greatly recovered its sales.

Case Example

”Pride Fish” – an Efforts Initiative to Identify Latent Needs (JF Group)

Since FY2014 the JF Group has been selecting “Pride Fish”—fishery products that fishermen recommend with confidence—for each region and season and disseminating the information. The Group holds fairs in supermarkets, department stores and restaurants across the country, Fish-1 Grand Prix and other PR events. A variety of information for expansion of consumption of domestic fishery products, which include local restaurants providing Pride Fish and a variety of contents, is disseminated through the Internet. Pride Fish is also sold at “JF Osakana Marche Gyogyo Ichi”, a site that opened in February 2020 for direct selling.

Website of Pride Fish

Case Example

Producers Trying Mail Order Business of Fresh Fish in Response to the Spread of COVID19 (Fisherman Japan)

Fisherman Japan is a group of young fishermen and distributors active in Miyagi Prefecture. They experienced a great decrease in sales for food services due to the spread of COVID19 . Recognizing that the increase in demand for eating in is an opportunity to communicate the taste as well as how to cut and enjoy high-quality fish, they started consumer mail-order business in April 2020 to sell assortments including high-quality and high-price fresh fish that had been sold to restaurants, etc.
Orderers receive instruction on how to cut fish through online meeting application. The group also distributes internet videos for popularization of fish dishes. The efforts proved effectual to maintain good sales.

Mail order of fresh fish accompanied by an online video on fish preparation (Photo provided by Fisherman Japan)

(4) Efforts for Food Safety and Sustainable Fisheries and Aquaculture

- In recent years many seafood businesses are implementing initiatives to respond to HACCP in order to extend their market. In fishing ports that serve as a logistic base of fishery products, cargo handling and other places for high-level hygiene management have been developed.
- Increasing number of production sites are obtaining the Marine Eco-Label. In recent years fisheries and aquaculture businesses not necessarily aimed at export, retailers and restaurants are also obtaining the certificate.

Case Example

Constructing a Supply System Toward Export of High-quality Fishery Products (Yaizu fishing port)

At Yaizu fishing port, where catches are landed by overseas purse seine fishing vessels, there has been development of deep piers to accommodate large fishing vessels, high level sanitary control facilities to handle fishery products, and freezing/refrigerating facilities to store PS products* with the aim of expanding export.
As a result, the landing quantity of PS products has increased and products for export are secured. In addition, EU･HACCP certified facilities have also increased in the Yaizu area, which is expected to contribute to export expansion.

*PS products: Products for eating raw that are produced through quick freezing of very fresh bonito, etc. by immersing in thick salt water of minus 20 degree Celsius and storing at an ultra-low temperature

Ultra-low refrigeration plant (completed on December 24, 2019)

PS products in the ultra-low refrigeration plant

Zoning

[Information of the Ultra-low refrigeration plant]
Refrigerator capacity (nominal): 3,000t
Temperature zone: -40 °C to -50 °C
Development cost: 1,587 million yen
Completion: FY2019

Examples of measures implemented at Yaizu fishing port

Case Example

Efforts Toward Sustainable Edomae Fishery (Kaiko Bussan Corporation)

Kaikobussan at Funabashi city (Chiba Prefecture) sells and distributes fresh fish caught in Tokyo Bay.
The company, in collaboration with Daidenmaru and Nakasenmaru, which are companies engaged in fishing boat fishery, is working on resource management including the collection of catch information of purse sein fishery targeting sea bass. In April 2018 the company obtained MEL certification for both production and distribution processing.
The company is communicating fishing activities in schools with the aim of transmitting the traditions and culture of Edomae fisheries to the next generation, while at the same time working to introduce catch traceability using ICT toward the balancing of resource management and value creation.

Round haul netters collaborating with Kaikobussan

Case Example

Retailers, etc. obtaining Marine Eco-Label

(1) AEON Co., Ltd.

AEON obtained CoC certification of MSC in 2007 and CoC certification of ASC in 2014. The 2020 Goals formulated by the company in April 2017 include a goal for all general merchandise store and supermarket companies of the group to obtain CoC certification of MSC/ASC. In FY2019 over 80% of the stores of the group obtained CoC certification. MSC/ASC certified fish species and items (including domestic fish and fishery products) sold by the group are expanding.

Sushi role of MSC-certified scallops from Hokkaido (Photo provided by AEON RETAIL Co., Ltd.)

(2) Ito-Yokado Co., Ltd.

Ito-Yokado Co., Ltd., together with producers of original brand products of domestic cultured fish, is working to obtain CoC certification of MEL. In March 2020 the company became the first major retailer obtaining CoC certification of MEL in Japan. Its stores nationwide started sales of Japanese yellowtail (from Kumamoto), Greater amberjack (from Kagoshima), red sea bream (from Mie) and flounder (from Mie) with the MEL logo.

Original brand products with the MEL logo (Photo provided by Ito-Yokado Co., Ltd.)

Section 3 Promotion of Market-in Efforts to Transform Fisheries into a Growth Industry

(1) Need for Further Promotion of Market-in Efforts

○It is expected that the world's fish and fishery product consumption will increase and their prices will remain high, but in Japan, fishery product consumption has been decreasing due to orientation to a simplified diet and other factors. Recently, however, lifestyles are changing under the impact of the spread of the COVID-19.

○Under such circumstances, fishery businesses, including fishermen and fishery processors, are working to grasp and respond to consumer and customer needs in Japan and abroad.

○In order to transform Japan's fisheries into a growth industry, it is necessary to ensure a balance of price and quality as demanded by consumers and customers in Japan and abroad by market-in activity, while at the same time giving extra consideration to food safety and sustainability of products for export.

(2) Direction of Market-in Efforts

[Fisheries]
Compared with aquaculture, production planning is relatively difficult for fisheries, on the other hand, fisheries produce natural fish and shellfish including mass-catchable pelagic fish. However, by keeping live mass-catchable pelagic fish caught in large quantities in fish reservation nets, it is possible to provide such fish in the needed quantity when needed, for example. Fishermen need to make efforts with awareness that they are part of the value chain.

[Aquaculture]
Maximizing the advantages of aquaculture, which can provide products of steady quality in a steady quantity, regularly and at steady prices, it is necessary to realize market-in aquaculture by ensuring scheduled production based on the demand and production cycle by proactively obtaining information of aquaculture items, utility form, quality and quantity according to demand.

[Processing and distribution]
In order to respond to changes in lifestyle due to the spread of the COVID-19 and other factors, it is important to utilize the Internet and SNS to directly sell processed or prepared products that save time of preparation.

[Fish and fishery product export]
It is necessary to shift the entire value chain from production to sales to market-in form, professionally and sustainably produce and export fish and fishery products of the specifications demanded in overseas markets and develop a system to pioneer sales channels in all possible ways.

[Obtain certification]
For market expansion in Japan and abroad, it is necessary to actively obtain HACCP certification in response to the rise in food safety awareness, and Marine Eco-Label certification in response to the movement to expand sustainable fisheries and aquaculture.

(3) Efforts of Governments to Promote Market-in Efforts

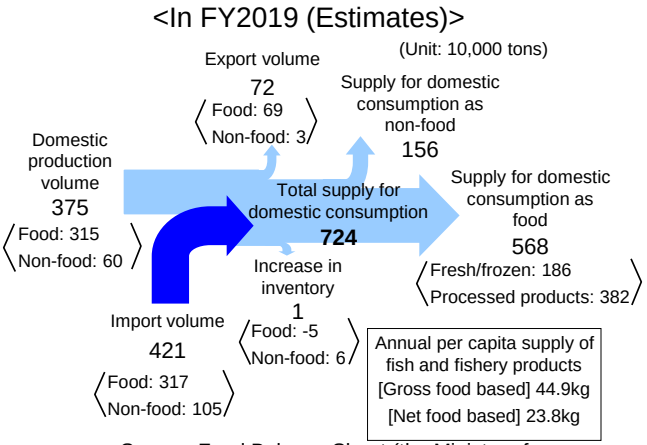
○It is important that businesses proactively carry out market-in activities, but governments provide the following support for necessary activities:
① "Seashore Revitalization Plan" to support unified efforts of fishing communities
② Promotion of shift to "Market-in Aquaculture" by aquaculture ③ Acceleration of efforts for fishery product distribution that fits in with needs
④ Promotion of activities to execute "The Strategy to Realize Export Expansion of Agricultural, Forestry, Fishery and Food Products"
⑤ Measures in response to the changes in lifestyle, etc. caused by the expansion of the COVID-19

(1) Supply-Demand Situation in Fish and Fishery Products

○The supply of fish and fishery products for domestic consumption was estimated at 7.24 million tons for FY2019 (converted on a fresh fish basis, estimates), of which 5.68 million tons (78%) were for human consumption (food) and 1.56 million tons (22%) for feed and fertilizer (non-food).

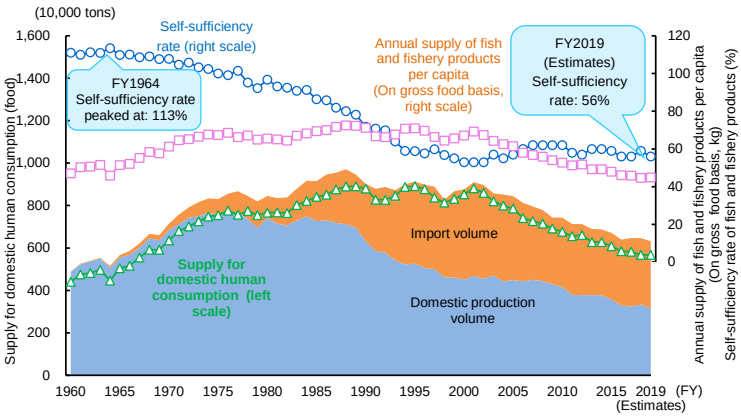
○The self-sufficiency rates (estimates) of fish and fishery products for human consumption for FY2019 decreased by 3 points from the previous year to 56%.

Japan's Production and Consumption Structure of Fish and Fishery Products



Source: Food Balance Sheet (the Ministry of Agriculture, Forestry and Fisheries)

Trends in self-sufficiency Rates of Fish and Fishery Products for Human Consumption



Source: Food Balance Sheet (the Ministry of Agriculture, Forestry and Fisheries)

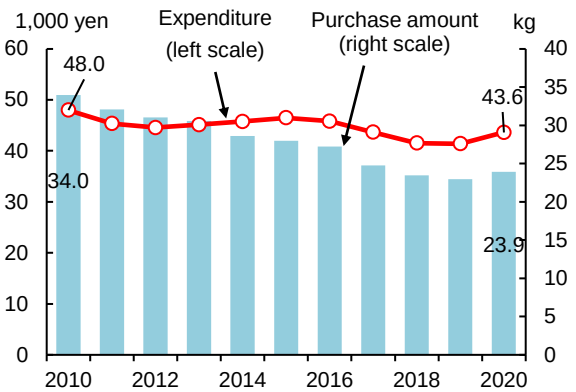
(2) Status of the Consumption of Fish and Fishery Products

i. Trends in the Consumption of Fish and Fishery Products and Consumer Awareness

○The annual purchase volume of fresh fish and shellfish per household consistently decreased until 2019. In 2020 the annual purchase amount increased by 4% from the previous year to 23.9kg as a result of an increase of eating in and purchasing from supermarkets, etc., while eating out greatly decreased under the impact of the spread of the COVID-19. Expenditure for fresh fish and shellfish increased 5% from the previous year to 43,600 yen.

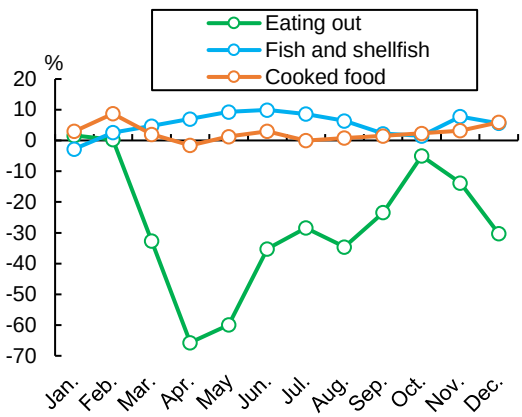
○In 2020 household expenditure for eating out recorded the largest decrease of 66% in April in comparison with the same month of the previous year, whereas expenditure for fish and shellfish recorded the largest increase of 10% in June.

Changes in annual expenditure and purchase volume of fresh fish and shellfish per household



Source: Family Income and Expenditure Survey (Ministry of Internal Affairs and Communications)
Note: Households with two people or more.

Percentage changes of monthly expenditure per household for eating out, fish and shellfish and cooked food over the year (2020)



Source: Family Income and Expenditure Survey (Ministry of Internal Affairs and Communications)
Note: Households with two people or more.

ii. Health benefits of fish and fishery products

○Various studies have shown that the consumption of fish and fishery products has positive health benefits.

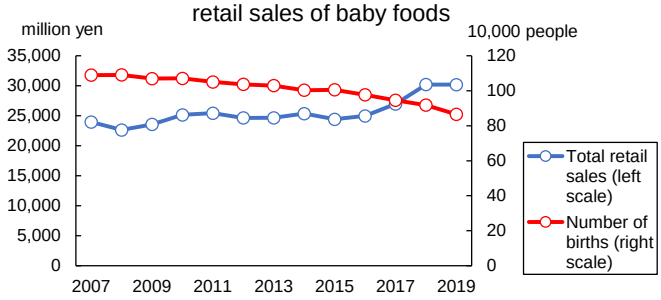
○Omega-3 polyunsaturated fatty acids including Docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA) contained abundantly in fish fat are expected to have health benefits, including promotion of brain development and prevention of dementia.

○Fish protein is not only a high quality protein containing a good balance of nine essential amino acids, which are necessary for human life, but it is also easily digested and taken in the body compared to soy protein and milk protein.

Column **Fishery products for baby food**

The birth rate continues to decline in Japan, but sales of baby foods that help weaning are increasing. Because many parents feel that it is hard to prepare weaning hood, easy-to-use processed baby foods match their needs well. “Support Guide for Breast-feeding and Weaning” (Ministry of Health, Labour and Welfare, 2019) recommends white meat fish at the initial stage of weaning and red meat fish and blueback after progress is made with weaning as a guide. Some baby foods in the market use white meat fish, half-dried small sardine and salmon.

