

FY2019 Trends in Fisheries

FY2020 Fisheries Policy

Summary

This document is a report on fisheries trends and the policy implemented during FY2019 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 FY2020 in accordance with the provisions of paragraph (2) of said Article.

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## **Structure of "FY2020 Fisheries Policy"**

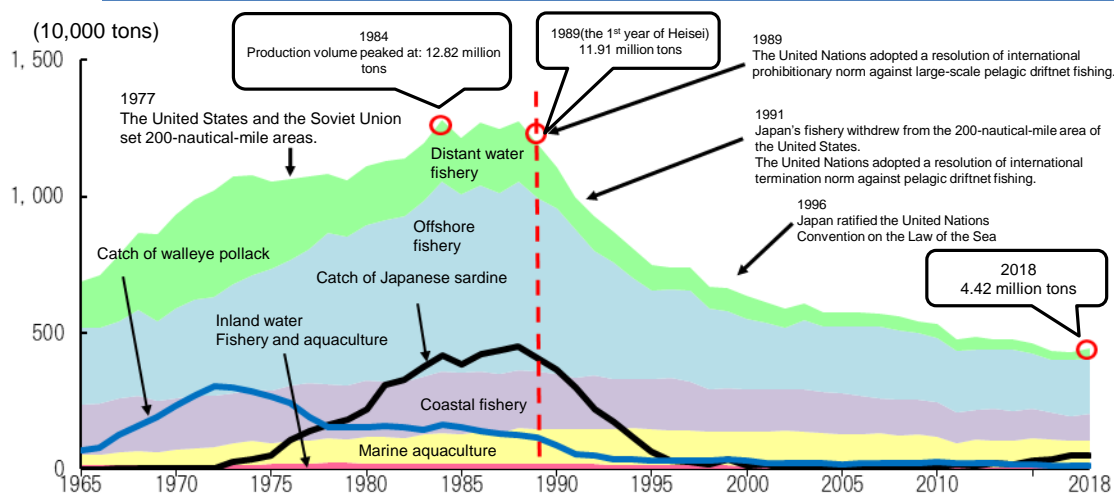
## Section 1 Change of Japan's Fisheries

\*From January 8, 1989 to April 30, 2019

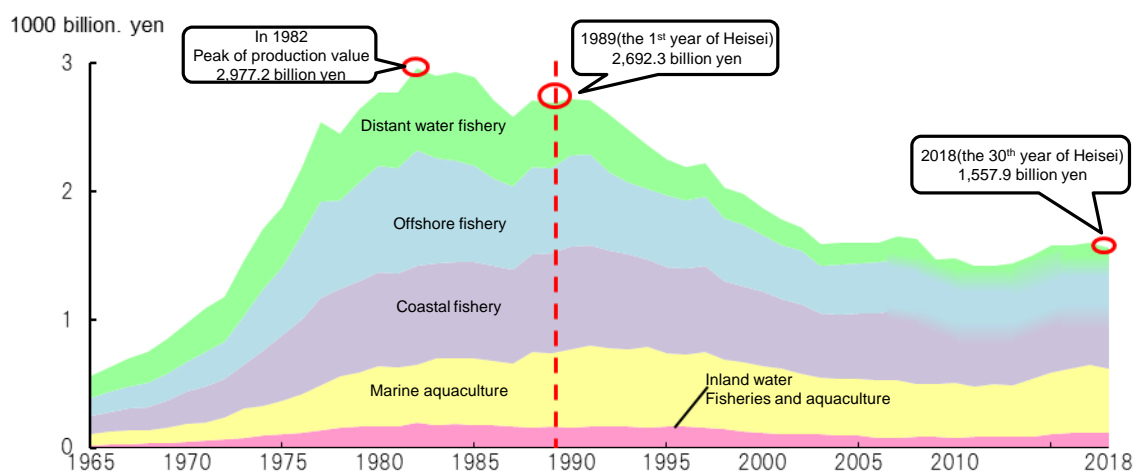
### (1) Situational Change of Fishery Production

- The “200 nautical miles” era began in late 1970s and distant water fishery declined. The catch of sardine increased and reached in 1984 the peak production of fishery and aquaculture, 12.82 million tons. The production value reached the peak of 2,977.2 billion yen in 1982 and then decreased afterwards.
- The ratio of the production of distant water fishery to the whole production of fishing vessel fishery was about 40% in 1973 and decreased to about 10% in 2018.
- The ratio of the production of offshore fishery to the whole production of fishing vessel fishery was about 50-60% throughout the period from 1989 to 2018.
- The ratio of the production of coastal fishery to the whole production of fishing vessel fishery increased to about 30% throughout the period from 1989 to 2018 although it tends to gradually decrease now due to changes of the marine environment.
- The production of marine aquaculture reached the peak of 1.34 million tons in 1994 and then gradually decreased afterwards. However, the production of yellowtail fish and similar ones does not change much.