Changes in the number of births in Japan and retail sales of baby foods



Source: “Vital Statistics of Japan” MHLW (number of births); “Changes in Baby Food Production” Japan Baby Food Conference (total retail sales)

(3) Approaches to Ensuring Information Provision to Consumers and to Protecting Intellectual Property

○Food labeling has been mandatory under the Food Labeling Act and comprehensively and centrally implemented since 2015.

○In September 2017, the Food Labeling Standards were revised and it was made mandatory for each processed food product other than imported ones to have a label displaying the place of origin of its ingredient that accounts for the largest part of the food product in terms of weight (nori seaweed used for rice ball is subject to such labeling requirement irrespective of the proportion of nori seaweed to the rice ball weight).

○There are various Marine Eco-Labels in the world. In Japan, MEL issued by the Marine Eco-Label Japan Council (MEL Council) have become widespread. MEL received recognition from Global Sustainable Seafood Initiative (GSSI) in December 2019.

○As of the end of FY2020, 13 fishery products are registered with the Geographic Indication (GI) protection scheme (one product was added in FY2020).

Products registered under the GI protection system (examples in fisheries) in FY2020

Registration No.	Name	Photo	Place of Production of Specific Agricultural, Forestry and Fishery Product and Foodstuff
101	Abashirikosan Shijimigai		Abashiri-shi and Ozora-cho, Abashiri-gun, Hokkaido Prefecture

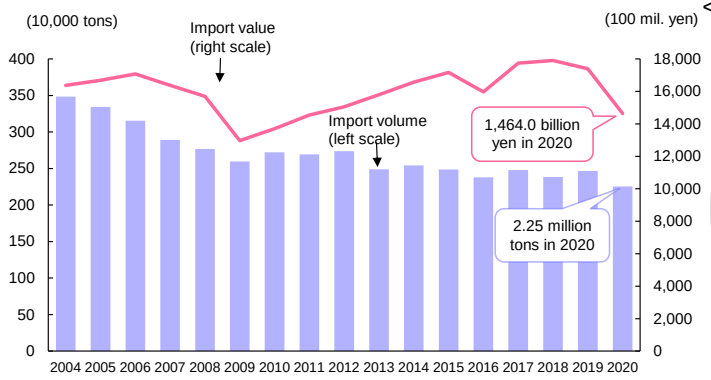
(4) Trends in the Trade of Fish and Fishery Products

i. Import Trends in Fish and Fishery Products

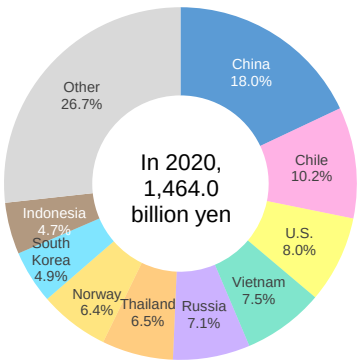
○The import volume of fish and fishery products (on a product weight basis) decreased by 8.7% from the previous year to 2.25 million tons in 2020. The import value decreased by 15.9% from the previous year to 1,464.0 billion yen.

○Major import items in terms of value are salmons and trouts, skipjacks and tunas, shrimp.

Trends in the Import Volume and Value of Fish and Fishery Products



<Import partner countries and regions>



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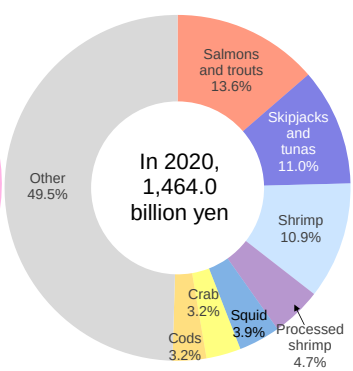


Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)

Share in the total import volume of agricultural, forestry and fishery products: 16.5%

ii. Export Trends in Fish and Fishery Products

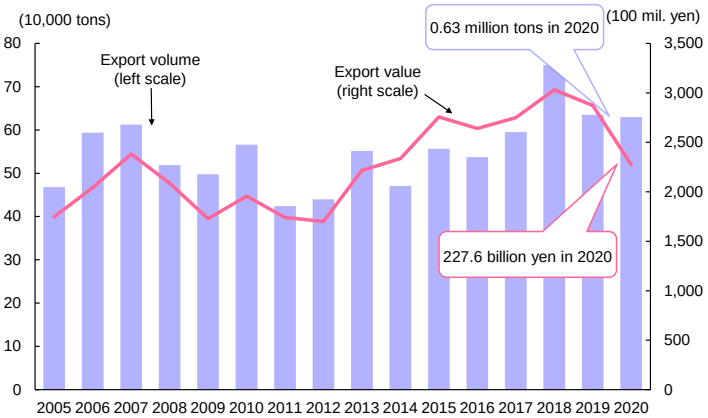
○The export volume of fish and fishery products (on a product weight basis) decreased by 0.9% from the previous year to 0.63 million tons in 2020. Export value of fishery products greatly decreased to 227.6 billion yen (21% down from the previous year due to the great decline in pearl export, etc. as a result of the spread of the COVID-19).

○Major export partners are Hong Kong, China, and the United States and the export value to these countries and regions accounts for about 50% of total exports.

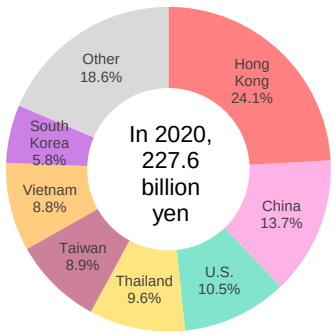
○Major export items are scallop, mackerel, skipjacks and tunas, etc. in terms of export value.

○A new target for export of agricultural, forestry and fishery products and foodstuff to reach 5 trillion yen (including fishery products of 1.2 trillion yen) by 2030 was established in March.

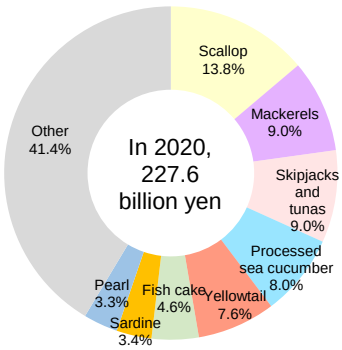
Trends in the Export Volume and Value of Fish and Fishery Products



<Export partner countries and regions>



<Export items>



Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)

Share in the total export value of agricultural, forestry and fishery products: 24.6%

(1) Trends in Fisheries and Aquaculture

○The volume of domestic fisheries and aquaculture production was 4.20 million tons in 2019, which is lower by 220,000 tons than in the previous year. Marine fisheries production was 3.23 million tons, which was lower by 130,000 tons than in the previous year. The productions of scallops, Alaska pollacks, etc. increased, while those of mackerels, sauries, etc. decreased. Marine aquaculture production decreased by 90,000 tons to 0.92 million tons. Inland water fisheries and aquaculture production decreased by 4,000 tons to 53,000 tons.

○The production value of domestic fisheries and aquaculture was 1,491.8 billion yen in 2019, which is lower by 73.3 billion yen than in the previous year. The production value of marine fisheries decreased by 69.5 billion yen to 868.4 billion yen, that of marine aquaculture decreased by 4.5 billion yen to 501.4 billion yen, and that of inland water fisheries and aquaculture increased by 0.7 billion yen to 122.0 billion yen.

Trends in the Production Volume and Value of Japan's Fisheries and Aquaculture

<Production volume>

(1,000 tons)

		2018	2019
Production volume	Total	4,421	4,196
	Marine	4,364	4,143
	Fisheries	3,359	3,228
	Distant water fishery	349	329
	Offshore fishery	2,042	1,970
	Coastal fishery	968	929
	Aquaculture	1,005	915
	Inland water	57	53
	Fisheries	27	22
	Aquaculture	30	31

Source: Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries)

<Production value>

(100 mil. yen)

		2018	2019
Production value	Total	15,651	14,918
	Marine	14,438	13,698
	Fisheries	9,379	8,684
	Aquaculture	5,060	5,014
	Inland water	1,213	1,220
	Fisheries	185	164
	Aquaculture	1,028	1,056

Source: Fisheries Output (the Ministry of Agriculture, Forestry and Fisheries)

Note: The fishery production value was obtained by adding the seedling production value to the fishery output (a value estimated by multiplying the production volume of fisheries and aquaculture by the wholesale prices in the landing area, etc.).

Column

About the poor catch of salmon, saury and squid

The catches of salmon, saury, and squid in 2020 are all at record low levels. There are many conceivable causes of poor catches, including changes in the marine environment, such as sea water temperature and ocean current, and the impact on catch caused by foreign fishing boats.

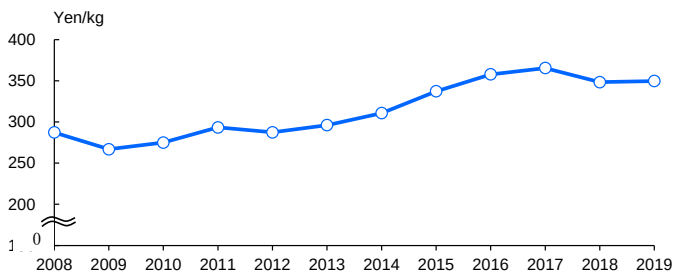
In order to clarify the causes, it is necessary to scientifically analyze factors such as the status of resources and changes in the marine environment based on a variety of data spanning multiple years, and it is important to establish a system for the continuous collection of data.

(2) Trends in Fishery Management

i. Trends in the Local Prices of Fish and Fishery Products

○In recent years, the average local price in fisheries and aquaculture was on an upward trend. In 2019, it increased by 2 yen/kg from the previous price to 350 yen/kg.

Average Local Price in Fisheries and Aquaculture



Source: Prepared by the Fisheries Agency, based on the Fisheries and Aquaculture Production Statistics and the Gross Fisheries Output (the Ministry of Agriculture, Forestry and Fisheries)

Note: Estimated with the fisheries/aquaculture output divided by its production volume.

Column

Impact of COVID-19 Seen from the Perspective of Fishery-related Businesses

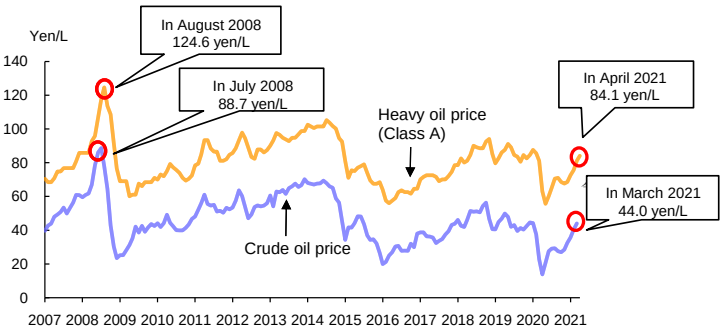
A research group led by researchers of the Research Institute for Humanity and Nature, one of the National Institutes for the Humanities, Inter-University Research Institute Corporation, conducted an individual questionnaire survey of fishery/aquaculture workers and fishery-related business operators (fishery processing, distribution, retail, food service, etc.) from May 29 to July 8, 2020 (350 respondents).

Regarding the impact of the spread of the COVID-19, 85% of the fishery/aquaculture workers and 75% of the fishery-related business operators answered that it had a "negative impact"; sales amount decreased by 33% and 31% on average respectively from the same month of the previous year.

ii. Trends in Management of Fisheries by Fishing Vessels/Aquaculture

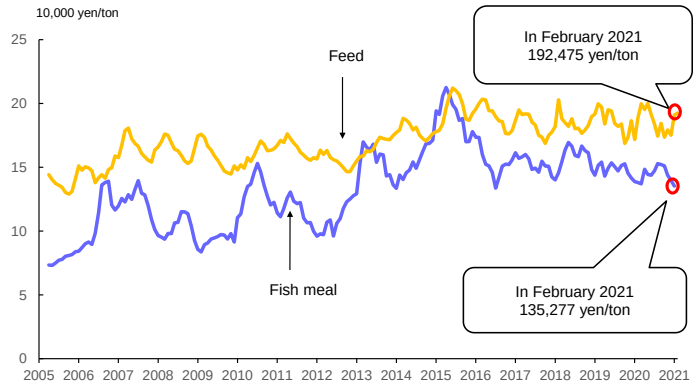
- The average fishing income of private management bodies of coastal fisheries using vessels in 2019 decreased by 180,000 yen to 1,690,000 yen. The business income including non-fishing income was 1,880,000 yen.
- Management bodies of companies that engage in fishing boat fisheries have been experiencing deficit in average fishery profit in FY2019. Operating profits, including non-fishery profit from fishery processing, posted a deficit of 7.25 million yen.
- Fuel oil prices, which were temporarily at the lowest level since 2016, have been rising since December 2020.
- The average fishing income of marine aquaculture households in 2019 decreased by 2.72 million yen to 4.91 million yen as compared to the previous year.
- Imported fish meal prices rose to about 2.6 times those of the 2005 level at the peak in April 2015. Subsequently, the prices have slightly leveled off.
- When the price of fuel oil or compound feeds rise, a subsidy is provided to the fisher from funds reserved in advance by the fishers and the national government, in order to mitigate the impact of the price rise.

Trends in Fuel Oil Prices



Source: Prepared by the Fisheries Agency

Trends in Feed Prices and Imported Fish Meal Prices



Source: Trade Statistics (the Ministry of Finance), Prepared by the Japan Fish Feed Association and by the Fisheries Agency

iii. Seashore Revitalization Plan to boost incomes

- Under the “Seashore Revitalization Plan,” each district thinks about and implements measures to increase fishery income by more than 10% in five years. As of the end of March 2021, 579 districts are implementing their respective plans.
- In FY2015, the "Wide-Area Seashore Revitalization Plan" also started, in which efforts are made to enhance wide-range competitiveness. As of the end of March 2021, 156 districts are implementing their respective plans.