#### Change of fishery production and fishing environment in Japan



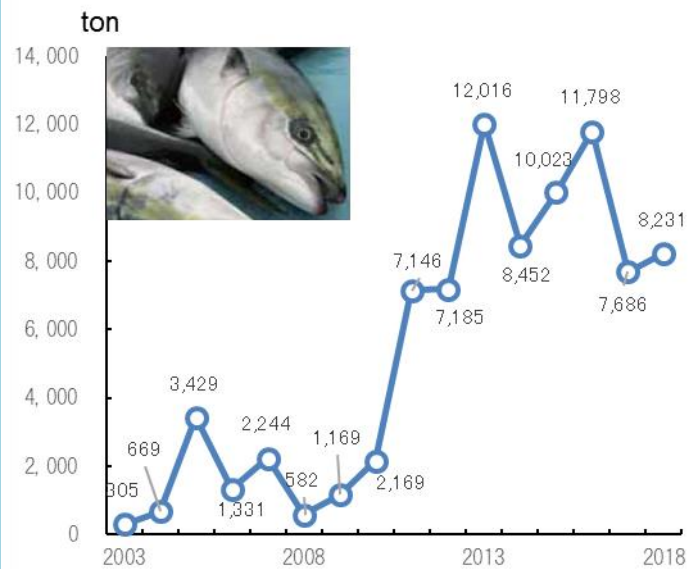
#### Change of fishery production value in Japan



## (2) Trends in Fishing Ground Environment

- In the Heisei period, various phenomena were observed such as increasing catch of yellowtail in Hokkaido Prefecture, expanding distribution of Japanese Spanish mackerel to the northward, and strengthened sea desertification along the coast of Kyushu, which could be mostly caused by increase of the sea water temperature. Development of aquaculture species highly resistant against high water temperature was promoted to respond to the climate change.
- In the Heisei period, measures for the fishing ground environment were strengthened through the Act on Ariake Sea and the Act on the Seto Inland Sea and cleaning of beaches and shores was conducted mainly by fishers involved in fishery over the country.
- The Sustainable Aquaculture Production Assurance Act was established in 1999 and fishery cooperative organizations created a Fishery Ground Improvement Plan on the basis of the Act to organize activities for improvement of fishery ground environment. Then, environmental improvement of the fish farms was promoted.

Change in catch of yellowtail in Hokkaido Prefecture

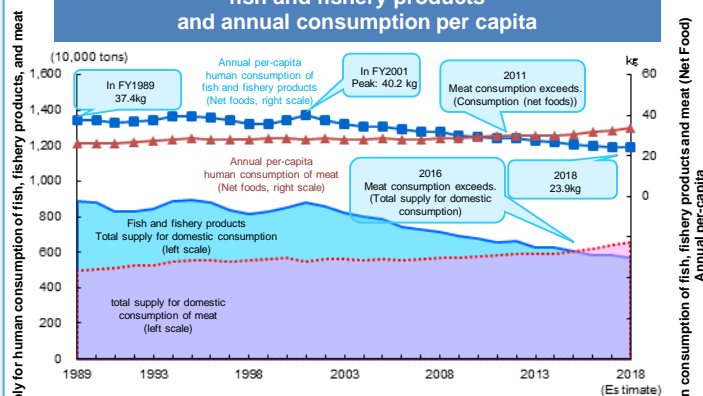


Source: Prepared by the Fisheries Agency, based on Hokkaido Fishery Status (the Government of Hokkaido Prefecture)