Case Example **“Seashore Revitalization Plan" Suits for Each Region's Circumstances**

Committee for Revival of Local Fisheries, Suzuka City Fishery Cooperative

Fisheries and fishery processing are flourishing on the coast of Suzuka city. The Committee has been working to stabilize production through an optimal combination of fisheries according to the season and increase value of catch through direct selling. As a result, fishery income increased over 10% in five years.

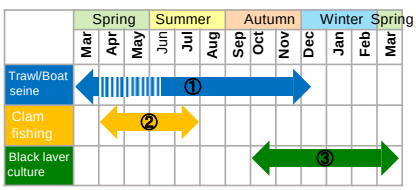
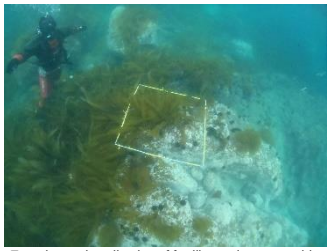


Figure Annual fishing schedule

Committee to Revive Furubira/Shakotan Area Fishery

The committee has conducted a variety of activities with focus on sea urchin, including land culture toward stable production of sea urchin, fattening in the sea, experimental seaweed culture using sea urchin shells in cooperation with a university and other partners, and reclamation of seaweed beds. It also worked on branding of yellow tail caught by set net fishing has increased. As a result, fishery income increased over 10% in five years.



Experimental application of fertilizer using sea urchin shells
(Photo provided by East Shakotan Fishery Cooperative)

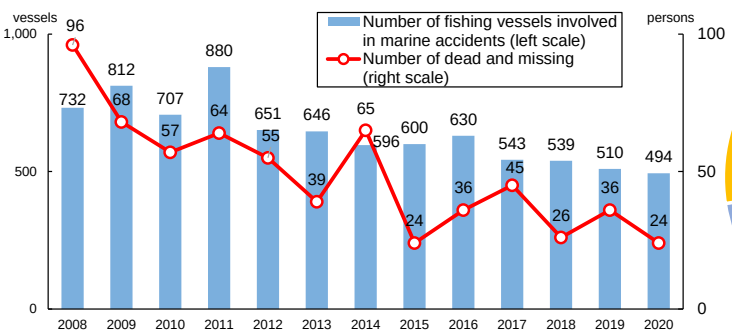
(3) Trends in Fishers

- The number of fishery workers has been consistently declining, reaching 144,740 in 2019.
- Since 2002 the Fisheries Agency has been providing support for new employees according to their situation so that even people without fishery experience can start and continue working in the industry. In addition, in order to address the shortage of fishing vessel crews, we supported fishing guidance for students of fisheries high schools.
- In the fisheries with vessels of 20 tons or more, problems of aging and shortage of licensed mariners have become serious. From FY2019, it has become possible for graduates of fisheries high schools to shorten the amount of time (one year and nine months) required to have a history of embarkation in order to sit for the Grade IV mariner examination.
- Women play a more important role in the work ashore after landing and in the fishery processing industry. The government supports the development of facilities for helping women's activities, consisting of waiting rooms for children, test kitchens, etc.
- Foreigners who meet the specific criteria regarding "Specified Skills" as qualification for stay are accepted in the fisheries and food and drink production fields (including fishery processing). Under the technical intern training program for foreigners, technical training is provided for 10 kinds of operations in fishery/aquaculture and 10 kinds of operations in fishery processing.
- In 2020, most foreigners were refused entry due to the global spread of the COVID-19. As a result, intern positions became vacant in fishery and fishery processing management bodies that had planned to employ interns. To address this situation, the government took measures to support continued employment of foreign fishermen on distant water fishing vessels, while at the same time securing human resources from other industries and using exceptional measures for qualification for stay of former technical interns facing difficulty in continuing training.

(4) Trends in Fisheries Working Environment

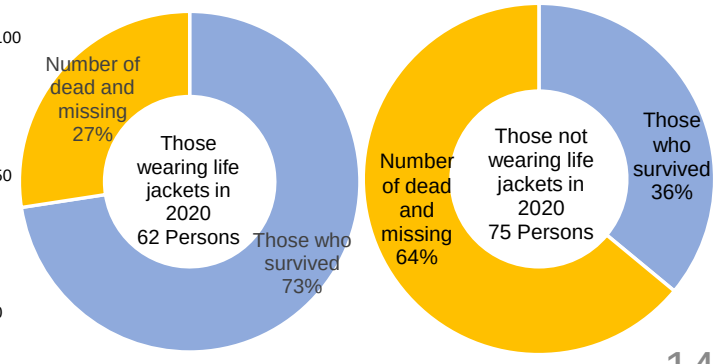
- In 2020, the number of fishing vessels involved in marine accidents was 494, and the number of dead and missing reported in those accidents was 24.
- Excluding those related to marine accidents, 74 fishers fell overboard in 2020, of which 49 persons were dead or missing.
- Life jackets are vital to saving the lives of those who fall overboard (approximately doubling the survival rate.) In 2018 and ahead, all persons on board, in principle, outside the cabin are required to wear life jackets. In 2020, the rate of wearing life jackets in the event of a fall overboard was approximately 50%.

Trends in the Number of Fishing Vessel Accidents and the Number of Dead and Missing Associated with the Accidents



Source: Prepared by the Japan Coast Guard

Survival Rates of Those Who Fell Overboard with and without Life Jackets



Source: Prepared by the Japan Coast Guard

(5) Development and Utilization of Technologies for Promoting Smart Fisheries

○In order to transform the fisheries industry into a growth industry, it is important to introduce and disseminate ICT, AI and other technologies to the fisheries and aquaculture.

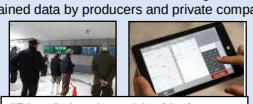
○Promoting technology development and demonstration toward field implementation of efficient initiatives using ICT/AI in the fields of stock assessment, fisheries/aquaculture and processing/distribution.

Vision of Smart Fisheries in 2027

Aims to realize the next-generation fisheries achieving both sustainable use of fishery resources and transformation of fisheries into a growth industry by 2027 through smart fisheries

MSY-based stock assessment using electronic data

- Implement stock assessment of about 200 kinds of fishery resources based on electronic data
- Implement stock assessment based on MSY for fish species subject to TAC management in principle
- Efficiency improvement of operation/management and creation of new businesses through utilization of obtained data by producers and private companies



Efficient collection and accumulation of data from producing district markets and fisheries cooperatives

Stock assessment

Processing/ distribution

Promote data cooperation to create fisheries that use data to the fullest

Fisheries/aquaculture

Major producing districts across the country and ambitious producing districts in cooperation with processors and distributors build a fishery product value chain to realize automation of work and adding of value to merchandize

- Automate goods handling/processing sites through AI, ICT and robotics, while enhancing the flow of information, including promotion of electronic commerce to eliminate unreasonable, wasteful or irregular practices and improve productivity
- Add value by using ICT to introduce high-freshness quick freezing, which enables consumption of sashimi-quality fishery products in remote places, and to strengthen the flow of information on freshness to consumers

Automatic sorting using image sensing technology

Use new fishery technologies to improve productivity and income and maintain workers

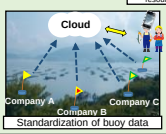
<Coastal fishery>

Coastal fishery ground prediction technology

- Efficient operation by obtaining detailed data of the fishing ground environment including sea current and water temperature distribution using smartphones for selection of fishery grounds and decision on going fishing
- Instruction and training of successors based on accumulated data

<Aquaculture>

- Prompt measures against red tide by speedily obtaining red tide information, environmental data and other information using smartphones
- Efficient and stable aquaculture through digitalization of growth data of cultured fish, ration, feed cost and other data using ICT

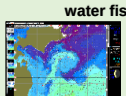


Standardization of buoy data

<Spread of technology>

Information sharing and human resource development

<Offshore/ distant water fisheries>



System to predict formation of fishing grounds

Automatic bonito fishing machine

- Efficient selection of fishing grounds and energy-saving route by utilizing systems to predict formation of fishing grounds and fishing/oceanographic conditions, which use satellite data and AI technology
- Personnel /labor saving in fishing by using automatic bonito fishing machine, etc.

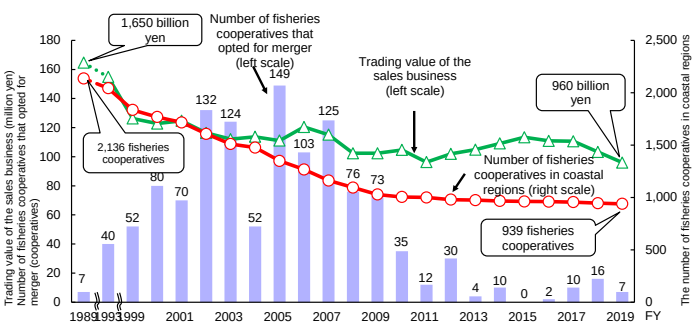
(6) Trends in Fisheries Cooperatives

○A fisheries cooperative is an organization that plays a core role in contributing to stabilization and development of fishery management by business implementation such as sales, appropriately using and managing fisheries resources, and supporting regional economies and social activities in a fishing community.

○The number of fisheries cooperatives (in coastal areas) as of the end of March 2020 was 939.

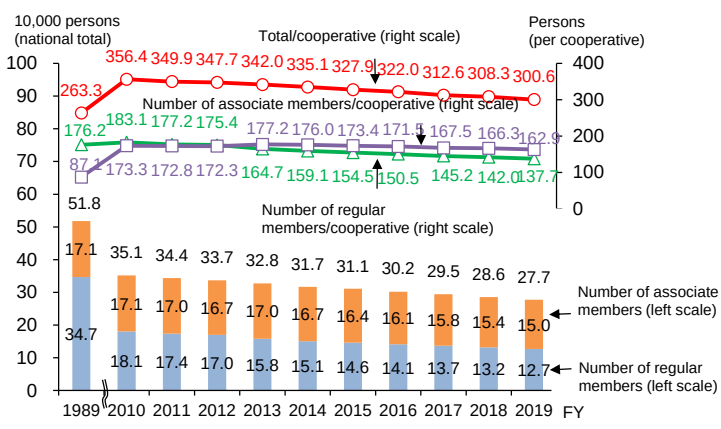
○The number of fisheries cooperative members has been decreasing in line with a decline in the number of fishers. There are still many small-cooperatives. There is a need to strengthen the cooperatives' business and management foundation through merger, etc. and to further reinforce their sales business.

Trends in the number of fisheries cooperatives in coastal regions, number of fisheries cooperatives that opted for mergers, and trading value of the sales business



Source: Annual Report of Fisheries Cooperatives (the number of fisheries cooperatives in coastal regions) and Statistics Table of Fisheries Cooperatives (trading value of the sales business) (the Fisheries Agency), and prepared by the JF Zengyoren (the number of fisheries cooperatives that opted for mergers).

Trends in the Number of Fisheries Cooperative Members



Source: Statistic Table of Fisheries Cooperatives (the Fisheries Agency)

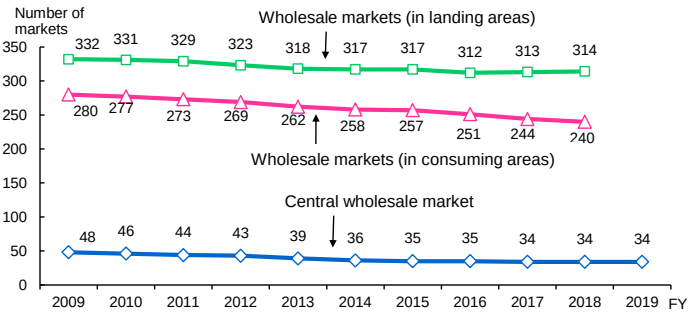
(7) Trends in the Distribution and Processing of Fish and Fishery Products

i. Trends in the Distribution of Fish and Fishery Products

○The number of wholesale markets in landing areas had been flat in recent years and that of wholesale markets in consuming areas decreased.

○Wholesales markets play a critical role in effectively distributing fish and fishery products. However, a challenge that wholesale markets in landing areas face is that many of such markets are small and in a weak position in terms of price formation. It is necessary to maintain and strengthen them through market abolition and consolidation, etc. For food distribution, it is important to respond precisely to the diverse needs of consumptive interests, etc.

Trends in the Number of Wholesale Fishery Markets



Source: Wholesale Market Database (the Ministry of Agriculture, Forestry and Fisheries)
Note: Data for central wholesale markets are the data at the end of every fiscal year but data for local wholesale markets are the data at the beginning of each fiscal year (up to FY2011) and at the end of each fiscal year (FY2012 or later).

ii. Role and Problems of the Fishery Processing Industry

○Fishery processing industry and fisheries are the two wheels that drive the marine product industry and contribute to the revitalization of fishing village communities.

○Due to the growing trend of simplification and externalization of diet among consumers in recent years, the importance of processing has increased in the consumption of fishery products. It is necessary to develop products that meet the diversifying consumer needs.

○Need for smooth intake of foreign human resources and personnel/labor saving using ICT and AI.

○In order to address the shortage of process materials due to poor catch of squid, saury, etc., it is necessary to build a production system that enables change of materials.

iii. Response to HACCP

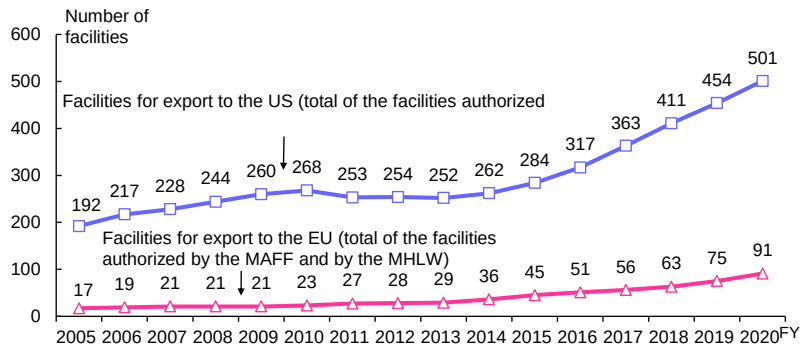
○Food business operators including fishery processors are going to be required to carry out HACCP-based sanitary control etc. after June 2020. (Current standards will be applied as a transitional measure until the end of May 2021.)