## (3) Change of the Consumption of Fish and Fishery Products

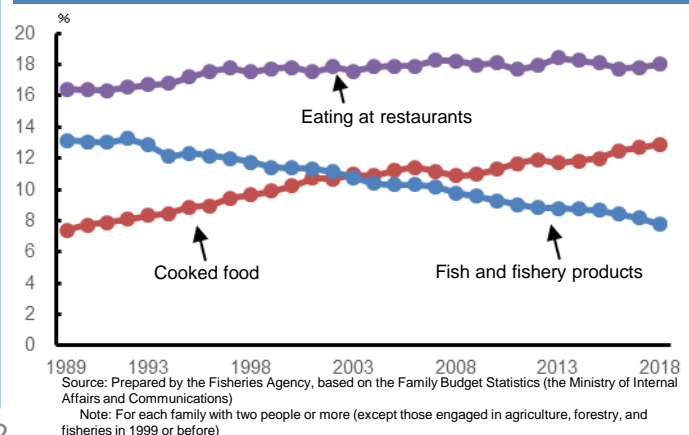
- The world's per capita consumption of fish and fish products has nearly doubled in the past half century. The consumption shows significantly increasing trends, especially in emerging countries such as China.
- Although Japan's per capita consumption of fish and fish products is still in a high level if compared to those in other countries, it has declined to the same level as the level 50 years ago.
- The annual consumption of fish and fishery products per capita tends to decrease from 40.2 kg, the peak in 2001. In 2011, the consumption of meat exceeds that of fish and fishery products.
- The most purchased fish species are squid and shrimp in 1989 but in recent years salmon, tuna, and yellowtail.
- Because time of doing housework has been shortened due to women's social progress and increase of the number of couples with husband and wife both working, there has been a tendency to have simplified meal and the ratio of expenditure for cooked foods and eating at restaurants to expenditure for foods has been increasing in family budgets.

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)

Change of the ratio of expenditure for eating at restaurants and others among total meal expenditure



Source: Prepared by the Fisheries Agency, based on the Family Budget Statistics (the Ministry of Internal Affairs and Communications)

Note: For each family with two people or more (except those engaged in agriculture, forestry, and fisheries in 1999 or before)

## **(4) Conclusion of a Treaty and Establishment of a Law as Guideline of Fisheries Policies**

- The United Nations Convention on the Law of the Sea, which specifies human activity in all ocean areas came into force in 1994 and Japan ratified it in 1996. Since then, resource management activities have been conducted.
- In 2001, the Fisheries Basic Act was established as a guideline of fishery policies for comprehensive targets of whole fishery industry including processing and distribution, with the background that the situation of fishery had changed largely. On the basis of the Act, the Fisheries Basic Plan was established as mid-term guideline for fishery policies.
- For inland water fishery, the Act to Promote Fishing in Inland Waters was established in 2014. On the basis of the Act, the Guidelines on promotion of inland water fisheries was established as mid-term guideline for promotion of inland water fishery.

## **(5) Activity of Sustainable Use of Fisheries Resources**

- Stock enhancement fishery was expected to increase the fishery production in the 200-nautical-mile era. In 1980s and 1990s, the number of major fish stock enhancements reached a peak. On the other hand, in the period from 1989 to 2018, tax revenue sources were transferred from the national government to local ones to promote the stock enhancement fishery over the country. In recent years, the national government has promoted activities for fair benefit and fair cost allocation for wide-area fish and activities to establish joint stock enhancement systems with low cost and high productivity.
- For Japan to ratify the United Nations Convention on the Law of the Sea in 1996, the Act on Preservation and Control of Living Marine Resources was established. In January 1997, the total allowable catch (TAC) system based on the Act began to be applied to 6 species.
- For promotion of voluntary resource management by fishers from FY2011, the national and prefectural governments set the Resource Management Guidelines and implement a resource management system and the fishers and groups of fishers develop and implement a resource management plan. To support activities for the resource management plan, measures for resource management and stable income (currently, measures for stable fishery income) were introduced.
- Western and Central Pacific Fisheries Commission (WCPFC) which manages tuna species and North Pacific Fisheries Commission (NPFC) which manages fisheries resources such as Pacific saury in the high seas of Pacific Ocean were established as international regional fisheries management organization in the Heisei period from 1989 to 2018. Japan - China Fishery Agreement and Japan - Korea Fishery Agreement, etc. were concluded to maintain Japan's relationships with peripheral countries and regions.
- International activities to prevent, deter and eliminate IUU (illegal, unreported, and unregulated) fishing were also promoted.

## **(6) Change of Development of Fisheries Infrastructure**

- The Fishing Port Act was amended in 2001 to the Act on Development of Fishing Ports and Grounds which aims to develop fishing ports and grounds in an integrated way.
- The Frontier Fishing Ground Enhancement and Development Project implemented by national government was introduced in 2007 for exclusive economic zones.
- Through the period from 1989 to 2018, sanitary management measures for fishing ports, measures against the aging of infrastructures for fishing port facilities, etc., and measures to prevent disaster or reduce disaster risk of fishing ports and villages were promoted.

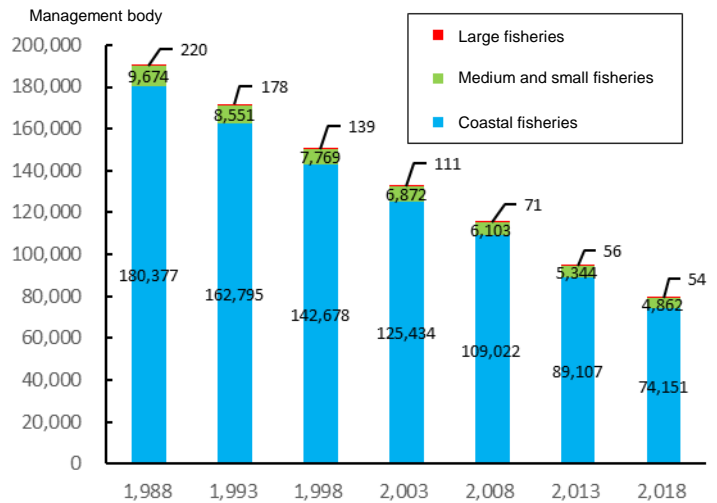


## Section 2 Change of Fishery Structure

### (1) Change in Fishery Management Body Structure

- The number of management bodies of sea fisheries and aquaculture decreased by 58% from about 190,000 in 1988 to about 79,000 in 2018.
- The decrease was 59% in the coastal fisheries, 50% in the medium and small fisheries, and 75% in the large fisheries.
- The number of management bodies of inland water fisheries decreased by 61% from 4,961 in 1988 to 1,930 in 2018.
- The number of management bodies of inland water aquaculture decreased by 70% from 9,061 in 1988 to 2,704 in 2018.

Change of the number of management bodies of sea fisheries and aquaculture



Source: Prepared by the Fisheries Agency, based on Fisheries Census (the Ministry of Agriculture, Forestry and Fisheries)

Note 1: Coastal fisheries: Generic term for fishing with no vessel, fishing with powerless vessel, fishing with outboard engine, fishing with total weight less than 10 tons of power-driven vessels used in the past year, fishing with fixed net, and sea aquaculture.

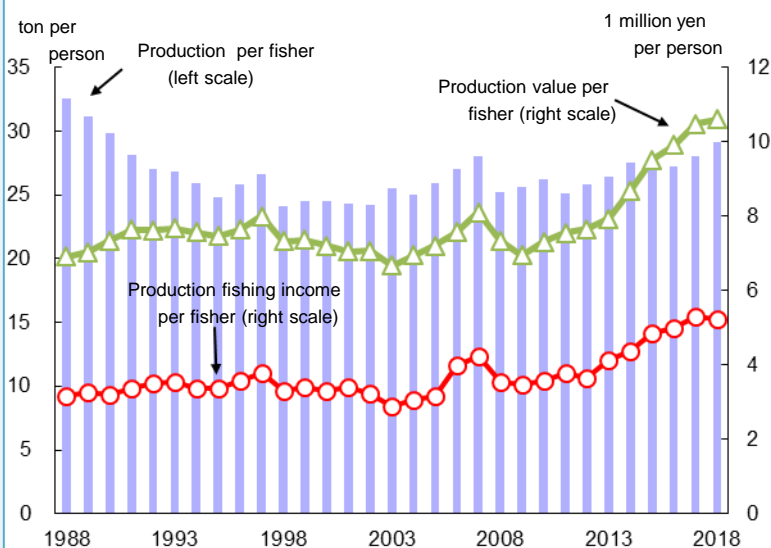
Note 2: Medium and small fisheries: Generic term for fishing with total weight equal to or more than 10 and less than 1,000 tons of power-driven vessels used in the past year.

Note 3: Large fisheries: Generic term for fishing with total weight equal to or more than 1,000 tons of power-driven vessels used in the past year.

### (2) Status of Management of Fisheries and Aquaculture

- The fishing income of private coastal fishing management bodies is higher for those younger than 65 than for those aged 65 or older.
- The fishing income of private sea aquaculture management bodies is higher for those aged younger than 65 than for those of all ages.
- The management status of company management bodies of fishing vessel fisheries indicates that the fishing profit was zero or negative but the non-fishing profit gradually increased making the operating profit positive in recent years.
- The production of fisheries per fisher tends to increase since 2002. The production value of fisheries per fisher and the production fishing income per fisher tend to increase since 2003.