○Fishery processing facilities, etc. need to implement the HACCP (Hazard Analysis Critical Control Point) system and to conform to related facilities criteria, as required by the export destination countries and regions, when exporting fish and fishery products to the United States, the EU, etc.

○Accordingly, the government supports the holding of seminars, etc. about general sanitary control and HACCP based sanitary control, and also supports the renovation, etc. of fishery processing and distribution facilities for acquiring the facility authorization required for export to the EU and the United States.

○As of the end of March 2021, in the fishery processing industry, etc., the number of facilities authorized to export to the EU is 91, and the number of facilities authorized to export to the United States is 501.

Trends in the Number of Facilities Authorized to Export to the EU/US in the Fishery Processing Industry, etc.



Source: Prepared by the Ministry of Agriculture, Forestry and Fisheries

(1) Fisheries Resources in the Waters around Japan

○For management of fishery resources, it is important to take appropriate measures on the two sides of stock status and fishing intensity based on the stock assessment.

○In FY2020, the fish species subject to stock assessment were expanded from 67 to 119, and the survey on these species was started.

○In FY2020 stock assessment based on MSY was expanded from 7 stocks of 4 fish species to 14 stocks of 8 fish species, with the following evaluation results:

① Both stock status and fishing intensity are appropriate: 3 stocks

② Stock status is appropriate, but fishing intensity is excessive: 1 stock

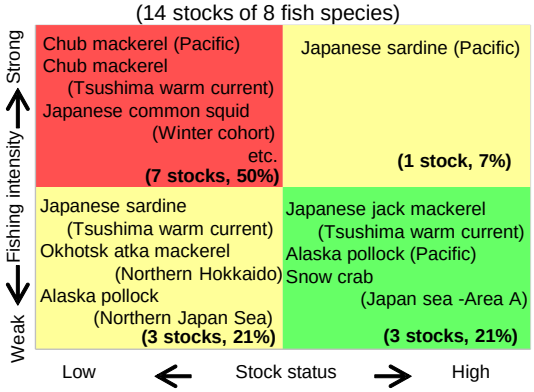
③ Stock status is low, but fishing intensity is appropriate: 3 stocks

④ Stock status is low, and fishing intensity is excessive: 7 stocks

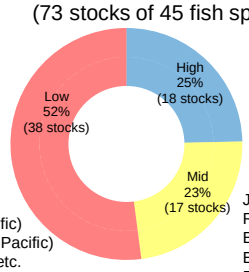
○Among 73 stocks of 45 fish species for which stock assessment based on MSY was not implemented, stock status of 18 stocks was high, status of 17 stocks was medium and status of 38 stocks was low.

Status and Trends in Resource Levels in the Waters around Japan

Stock assessment based on MSY (Kobe plot)
(14 stocks of 8 fish species)



Stock assessment with three segment of high, mid and low
(73 stocks of 45 fish species)



Pacific Herring (Hokkaido)
Pacific cod (Pacific off Hokkaido, etc.)
Japanese Spanish mackerel (East China Sea)
Japanese yellowtail, etc.

Whitespotted conger (Ise / Mikawa Bay)
Deep-sea smelt (Pacific)
Pacific cod (Northern Pacific)
Japanese pufferfish, etc.

Japanese anchovy (Seto Inland Sea)
Round herring (Pacific Ocean)
Bastard halibut (Western Japan Sea / East China Sea)
Pacific cod (Nemuro Strait), etc.

Source: Prepared by the Fisheries Agency, based on the Fish Stock Assessment in the Waters around Japan (the Japan Fisheries Research and Education Agency and the Fisheries Agency)
Note: Sum of the breakdown ratio is not 100% due to rounding to the unit of display

(2) Japan's Fisheries Resource Management

i. Japan's Fisheries Resource Management System

○Techniques for resource management are primarily classified into 1) input control, 2) technical control, and 3) output control. These methods are appropriately used and combined in Japan to properly manage resources, taking into account the characteristics of fisheries, the number of fishers, the status of targeted stocks, etc.

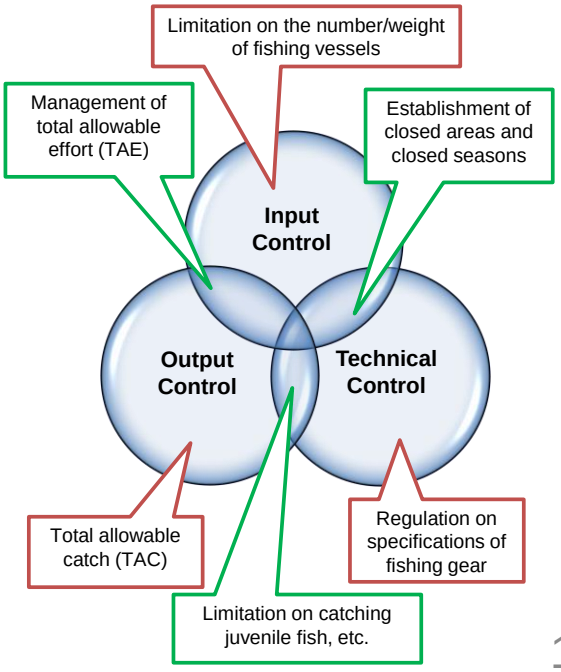
○Shellfish and algae harvesting, set net fishing, aquaculture, and inland water fisheries are managed under the fishery rights system. Offshore and distant fisheries are managed on the basis of a fishing permit system.

○The TAC system has so far covered eight fish species. Bluefin tuna is added as a new TAC species in 2018 within the framework of the international resource management.

(Reference)

Species under TAC: saury, Alaska pollack, Japanese jack mackerel, Japanese sardine, mackerel, snow crab, cuttlefish, bluefin tuna

Correlation Between Resource Management Methods



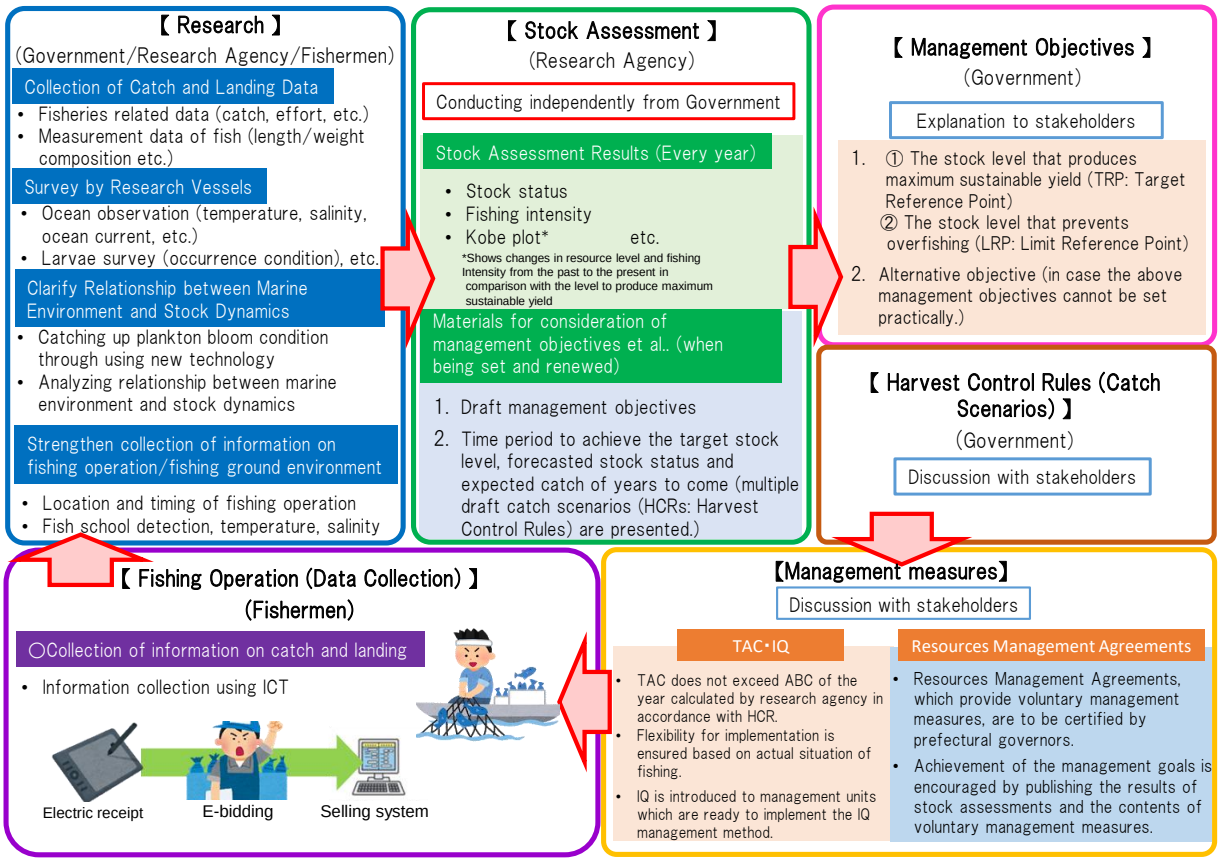
ii. Promotion of Resource Management Based on the New Fishery Act

○The new Fishery Act stipulates that national and prefectural governments have responsibilities to provide appropriate conservation and management of fisheries resources.

○Fisheries resources shall be managed with a goal to achieve the Maximum Sustainable Yield (MSY) through TAC management basically.

○For transformation of the fisheries industry into a growth industry, it is important to maintain, recover, and appropriately manage the resources. Internationally standard scientific stock assessments and effective management methods are introduced.

Flow of Resource Management



iii. Development of a Road Map for Promotion of the New Resources Management

○Prior to the enforcement of the new Fishery Act in December 2020, the “Roadmap for Promotion of New Resources Management” was decided and published in September 2020. The roadmap presents the specific route to build a new resource management system including the enhancement of scientific resource surveys and assessment and promotion of management with the total allowable catch (TAC) based on stock assessment.

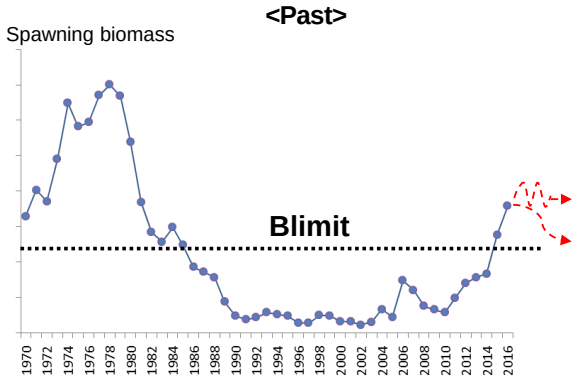
○The roadmap aims to recover fisheries production to 4.44 million tons by 2030 through the following measures: By the end of FY2023, 1) expanding the fisheries species subject to stock assessment to about 200 species; 2) putting 80% of fisheries production under TAC management; 3) introducing management based on IQ (individual quota) to minister-licensed fisheries, whose main targets are TAC species, in principle, and; 4) shifting the current voluntary resources management by fishermen (Resources Management Plans) to “Resources Management Agreements” based on the new Fisheries Act.

iv. Promotion and Expansion of Management Based on TAC under the New Fishery Act

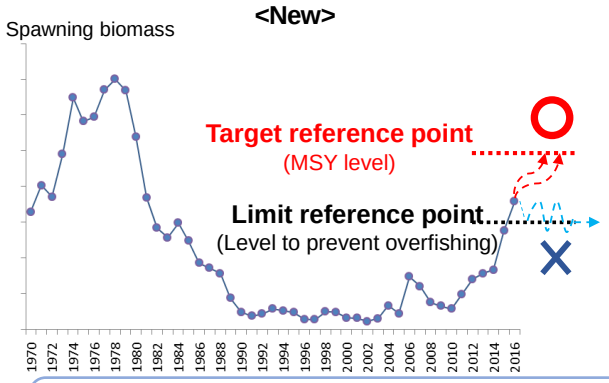
○Under the new TAC system based on the new Fisheries Act, fisheries resources subject to management based on TAC are defined as “Specified Fisheries Resources” in the Basic Policy of Resources Management that is decided by the Minister of Agriculture, Forestry and Fisheries.

○For each Specified Fisheries Resource, the resource level that produces the maximum sustainable yield (Target Reference Point, TRP) and the level that prevents overfishing (Limit Reference Point, LRP) are set based on stock assessment. TAC is decided according to the harvest control rule (HCR, management scenario) that is determined beforehand to achieve the management goal. If the fisheries stock biomass is below the LRP, a rebuilding plan should be developed and implemented to recover the biomass to TRP.

The former TAC system and the new TAC system



- There is no target for the stock when the biomass level is above Blimit.
- The management system would accept a risk that the stocks would decrease to a dangerous level affected by environmental changes, such as a temporary rise in water temperature.



- TRP is set to recover or maintain the biomass to be the level at which the stock can produce MSY (Bmsy).
- On a long-term basis, it is expected that benefits from the stock would be maximized, while short-term catch limitation may be needed depending on the stock status.
- Predictability of future catch is increased on a long-term basis so that fishermen can develop a long-term business plan.

v. IQ Management will be Gradually Introduced into Minister-licensed Fisheries as the Initial Step

○For TAC management, the new Fishery Act basically adopted IQ that allocates a quota to each vessel, etc., as a basic method. The IQ management system under the new Fishery Act will be introduced to minister-licensed fisheries for which IQ-like management methods have been adopted or individual catch quota allocation has been implemented under the former legal system. By FY2023, IQ-based management will be introduced to Minister-licensed fisheries, mainly targeting TAC species in principle.

○For coastal fisheries for which IQ-like management methods are currently adopted, such methods would be applied as a management measure under Resources Management Agreements, and TAC species should go under the IQ management system based on the new Fishery Act, depending on the species and regions.

vi. Shifting to Voluntary Resources Management under Resources Management Agreements based on the New Fishery Act

○Since FY2011, a resources management system has been implemented where national and prefectural governments develop “Resources Management Guidelines” and the relevant fishermen groups create and implement their “Resources Management Plan” in line with the Guidelines.