Change of productivity of fisheries and aquaculture in Japan

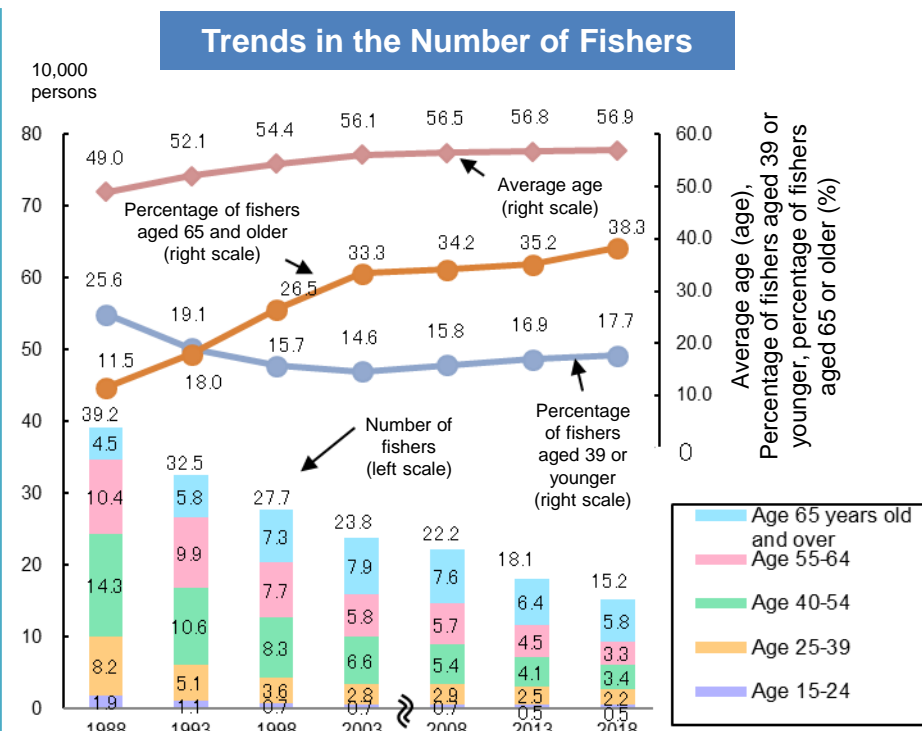


Source: Prepared by the Fisheries Agency, based on the Fisheries Census, Survey on the Trends in Fishery Employees, Fisheries and Aquaculture Production Statistics, and the Gross Fisheries Output (the Ministry of Agriculture, Forestry and Fisheries)



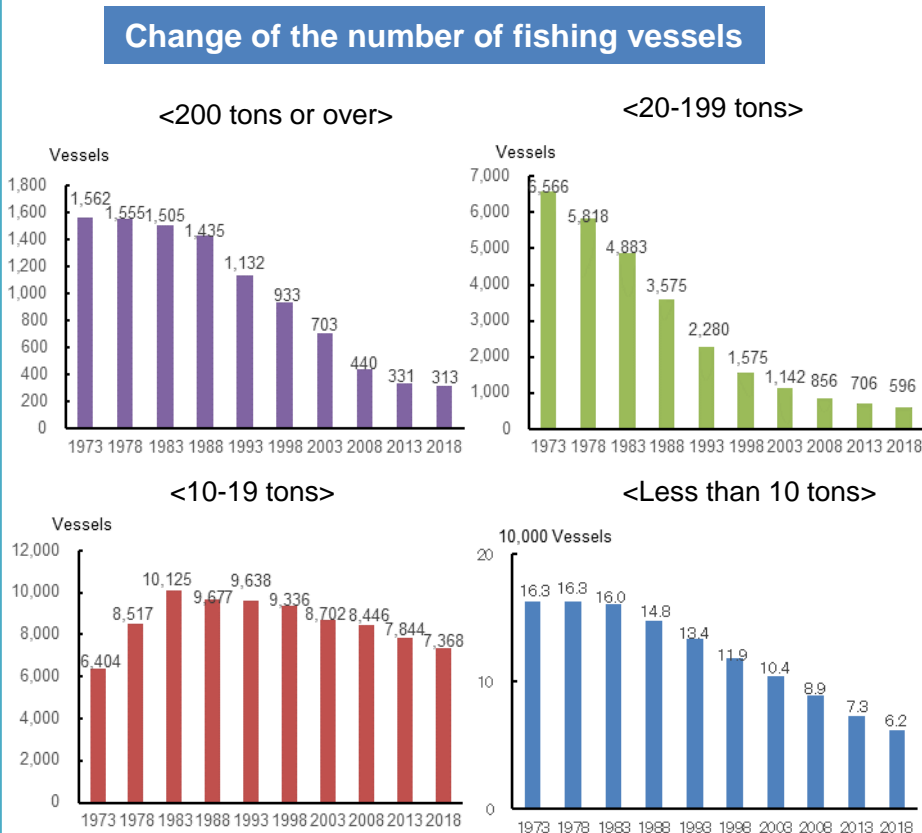
### (3) Change of Fishery Work Structure, etc.

- The number of fishers decreased by 61% in 30 years from 1988 to 2018.
- The ratio of fishers aged 39 or younger among all the fishers tends to gradually increase since 2003 and 2010s. On the other hand, the ratio of fishers aged 65 and older tends to increase consistently.
- The annual number of new entrants into fisheries has remained at the same level, at around 2,000 persons, since 2009. The percentage of fishers aged 39 and younger is about 70%.



### (4) Change of Fishing Vessel Structure

- The number of fishing vessels of any sizes decreased in the period from 1989 to 2018. In particular, the number of fishing vessels of 20 tons or heavier used for offshore and distant water fisheries has decreased to about 20% in 30 years.
- Fishing vessels has got older in the period from 1989 to 2018. The percentage of fishing vessels of 5-9 tons aged 20 or older has increased from 4% to 83% and that of 10-19 tons aged 20 or older has increased from 5% to 72%. Among fishing vessels of 20 tons or heavier, the percentage of those aged 20 or older increased and the percentage of those younger than 10 years tends to increase since 2008.

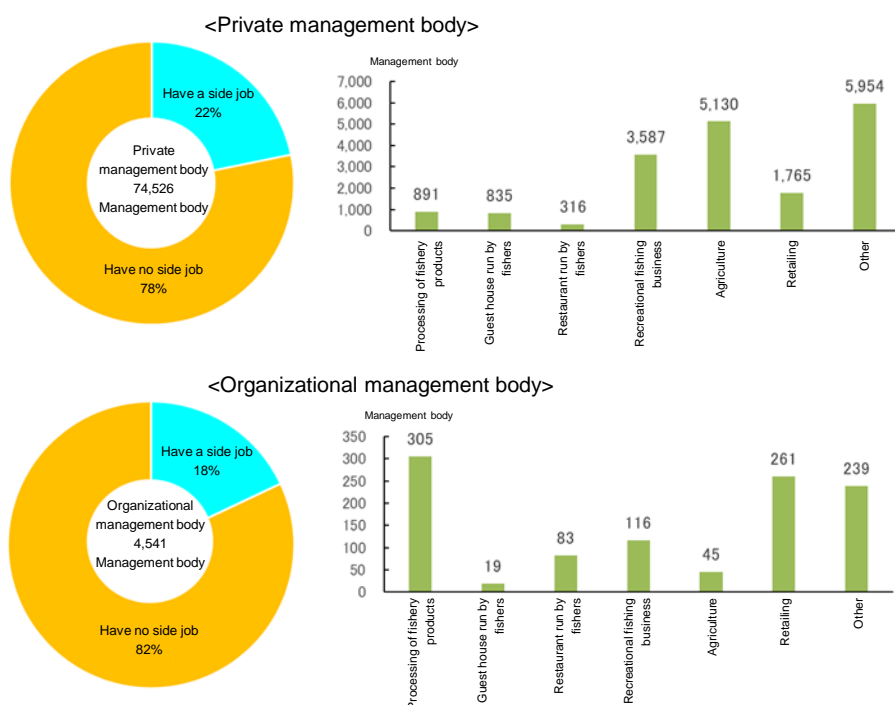


## (5) Actual Status of Side Jobs in Fisheries

○About 20% of all fishing vessels (most of which are coastal squid fishing vessels and stick-held dip net saury fishing vessels of less than 20 tons) operate multiple kinds of fisheries.

○About 20% of sea fisheries management bodies have side jobs other than fisheries. The side jobs of private management bodies include agriculture, recreational fishing business, etc. and those of organizational management bodies include fishery processing, retailing, etc.

### Status and kinds of side jobs in fishery management bodies (2018)



Source: Prepared by the Fisheries Agency, based on Fisheries Census 2018 (the Ministry of Agriculture, Forestry and Fisheries)