○With the aim of enhancing the effect of voluntary resources management by fishermen, the current “Resources Management Plans” based on the “Resources Management Guidelines” will be gradually shifted into “Resources Management Agreements” based on the new Fishery Act. Fishermen participating in a “Resources Management Agreement” will be supported by the “Measures to Stabilize Fishery Income.”

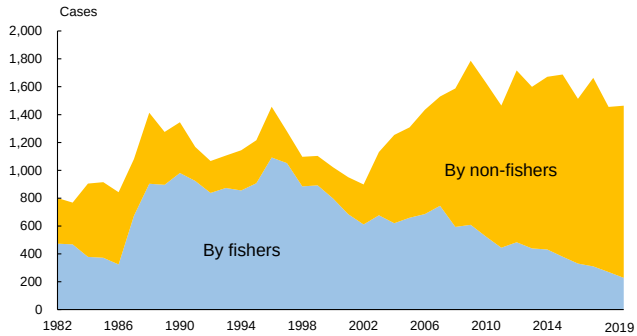
(3) Approaches to Practical, Effective Resource Management

i. Prevention of poaching and fishery control in coastal areas of Japan

○The number of arrests for violation of fisheries laws and regulations stood at 1,556 in 2019 (1,498 in coastal waters and 58 in inland waters). The number of poachings conducted by non-fishers has increased. Especially poaching by organized criminal groups (Boryokudan) members has become more vicious and sophisticated.

○Based on the new Fishery Act enforced on December 1, 2020, sea urchin, sea cucumber, etc. subject to heinous poaching are designated as “Specified Aquatic Animals and Plants,” and their gathering or catching is prohibited in principle, except for gathering or catching based on a fishery right or permission. A person who violates the prohibition is punished by imprisonment with work for not more than three years or to a fine of not more than thirty million yen: the same penal provision applies also to a person who transports, retains or acquires specified aquatic animals and plants knowing that they have been illegally gathered or caught.

Trends in the Number of Arrests for Violation of Fisheries Laws and Regulations in Japan‘s Marine Regions



Source: Prepared by the Fisheries Agency

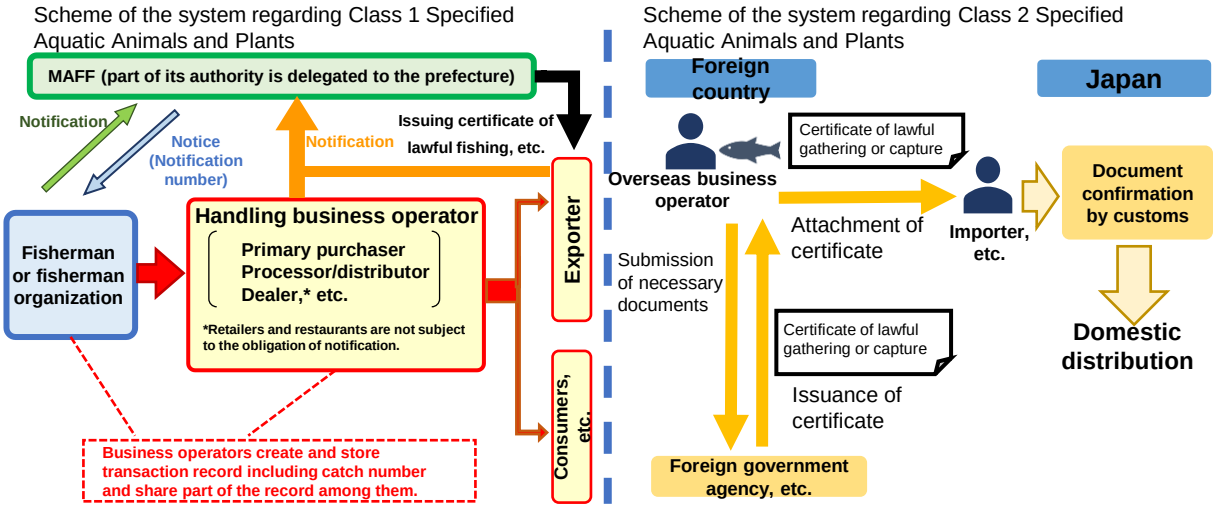
Outline of strengthened punishment based on the new Fishery Act

	Violation of prohibition of gathering or catching Acceptance of poached products	Fishing without license	Infringement of a fishery right
Before the revision		Imprisonment with work for not more than three years A fine of not more than two million yen ↓	A fine of not more than 200,000 yen ↓
After the revision	Imprisonment with work for not more than three years A fine of not more than 30 million yen	Imprisonment with work for not more than three years A fine of not more than three million yen	A fine of not more than one million yen

ii. Introduction of the Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants

○In 2020, the Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants was enacted with the aim of preventing mixing of illegally gathered or captured aquatic animals/plants into the distribution process. The act was promulgated in December of the same year. The act mandates notification by fishermen, etc. who handle specified aquatic animals and plants to the relevant administrative organ, communication of catch number and development and maintenance of transaction records.

○The act is scheduled for enforcement within 2 years after the promulgation. Before the enforcement, designation of fish species subject to the act and digitalization will be discussed with consideration to reduction of the burden on related business operators.



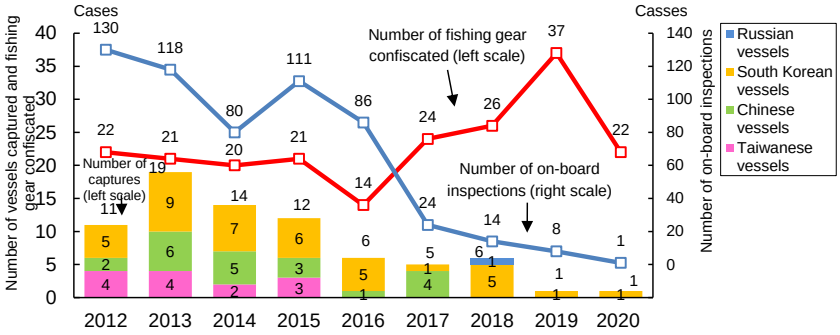
*There are penalties for violation of obligation of notification, communication, transaction record, attachment of certificate for import/export and other obligations

ii. Monitoring and inspection of foreign fishing vessels

○In 2020, the Fisheries Agency conducted one on-board inspection and captured one foreign fishing vessel and the number of confiscations of illegal fishing gear totaled 22.

○Illegal cross-border fishing by Chinese and North Korean fishing vessels in waters around Yamato bank of the Sea of Japan obstructs safe operation by Japanese fishermen. The Fisheries Agency deploys fisheries inspection vessels including two large fisheries inspection vessels that went into service in March 2020 with focus on the waters and responds to violations in cooperation with the Japan Coast Guard. In 2020 the agency issued expulsion order to 4,394 Chinese and other fishing vessels in total.

Trends in the number of foreign fishing vessels captured or inspected, etc.



Source: Prepared by the Fisheries Agency

Patrol boat chasing South Korean fishing vessel fleeing in East China Sea

Column

Efforts of the Fisheries Agency to Strengthen Fisheries Inspection

As of March 2020, the agency deployed 45 fisheries inspection vessels and 4 patrol aircrafts to control fishery activities around the clock. In FY2020 the agency completed new vessels for the first time in 55 years and replaced existing old vessels deployed to Sakaiminato with the new vessels. Furthermore, completion of another new vessel and one replacement are scheduled in FY2021.

In May 2020, the agency implemented joint training of its fisheries inspection vessels with patrol vessels of the Japan Coast Guard off the port of Niigata. The training assumed an illegal operation by foreign fishing vessels in waters around Yamato bank. A patrol craft played the role of an illegal foreign vessel. Offshore joint training of this scale was unprecedented.

Joint training by the Fisheries Agency and the Japan Coast Guard

(4) Measures to Actively Enhance Fisheries Resources

○Seed release is an effort to increase resources by releasing fish, etc. after rearing to a certain size. It is implemented covering about 70 species in various places led by prefectural fish farming centers and others. The government promotes such programs as the Resource-creating Farming Fisheries, in which part of adult fish are conserved for reproduction.

○With the aim of increasing offshore living aquatic resources, the government is developing preservation and nursery artificial reefs by installing blocks to promote spawning and growth of queen crab, and mound reefs that increase productivity of the sea area through vertical mixing.

○Inland water fisheries cooperatives, meanwhile, are working on programs to release sweetfish/eel seedlings and set up spawning beds.

(5) Trends in Fishing Ground Environment

i. Promotion of Preservation and Recovery of Seaweed Beds and Tidal Flats and Improvement of Fishing Ground Environment

- It is important to raise the productivity of the entire ecosystem by preserving seaweed beds and tidal flats and recovery of their functions. The national government will promote wide-area measures in which the creation of seaweed beds and tidal flats by local governments and the conservation activities of fishers and others are combined.
- The Act on Special Measures concerning Rejuvenation of Ariake Sea and Yatsushiro Sea was revised in March 2021 as legislation by Diet members. The act includes an increase of the national subsidy ratio for projects to preserve and improve the sea area environment with the aim of rejuvenating the Ariake Sea and Yatsushiro Sea.
- "Fishery ground improvement plan" was formulated that summarizes water quality targets and the amount of fish that can be appropriately cultured.

ii. Impact of Climate Change and Countermeasures / Plastic Litter in Ocean

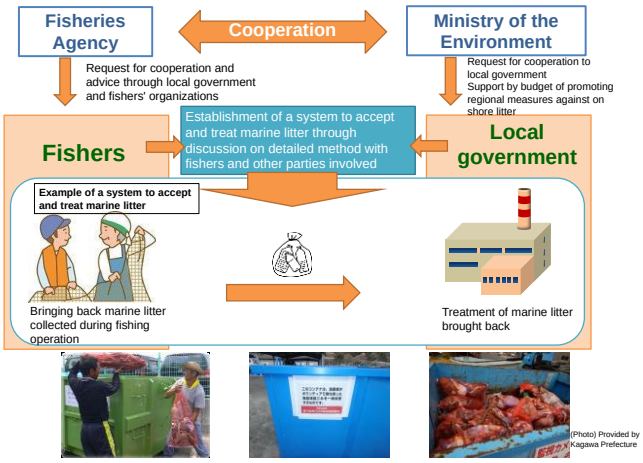
- As mitigation strategies for climate change, the government promotes implementation of both Smart Fisheries using ICT and electric or hydrogen fuel cell fishing vessels to reduce greenhouse gas emissions. As adaption for climate change, development of aquaculture breeds with high temperature tolerance is also promoted.
- Marine plastic litter affects not only the environment and ecosystems, but also fisheries, such as contamination of fish catches. There are several measures made by the Fisheries Agency, for example, 1) to formulate "Guidelines for Promotion of Systematic Disposal of Fisheries Waste" in order to promote well-planned disposal of used fishing gear; 2) to consider development of fishing gear using environmentally friendly materials and for promotion of recycling; and 3) to promote bringing back of marine litter by fishers, etc.

Preservation of seaweed beds and tidal flats

Preservation of seaweed beds
(exterminating sea urchin)

Preservation of tidal flats
(tilling tidal flats)

Collection and treatment of marine litter(measure by bringing back those in fishing net)



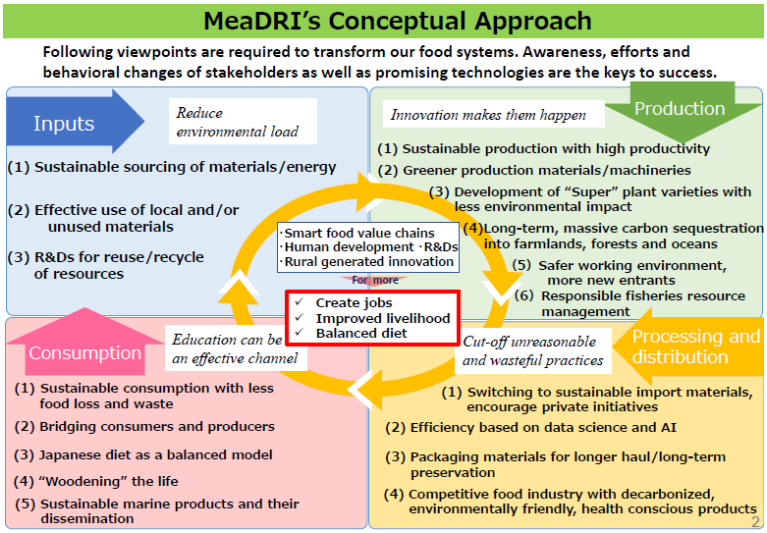
Column **Strategy for Sustainable Food Systems: MeaDRI**

Drafting of “Strategy for Sustainable Food Systems, MeaDRI” started in October 2020 to achieve both productivity improvement and sustainability of Japan’s food, agriculture, forestry and fisheries industries. Its interim report was published in March 2021.

MAFF aims to achieve zero CO2 emissions in agriculture, forestry and fisheries by 2050 through development of innovative technologies and production systems and their application to the industries.

This strategy includes the measures as well as reduction of CO2 emissions such as reducing the import, carbon and environmental burden of materials/energy; building a sustainable production system; establishing sustainable processing and distribution systems free of unreasonable and wasteful practices; expanding environmentally friendly sustainable consumption; and promoting food education.

The strategy also enhances the balance between measures of new fisheries resource management and transformation of fisheries and aquaculture into growth industries through appropriate fisheries resource management, sustainable aquaculture production systems and electrification by using fuel cells for fishing vessels without any burden on natural resources.



(6) Damage to Fisheries Caused by Wildlife and Mitigation Measures

- Reports have come out about damage to fisheries caused by wildlife such as steller sea lions and *Ascidiella aspersa*. For wildlife that range/migrate across prefectural borders, for which broad-based measures are expected to be effective for damage prevention/reduction, the national government supports investigations on the occurrence status, the provision of related information, the development of technologies to reduce damage, and control activities, etc.
- Damage cost to fisheries caused by Steller sea lions was reduced by half from about 2 billion yen in FY2013 to about 1 billion yen in FY2019.
- The government is promoting control measures to address feeding damage by great cormorants and non-native fish such as largemouth bass in inland waters.