## (6) Change of Distribution and Processing Structure

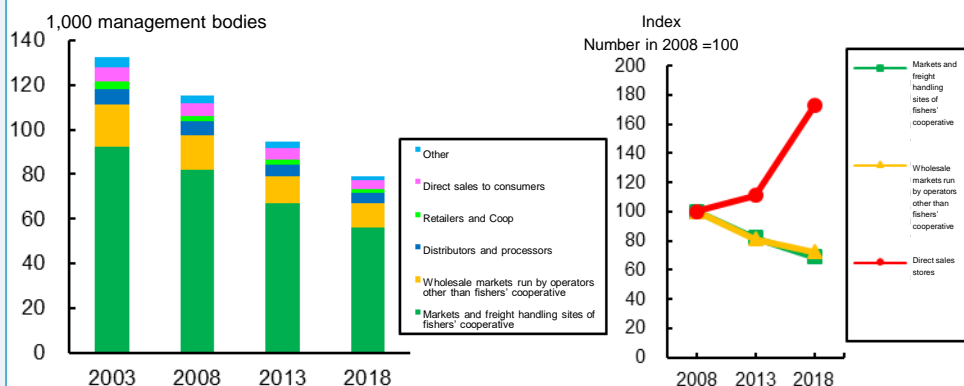
○70% of fisheries management bodies mainly ships fish and products to markets and processing sites. The number of fisheries management bodies which ship fish and products to direct sales stores increases.

○The number of fish markets tends to decrease in the period from 1989 to 2018. Annual amount of fish handling also tends to decrease but that of living fish has been increasing in recent years.

○The number of fishery processing sites tends to decrease. In particular, the number of processing factories where dried fish products are produced decreased to about 30%. On the other hand, the number of processing factories where frozen foods are produced has been increasing in recent years.

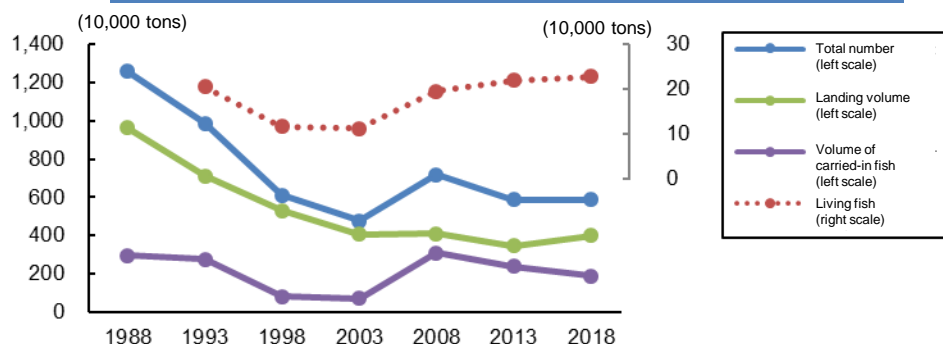
○The number of foreign workers at cool product factories, frozen product factories, and fishery processing factories increases.

### Change in shipment destination of fisheries management bodies



Source: Prepared by the Fisheries Agency, based on Fisheries Census (the Ministry of Agriculture, Forestry and Fisheries)

### Change of annual amount of fish handling at fish markets



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

## Section 3 Promotion of Renovation Toward the Reiwa Era

### (1) Establishment of “Reform of Fisheries Policies” and Amendment of Fishery Act, etc.

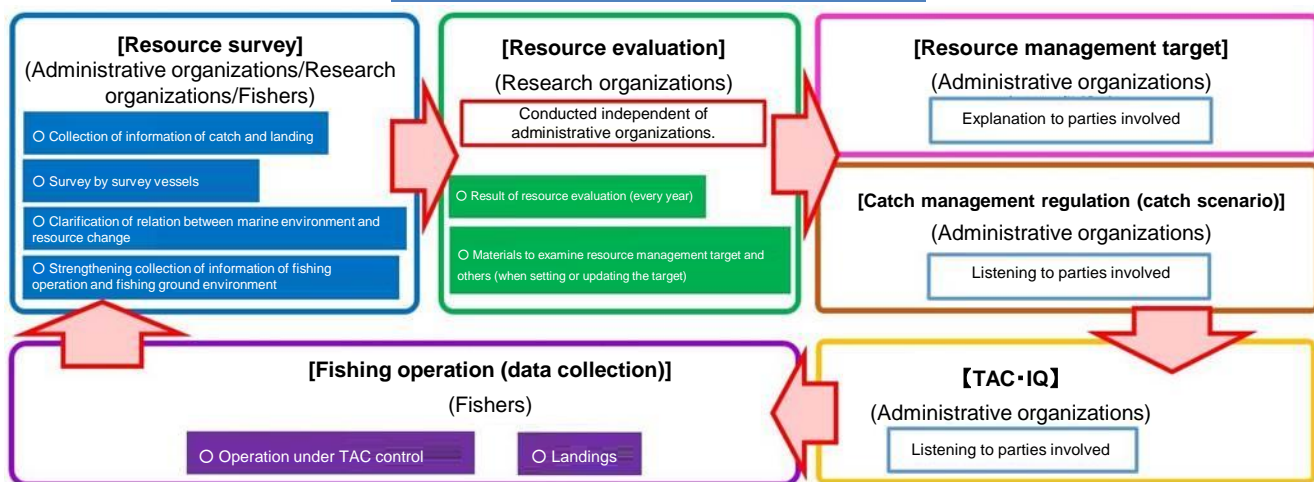
- In the Heisei period, the trend and environment of Japan's fisheries changed significantly and new actions were taken for future development of the fisheries. As a turning point, it is desired to update the framework of previous policies and systems.
- In order to achieve both appropriate resource management and transformation of the fisheries industry into a growth industry at the same time, to increase fishers' income, and to establish a fishers job system with well-balanced age distribution, Reform of Fisheries Policies were made in June 2018.
- To develop laws for the Policies, the Fishery Act was amended in December 2018 and the basic systems of fishery production such as the resource management measure, fishing permission, and fishing right were amended.