<Steller Sea Lions>

Steller's Sea Lions' Feeding Damage to Catches

<Great Cormorant>

Their feeding damage has become a problem due to expansion of the population and distribution

<Largemouth Bass>

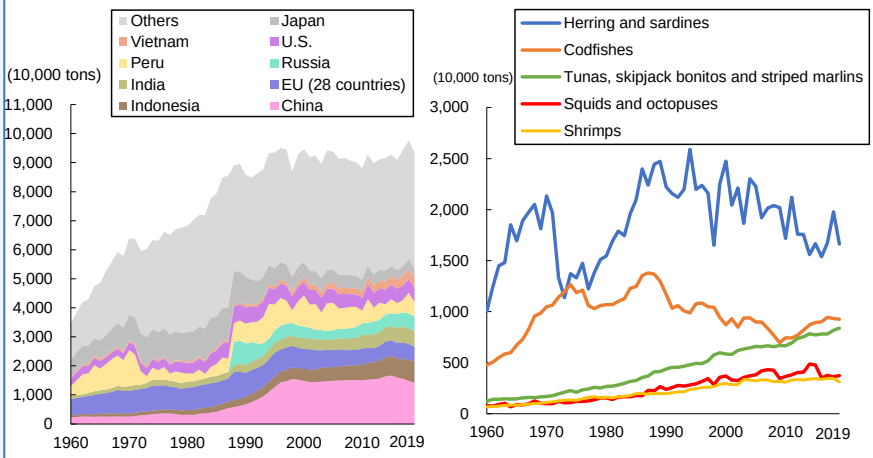
Feeding Damage by Non-native Fish

(1) Production of World Fisheries and Aquaculture

○In the advanced countries and regions including EU, the Unites States, and Japan, etc. the capture fisheries production volumes have remained almost flat or have been on a declining trend. In contrast, the capture fisheries production volumes in the developing countries including China, Indonesia, Vietnam, etc. have increased.

○By fish species, herring and sardine account for the largest part, at 18%. Tuna, skipjack bonito, striped marlin, and shrimp are on an increasing trend in the long term.

Trends in Catch of World Fishing Vessel Fisheries by Country and by Fish Species

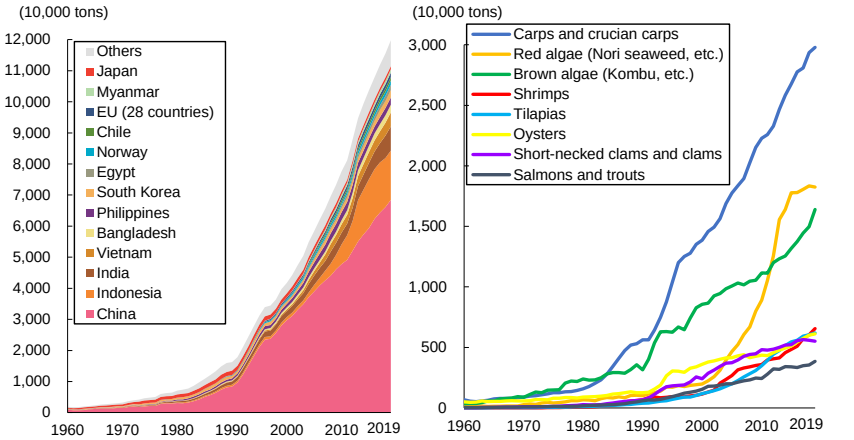


Source: Prepared by the Fisheries Agency, based on the Fishstat (Capture Production) (FAO) and Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries)

○The aquaculture production significantly increases in China and Indonesia.

○By fish species, carp/crucian carp and algae have the largest share and their increases is significant in recent years.

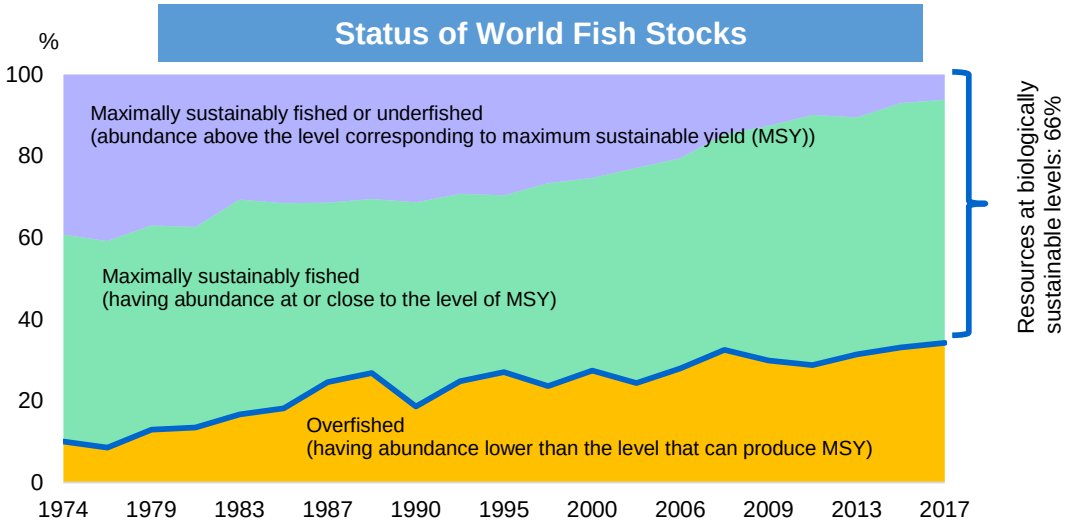
Trends in World Aquaculture Production by Country and Fish Species



Source: Prepared by the Fisheries Agency, based on the Fishstat (Aquaculture Production) (FAO) and Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries)

○The ratio of world fisheries resources being exploited within biologically sustainable levels is on a gradually decreasing trend. In 2017, 66% of world fisheries resources were at biologically sustainable levels (world fisheries resources with enough room for production expansion were 6%), and 34% of the resources were at overfished levels.

Status of World Fish Stocks



Source: Prepared by the Fisheries Agency, based on the State of World Fisheries and Aquaculture 2020 (FAO)

(2) International Situation Surrounding the Trade of Fish and Fishery Products

○In WTO rule negotiations, discussions have been made about the establishment of disciplines on fisheries subsidies. Japan takes a stance of limiting prohibited subsidies to those which truly cause overcapacity and overfishing.

○The Japan-UK EPA became effective on January 1, 2021. Regarding the tariffs placed by Japan, the content of the Japan-EU EPA is maintained. Regarding the tariffs by UK, the content of the Japan-EU EPA that eliminated tariffs on major export-intended items is maintained.

○The RCEP, in which 15 countries including Japan, China, South Korea, ASEAN, Australia and New Zealand participate was signed on November 15, 2020. Tariffs by Japan were excluded from reduction/elimination for many items, including marine algae, horse mackerel and mackerel. Tariffs on scallop, yellowtail, salmon, etc. by China and on colored carp by South Korea are eliminated.

(3) International Resource Management

i. Trends in Tunas Regional Fisheries Management Organizations

○The global tunas and tuna-like species resources are managed by five regional fisheries management organizations (tRFMOs), and Japan is a member of all of the tRFMOs.

○The 2020 annual meeting of the Western and Central Pacific Fisheries Commission (WCPFC) adopted a one-year extension of the following measures for Pacific bluefin tuna, which was scheduled for expiration at the end of 2020: 1) increase of the upper limit of carry-over ratio of underused catch limit from 5% of the catch limit to 17%; and 2) allowing transfer of catch limit of smaller fish to that of larger fish.

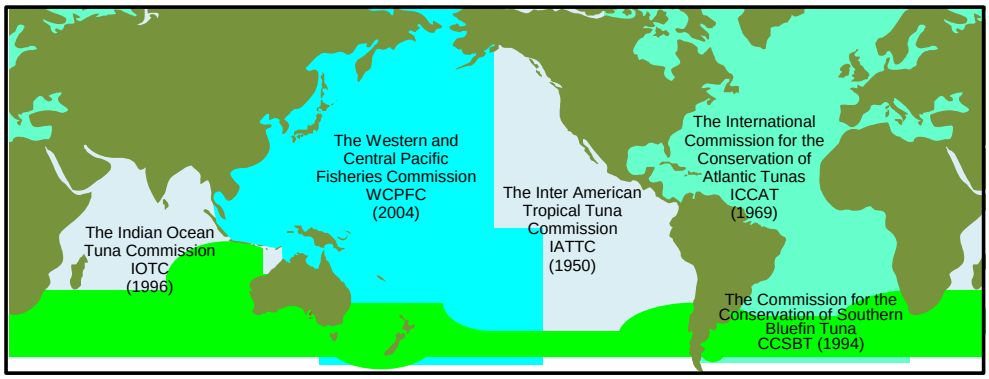
○The 2020 annual meeting of the Inter-American Tropical Tuna Commission (IATTC) adopted a one-year extension of the current measures based on discussions at the joint task force of IATTC and WCPFC.

○The 2020 meeting of the International Commission for the Conservation of Atlantic Tunas (ICCAT) agreed to maintain the current TAC for Atlantic bluefin tuna (36,000 tons for East Atlantic resources and 2,350 tons for West Atlantic resources) also in 2021.

○The 2020 annual meeting of the Indian Ocean Tuna Commission (IOTC) agreed to continue the current resource management measures, including reduction of catch of yellowfin tuna. Considering the unimproved resource status of yellowfin, the commission agreed to hold a special meeting to discuss resource management of the species.

○The 2020 annual meeting of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) agreed to set Japan’s annual catch quota for the period from 2021 to 2023 at 6,245 tons.

Tunas Regional Fisheries Management Organizations (tRFMOs)



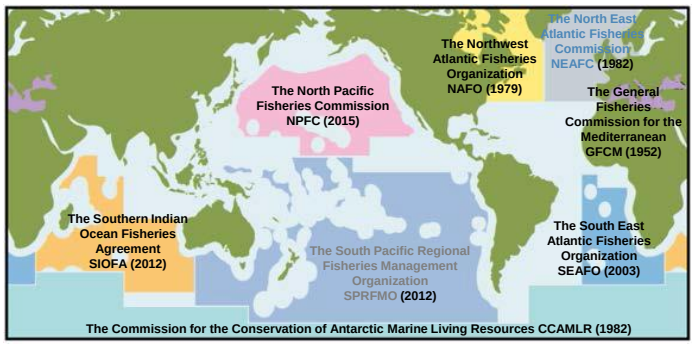
Note: The years in parentheses are the years of effectuation of the relevant treaties.

ii. Trends in Regional Fisheries Management Organizations for Pacific Saury, Chub Mackerel, etc.

○In the high seas area in the North Pacific, the North Pacific Fisheries Commission (NPFC) manages fisheries resources, such as Pacific saury, chub mackerel, and North Pacific armorhead.

○The NPFC annual meeting held in February 2021 agreed to set TAC of saury on the high seas at 198,000 tons for 2021 and 2022 (40% reduction from 330,000 tons in 2020) and that member countries shall reduce their TAC on the high seas by 40% from their respective catch in 2018.

Major Regional Fisheries Management Organizations Managing Other Resources than Tunas and Skipjacks



Notes: 1) Currently, Japan is neither a member of the SPRFMO nor of the NEAFC. Japan withdrew from GFCM in 2020.
2) The years in parentheses are the years of effectuation of the relevant treaties.

iii. Developments Toward Eliminating IUU Fishing

○Initiatives toward preventing, deterring and eliminating IUU fishing have been promoted internationally. For example, regional fisheries management organizations have established a list of fishing vessels with proper authorizations (positive list) and a list of fishing vessels and carriers that have engaged in IUU fishing* (negative list), and to prevent international distribution of catches harvested by IUU fishing through the use of the catch documentation scheme.

○The Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants that was promulgated in December 2020 requires attachment of certificates issued by a foreign government agency, etc. when importing fish and fishery products with high risk of IUU fishing.

*IUU fishing: Illegal, Unreported and Unregulated fishing

iv. Bilateral Relations in Fisheries

○Relationship between the Japanese and Russian governments, fishing vessels of both the countries are operating under conditions decided through negotiations.

○The Japanese and Korean governments have not reached agreement about operation conditions for mutual fishing access, etc., and therefore mutual consultations are still underway.

○The Japanese and Chinese governments have not reached agreement about operation conditions for mutual fishing access, etc., and therefore mutual consultations are still underway. In order to prevent illegal cross-border fishing by Chinese and other fishing vessels around Yamato bank in the Sea of Japan, the Fisheries Agency deploys fisheries inspection vessels with focus on the waters and responds to violations in cooperation with the Japan Coast Guard.

○Japan and Taiwan continue the operation rule of the previous year (2019).

○Although the EEZs of the Pacific Island countries continue to serve as vital fishing grounds, the severity of fishing conditions continues to increase due to fishing fee hikes, establishment of marine protect areas, etc.

(4) Developments Concerning Whaling

○Japan withdrew from the International Convention for the Regulation of Whaling (ICRW) at the end of June 2019, under the basic policy of sustainable use of marine resources based on scientific evidence, and resumed commercial whaling of large whales (minke, sei and Bryde's whales) in July 2019.

○These whaling activities are conducted under the catch limit that is calculated in line with the method adopted by the International Whaling Commission (IWC) (Revised Management Procedure (RMP)).

○Scientific research on whales will continue after Japan's withdrawal from the ICRW to contribute to the management of whale stocks based on scientific knowledge, in cooperation with international organizations such as the IWC.

○In October 2020, the "Basic Policy of Measures for Ensuring the Sustainable Use of Whales" was formulated based on the Act for Ensuring the Sustainable Use of Cetaceans. The policy includes the significance of conducting scientific whale research, calculation of catch limit and basic matters regarding support for whaling industry. Japan is taking necessary measures based on the policy.

Target species and catch quota of the whaling industry (large whales)

	Estimated abundance	Catch limit	2019 (July-December)		2020		2021
			Catch quota (final)	Catch total	Catch quota (final)	Catch total	Catch quota (initial)
Minke whale (Western North Pacific)	20,513	171	53	44	112	95	120
Bryde's whale (North Pacific)	34,473	187	187	187	187	187	150
Sei whale (North Pacific)	34,718	25	25	25	25	25	25

Note: 1) Catch quota is set by subtracting the number of bycatch (5-year average) of set net and quota reserved by the Fisheries Agency from the catch limit.
2) During the period from April to June 2019, 79 minke whales were caught separately for Japanese scientific research program.

(5) Overseas Fishery Cooperation

○For the purpose of the promotion of the fisheries industry and fishing resource management, the Japanese government offers grant aid (for the construction of fisheries facilities, etc.) and technical cooperation (the dispatch of experts, etc.) to fishery sectors in countries that have important fishing grounds for Japanese fishing vessels and countries sharing the stance of sustainable use of marine living resources.

○For the stable operation of Japanese fishing vessels, the Japanese government supports private organizations' cooperation which provides for the rehabilitation of fisheries facilities and the transfer or dissemination of fisheries technologies to coastal countries such as Pacific Island Countries.

○The Japanese government provides financial and technical assistance to the Southeast Asian Fisheries Development Center (SEAFDEC) in order to achieve sustainable fisheries in the Southeast Asia region.

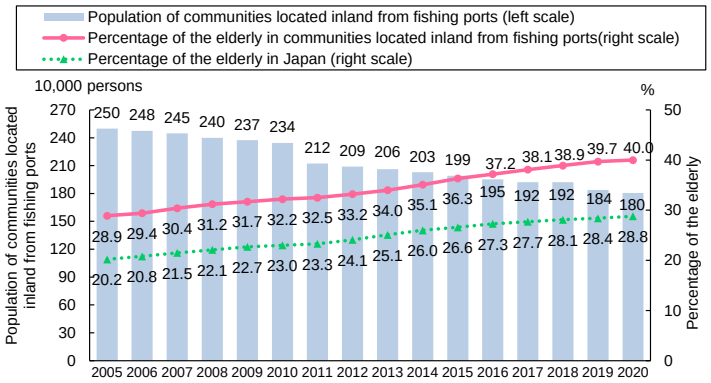
(1) Current Status and Role of Fishing Communities

○Many fishing communities are situated in advantageous locations for fishery production but are vulnerable to natural disasters (approx. 34% of communities located inland from fishing ports are in peninsular areas, and approx. 19% in isolated island areas). Population is rapidly aging and decreasing (the percentage of the elderly in communities located inland from fishing ports is 40%).

○Fisheries and fishing communities have multifunctional roles such as (i) conserving the natural environment, (ii) safeguarding the lives and property of the public, (iii) providing exchange opportunities and (iv) developing and maintaining local communities. Benefits from the multifunctional roles extend to the public.

○The government supported conservation of seaweed beds and tidal flats, maintenance, conservation, and improvement of inland water ecosystems, and efforts by fishers and others to contribute to the fulfillment of multifaceted functions such as marine rescue, border and water monitoring.

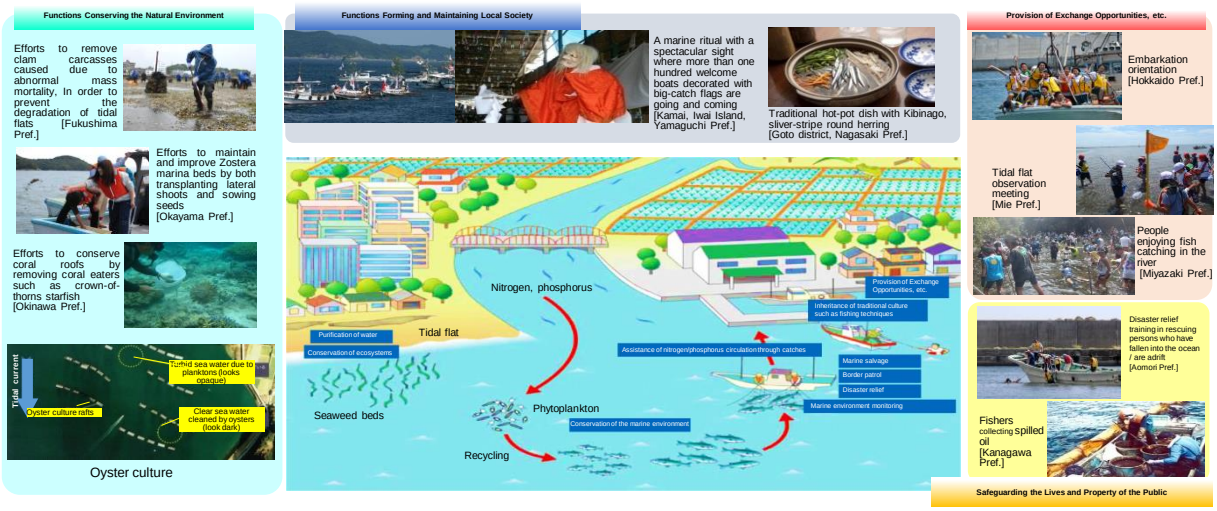
Population and Percentage of the Elderly in Communities Located Inland from Fishing Ports



Source: Survey by the Fisheries Agency (population and percentage of the elderly in communities located inland from fishing ports); Ministry of Internal Affairs and Communications "Population Census" (percentage of the elderly in Japan of 2005, 2010 and 2015); "Population estimate" (percentage of the elderly in Japan of other years)

Note: The population of communities located inland from fishing ports and their percentages of the elderly (2011-2020) do not include data on three prefectures (Iwate, Miyagi and Fukushima)

Multifunctional Roles of Fisheries and Fishing Communities



Source: Prepared by the Ministry of Agriculture, Forestry and Fisheries, based on a report by the Science Council of Japan (only data on the fisheries industry and fishing communities are extracted).

(2) Development of Safe Fishing Communities Where People Can Live in Peace

○Fishing ports and fishing communities require both the improvement of disaster prevention capabilities and the promotion of disaster risk reduction measures. Multiple protection measures for fishing communities using breakwaters and seawalls, the construction of breakwaters and seawalls that are resistant to tsunamis, the preparation of evacuation routes, etc. have been promoted.

○In fishing villages, the development of living conditions lags behind. The development of fishing communities' roads, drains, etc. has been promoted.

○Measures against the aging of infrastructures are a cross-departmental issue for the government. The government promotes measures to address obsolescence of infrastructure, including fishing port facilities, based on plans incorporating measures for preventive maintenance.

(3) Activation of Fishing Communities

○In order to revitalize fishing villages, it is important to fully understand and make the most of their local resources to increase the number of visitors and promote interaction. For this purpose, about 1,500 exchange facilities, including stores for direct selling of fish and fishery products, have been developed in fishing ports and communities located inland from ports across the country. For the future, the perspective of sustainability will increase importance.

○Using "Seaside Stay" where a visitor can enjoy the traditional life experience of a fishing village community and the exchange with local people in such community, the government supports the implementation of measures concerning contents, such as efforts to polish up community resources as attractive tourist contents, and measures for infrastructures, such as the arrangement of accommodation facilities by utilizing old folk houses, etc.

○Thanks to the efforts of "Seashore Revitalization Plans" and the "Wide Area Seashore Revitalization Plans," the activation of fishing communities is expected to be accomplished through the promotion of fisheries.

Exchange facilities, including stores for direct sales of fish and fishery products in fishing ports and communities located inland from ports across the country

	FY2015	FY2016	FY2017	FY2018	FY2019
Number of exchange facilities, including stores for direct selling of fish and fishery products	1,386	1,421	1,371	1,390	1,451

Source: Prepared by the Fisheries Agency

Chapter 6 Current State of Reconstruction That Have Passed 10 Years After the Great East Japan Earthquake

(1) Conditions of the Restoration/Reconstruction from the Earthquake Damage in the Fisheries Industry

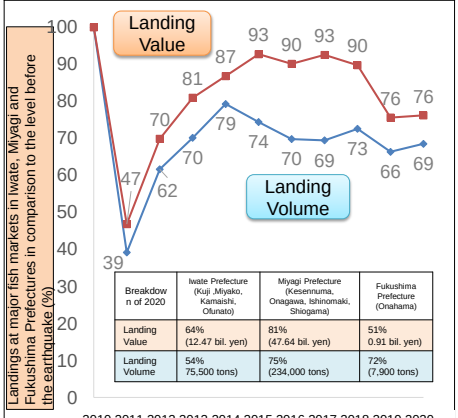
○ March 2021 marked ten years since the Great East Japan Earthquake. During the 10 years, fishing port facilities, fishing vessels, aquaculture facilities, fishing grounds and other facilities had been restored in the afflicted areas. The government will continue work to restore and reconstruct the fisheries industry of the afflicted areas.

○For fishing ports that serve as bases for the fisheries industry, high sanitary control freight handling areas, earthquake resistant piers, etc. have been developed.

○In the marine product processing industry, recovery of sales lags behind production capacity. The government will continue to support reconstruction of marine product processing businesses in the afflicted area through tutorials for each process of processing and distribution, seminars and business meetings, development of processing equipment necessary for labor saving, diversification of materials and cultivation of the old and new markets.

Summary of Restoration of the Fisheries Industry Following Great East Japan Earthquake (as of March 2021)

1. Landings



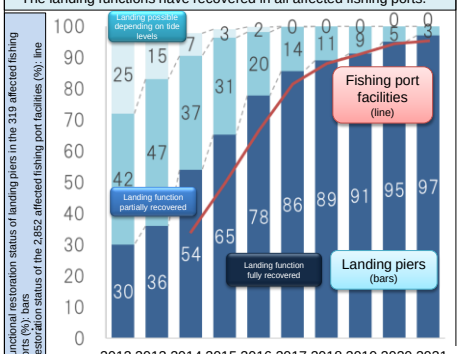
Breakdown of 2020	Iwate Prefecture (Kuji ,Miyako, Kamaishi, Ofunato)	Miyagi Prefecture (Kesennuma, Onagawa, Ishinomaki, Shiogama)	Fukushima Prefecture (Onahama)
Landing Value	64% (12.47 bil. yen)	81% (47.64 bil. yen)	51% 0.91 bil. yen)
Landing Volume	54% 75,500 tons)	75% (234,000 tons)	72% (7,900 tons)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Landing Value (100 mil. yen)	801	375	560	649	695	743	722	741	719	606	610
Landing Volume (1,000 tons)	462	181	285	325	367	345	323	322	336	307	317

*The 2010 values are those for March 2010 through February 2011, and the values for other years are those for February through January of the following year.

2. Fishing Ports

- The landing functions have recovered in all affected fishing ports.

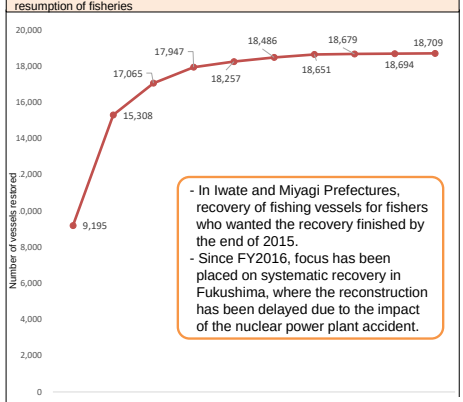


Regarding landing piers	Mar. 2012	Mar. 2013	Mar. 2014	Mar. 2015	Mar. 2016	Mar. 2017	Mar. 2018	Mar. 2019	Mar. 2020	Jan. 2021
Landing function fully recovered (fishing port)	96	115	172	208	248	273	284	291	303	311
Landing function partially recovered (fishing port)	134	149	117	99	65	45	35	28	16	8
Landing possible depending on tide levels (fishing port)	81	48	23	9	5	1	0	0	0	0
Not restored (fishing port)	8	7	7	3	1	0	0	0	0	0
Fishing facilities of which restoration has been completed (facilities)			974	1,417	1,903	2,324	2,514	2,602	2,695	2,717

*Fishing port facilities mean piers, breakwaters, anchorages, roads, etc.
*The number of affected fishing ports is the total number for seven prefectures.

3. Fishing Vessels

- Systematically recovery of fishing vessels in Fukushima Prefecture which wanted resumption of fisheries



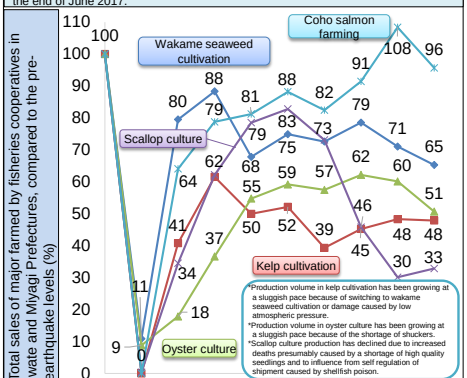
- In Iwate and Miyagi Prefectures, recovery of fishing vessels for fishers who wanted the recovery finished by the end of 2015.
- Since FY2016, focus has been placed on systematic recovery in Fukushima, where the reconstruction has been delayed due to the impact of the nuclear power plant accident.

Number of vessels restored	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
	9,195	15,308	17,065	17,947	18,257	18,486	18,651	18,679	18,694	18,709
Iwate	4,217	7,768	8,542	8,805	8,852	8,852	8,852	8,852	8,852	8,852
Miyagi	3,186	5,358	6,293	6,861	7,106	7,310	7,465	7,465	7,465	7,465
Fukushima	-	256	289	340	358	383	393	421	436	451

*The number of vessels for each year of 2012 through 2020 is that as of the end of March. The number of vessels for 2021 is that as of the end of January.
*The number of vessels restored is the total number for 21 prefectures.

4. Aquaculture

- All aquaculture facilities wishing to resume operations have been reconstructed by the end of June 2017.



*Production volume in kelp cultivation has been growing at a sluggish pace because of switching to wakame seaweed cultivation or damage caused by low atmospheric pressure.
*Production volume in oyster culture has been growing at a sluggish pace because of the shortage of shuckers.
*Scallop culture production has declined due to increased deaths presumably caused by a shortage of high quality seedlings and to influence from self regulation of shipment caused by shellfish poison.

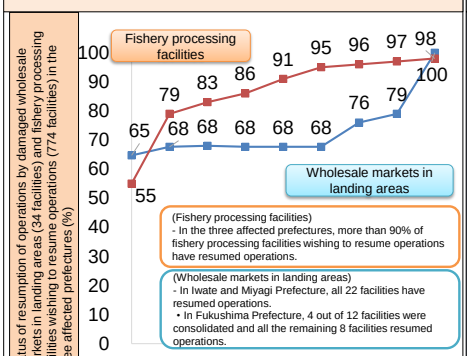
Unit: tons

	2010 fishing season	2011 fishing season	2012 fishing season	2013 fishing season	2014 fishing season	2015 fishing season	2016 fishing season	2017 fishing season	2018 fishing season	2019 fishing season
Wakame seaweed cultivation*1	34,439	3,742	27,379	30,414	23,354	25,799	25,002	27,047	24,462	22,473
Kelp cultivation*2	13,817	0	5,633	8,502	6,904	7,205	5,433	6,250	6,674	6,616
Oyster culture*3	4,031	354	719	1,476	2,207	2,386	2,316	2,503	2,423	2,042
Scallop culture*4	14,873	56	5,130	9,245	11,677	12,313	10,871	6,810	4,476	4,885
Coho salmon farming*5	14,750	0	9,448	11,619	11,978	13,007	12,159	13,486	15,982	14,111

*1 Fishing season is February through May. *2 Fishing season is March through August. *3 Fishing season is September through the following May. *4 Fishing season is April through the following March. *5 Fishing season is March through August.

5. Processing and Distribution Facilities

- More than 90% of fishery processing facilities wishing to resume operations have resumed operations.



(Fishery processing facilities)
- In the three affected prefectures, more than 90% of fishery processing facilities wishing to resume operations have resumed operations.

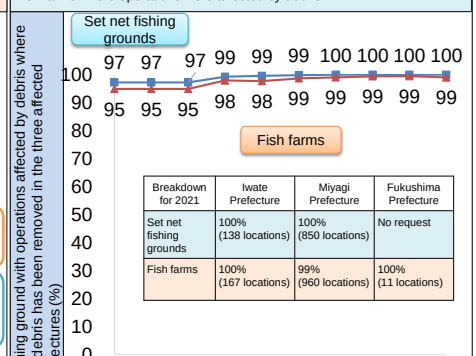
(Wholesale markets in landing areas)
- In Iwate and Miyagi Prefecture, all 22 facilities have resumed operations.
- In Fukushima Prefecture, 4 out of 12 facilities were consolidated and all the remaining 8 facilities resumed operations.

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fishery processing facilities (facilities) that have resumed operations*1	418	645	672	705	729	749	754	754	755
Wholesale markets in landing areas (facilities) that have resumed operations*2	22	23	23	23	23	23	26	27	30

*1 The figure for 2012 is that as of the end of March, the figures for 2013 through 2017 are those as of the end of December, the figure for 2018 is that as of the end of September, and the figures for 2019 and 2020 are those as of the end of December.
*2 The figure for 2012 is that as of the end of April, the figure for 2013 is that as of the end of December, the figures for 2014 through 2019 are those as of the end of February, and the figure for 2020 is that as of the end of January in 2021. Wholesale markets of Fukushima Prefecture were consolidated from 12 to 8 facilities, all of which resumed operation in 2020. As a result, the status of resumption of operation reached 100%.

6. Debris

- Debris removal has been completed in most set net fishing grounds and fish farms where operations were affected by debris.



Breakdown for 2021	Iwate Prefecture	Miyagi Prefecture	Fukushima Prefecture
Set net fishing grounds	100% (138 locations)	100% (850 locations)	No request
Fish farms	100% (167 locations)	99% (960 locations)	100% (11 locations)

Fishing grounds with their operations affected by debris (locations)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Set net fishing grounds	1,004	1,004	1,004	987	992	990	988	988	988	988
Debris removed	976	976	976	980	988	988	988	988	988	988
Fish farms	1,101	1,101	1,101	1,100	1,129	1,131	1,135	1,135	1,136	1,138
Debris removed	1,045	1,045	1,045	1,077	1,103	1,116	1,124	1,128	1,130	1,133

*The number of locations where operations are affected changes as a result of inflow or outflow of debris to or from the fishing ground due to meteorological or oceanographic phenomena.
*Figures for each year are those as of the end of March (as of the end of January in 2021 only).

Case Example

Efforts to Secure New Workers in the Afflicted Areas

The number of fishermen dropped sharply in Ishinomaki (Miyagi prefecture) after the disaster. In order to overcome the difficult situation and pass on its fisheries to the next generation, the city commissioned “Program to foster personnel who support fisheries” to Fisherman Japan. Fisherman Japan supports people wishing to become a fisherman by receiving their inquires, implementing short-term training before employment, operating 2-day-1-night fishing school, renovating vacant houses in the community into a fishery worker center where people wishing to work can live during training, for example. As a result, 35 people were newly recruited under the program as of February 2021 (21 of them currently remain in the job).

Training
(Photo provided by Fisherman Japan

Case Example

Establishing a New Company with Cooperation toward Reconstruction (Kesennuma Kanae Fisheries)

In Kesennuma (Miyagi Prefecture) multiple companies engaged in inshore long-line fishery of tuna cooperated to make the fishery, which is one of the area’s main industries, sustainable in the long term. Toward efficient fisheries, the companies worked on well-organized group operation and reduction of navigation days of eight fishing vessels of the area, cost reduction through blanket purchase of fishing gear and materials, for example. As a result, average navigation days were reduced by about 7 days from 34.5 days to 27.4 days in three years from April 2016 to April 2019, and fishing gear/material purchase cost is reduced by 4.8% compared with individual purchase.
For further streamlining of operations and maintenance of the fleet by constructing replacement vessels, the 6 cooperating companies established Kesennuma Kanae Fisheries in 2018. In 2019, the company constructed “Kanaemaru” with improved inboard ambience, including a Wi-Fi environment and enlarged cabins, in an effort to make the fishery attractive for young people.

New ship of Kesennuma Kanae Fisheries Kanaemaru
(Photo provided by Kesennuma Kanae Fisheries)

Case Example

Working on New Product Development Positioning Reconstruction as its Second Start of Business (MORIYA Corporation)

MORIYA, a marine product manufacturer in Kesennuma (Miyagi Prefecture) lost its head office and factory as they were swept away by the tsunami, but it embarked on a new initiative positioning reconstruction as the second start of business.
Before the earthquake the company’s main product was simply processed sliced fish. After the disaster, based on the president’s belief that “business is difficult with the profitability of simple processing” the company tried development of products with high added value and developed a product series name “Soft fish—even the bones are edible.” The series uses fresh fish that is landed on foreshore and cooked to make even the bones edible without sacrificing the original flavor and nutrients of the fish. Since the start of experimental selling, the product has been gaining new customers and increasing sales. The company is working to create products to respond to customer demand for small quantity, large variety and quick delivery, while at the same time introducing equipment. As a result of these efforts, the company’s sales as of the end of May 2019 recovered to about 60% of the before-disaster level. Moriya aims to export its products in the future.

Recipe using product series “Soft fish—even the bones are edible” (saury rice)
Photo provided by MORIYA Corporation

Case Example

Cooperation of Processing Businesses Driven by the Earthquake (Ishinomaki Umaimono Corporation)

Driven by the Great East Japan Earthquake, 10 processing businesses in Ishinomaki (Miyagi Prefecture) established the company “Ishinomaki Umaimono” with the aim of cooperation.
The member businesses that are of different business categories and with different specialty fish species are increasing processing options while at the same time reducing expenses for plant investment by sharing knowledge, knowhow and processing equipment through cooperation.
Ishinomaki Kinnka Chazuke, which focuses not only on taste but also on marketing including packaging to attract consumers’ attention, uses specialty fish species of the member businesses. The series has developed into a fast-selling product of the company.

Ishinomaki Kinnka Chazuke series
Photo provided by Ishinomaki Umaimono

(2) Response to the Impact of the Accident at TEPCO's Fukushima Daiichi Nuclear Power Plant

i. Monitoring of Radioactive Materials in Fish and Fishery Products and Trial Fishing Operation/Selling off the Coast of Fukushima

- The government, in cooperation with prefectural governments and fisheries cooperatives concerned, implements monitoring of radioactive materials in fish and fishery products. Results of the monitoring are published.
- Distribution of fish and fishery products whose radioactive material monitoring results exceed the Japanese maximum levels in food (JMLs) is prevented through the cooperation of the national government, related prefectural governments, and fishery related organizations. Restriction of distribution was once lifted for all fishery products by the end of February 2020. However, restriction of shipment was imposed on black rockfish off Fukushima Prefecture because radioactive cesium exceeding JMLs was detected from one in February 2021.
- Trial fishing operation/selling was for coastal fishery and bottom trawl fishery off Fukushima Prefecture. It finished at the end of March 2021.

ii. Handling of ALPS* Treated Water

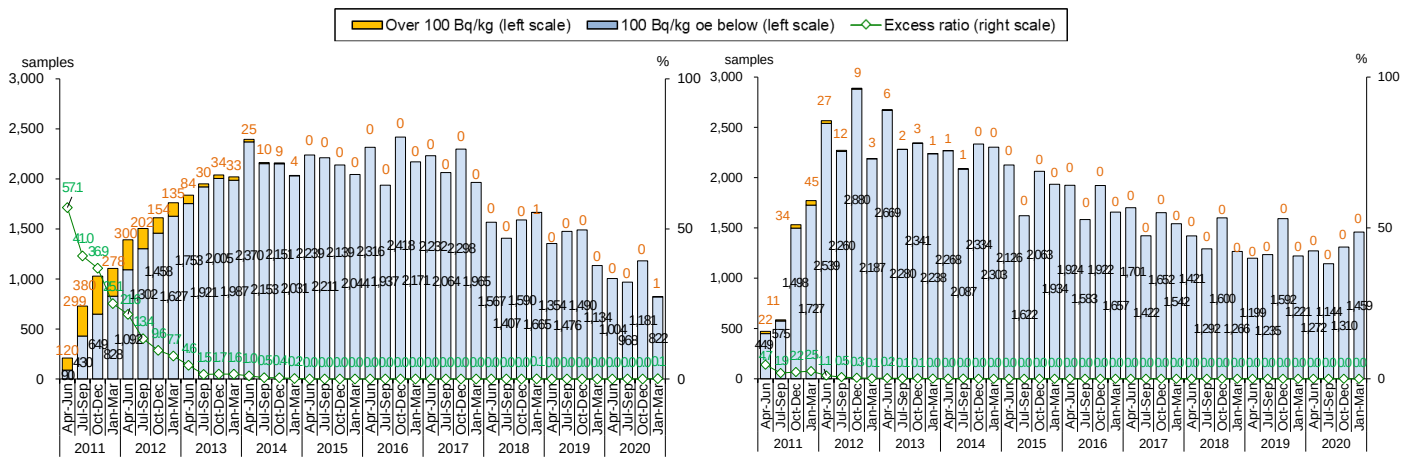
- In order to decide the government policy on the handling of ALPS-treated water, after receiving the report of the Subcommittee on Handling of the ALPS Treated Water in February 2020, the government is holding discussions with stakeholders broadly including agriculture, forestry and fisheries-related people, in Fukushima Prefecture.
- Listening to the opinions of stakeholders, the government is considering disposal methods that may attract less social concern, enhancement of environmental monitoring, and other countermeasures for reputational damage.

*Advanced Liquid Processing System

Monitoring Results of Radioactive Materials in Fish and Fishery Products (as of the End of March 2021)

<Marine species from Fukushima Prefecture>

<Marine species from areas other than Fukushima Prefecture>



iii. Mitigating Reputational Damage and Response to Import Restrictions in Foreign Countries and Regions

- Some consumers are still concerned about food from Fukushima Prefecture. Therefore, the Fisheries Agency monitors radioactive materials in fish/fishery products and publishes the results to consumers in a timely manner as well as posting a Q&A on its website so that consumers can get correct information and easily understand it.
- Results of the monitoring are published in English, Chinese and Korean. Survey results and measures taken to ensure safety are explained to governments and media to lobby for the relaxation or elimination of import restrictions. As a result, 40 countries among the 53 countries and regions that had continued to impose ban on fish and fishery product imports completely withdrew their import restrictions by the end of March 2021.
- The government will continue to take various opportunities to encourage countries and regions that are continuing import restriction to loosen or lift the restriction.

Structure of "FY2021 Fisheries Policy"

Overview

Focus of measures, fiscal measures, tax measures, financial measures, and policy assessment

I. Fishery Resource Management for Making Fisheries a Growth Industry

- Advancement of domestic resource management
- Promotion of international resource management
- Strengthening the fisheries regulatory system
- Income stabilization measures that contribute to stable business management of fishers engaging in appropriate resource management, etc.
- Conservation of the fishing ground environment and maintenance of the ecosystem

II. Reform of the Distribution Structure which Contributes to Increasing the Income of Fishers

- Establishing a competitive distribution structure
- Developing measures for processing, distribution, consumption, and export

III. Development of an Environment for Securing Leaders and Expanding Investments

- Steady conduct of Seashore Revitalization Plans and fostering of human resources
- Creating an environment for sustainable fisheries and aquaculture
- Demonstrating the roles and restructuring and improving of fisheries cooperatives organizations
- Supporting fishery management through appropriate loans, credit guarantees, and fisheries insurance systems

IV. Efforts to Support Revitalization of Fisheries and Fishing Communities

- Comprehensive development of fishing ports, fishing grounds, and fishing communities
- Promoting the demonstration of multifunctional roles
- Strategic promotion of research, studies, and technological development in the fisheries industry
- Strengthening safety measures for fisheries by fishing vessels

V. Reconstruction from the Great East Japan Earthquake

- Steady restoration and reconstruction
- Overcoming the impact of the nuclear power plant accident

VI. Requirements for the Comprehensive and Systematic Promotion of the Fisheries Policy

- Promoting measures in an efficient manner through coordination between relevant ministries and agencies
- Management and assessment of the progress of measures
- Implementing measures from a public point of view, taking into account the needs of consumers and the public
- Compiling and enhancing the use of statistics in line with policy needs
- Helping business owners and producers become independent and demonstrate originality and ingenuity
- Taking fiscal measures in an efficient and focused manner