### (2) Specific Direction of Reform of Fisheries Policies

#### i. Promotion of a new resource management system

- For transformation of the fisheries industry into a growth industry, it is important to preserve, recovery, and appropriately manage the resources. Therefore, resource evaluation is conducted on the basis of resource surveys and an evaluation method and management method are introduced with a management aim to realize that the catch reaches maximum sustainable yield (MSY).
- For the resource evaluation, 1) information of resource generation situation, 2) estimation of the number of fish for different ages, the natural decrease rate, and the rate of death due to catch, and 3) influence of recent marine environmental change on the natural decrease rate are examined and a survey system to collect necessary information for the examination is strengthened.
- For non-TAC fish, results of the resource evaluation are released successively and an examination meeting is held. By doing so, it is aimed at that 80% of the catch will be under control of TAC management by 2023.
- Management based on Individual Quota (IQ) is introduced successively to the ready fisheries permitted by the minister.
- For collection of catch information which is important for the resource evaluation and resource management, it is newly obliged for fisheries permitted by a prefectural governor to submit a catch record report. It is also obliged for fisheries with fishing right to submit a report on resource management and ground usage. For the catch information, reporting and collecting via electronic means are promoted as smart fisheries activity.

#### Flow of resource management



## ii. Strengthening of fishery production base and promotion of structural reform

### Activation of fishing villages through Seashore Revitalization Plans and comprehensive use of fishing ground

- For coastal fishery, it is important that fishers themselves work on solving problems according to regional situations for increase of their incomes. To back up this activity, Seashore Revitalization Plans are promoted.
- To maintain power of local fisheries, the sea area (fishing ground) whose degree of use has decreased needs to be comprehensively used by collaboration with other industries or new entry from other districts.



Direct sales store "Shima no Shiki" run by JF Itoshima, which is working on increase of the income of fishers (Right photo courtesy: Fukuoka Prefecture)

### Transformation to operation and production system of fishing vessel fisheries with high profitability

- For offshore and distant water fisheries, transformation to an operation and production system with high profitability is promoted by introducing high-performance fishing vessels.
- Comfortability, safety, and operability of fishing vessels are enhanced and the Internet environment on the sea is developed for improvement of the work environment.

#### <Example of Overseas Purse Seine Fisheries>



Fishing vessels with improved labor and living environments



Accompanied helicopter



Wi-Fi internet environment  
Wi-Fiインターネット環境

### Promotion of securement and development of human resource

- The acquisition of fisheries skills and knowledge such as handling of fishing vessels and tools is supported so that people having no experience of fisheries can take a job in fisheries and stay in it.
- Fishers' conscious renovation is promoted by 1) promotion of increasing the number of licensed mariners, 2) transmission of craftsmanship using ICT, and 3) acceptance of fisheries workers from other districts.

### Promotion of Smart Fisheries

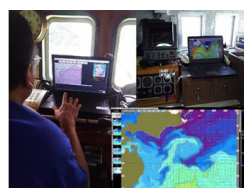
- In order to transform the fisheries industry to a growing industry, introduction and promotion of ICT/IoT/AI technologies and drone/robot technologies in fisheries and aquaculture sites are promoted.
- In addition, the fishery data collaboration platform that enables utilization of data obtained from production to distribution is developed.

#### Example of ICT and AI technologies on operation stage



##### Automatic feeder

Remote feeding can be made by checking feeding status of cultured fish through smart phones.  
(Photo by Umitron)



##### Ebisu-kun

Wide-area information of water temperature and climate is provided to fishing vessels by combining sea surface temperature images measured from satellites and on-site temperature measured by fishing vessels or survey vessels.  
(Photo by Japan Fisheries Information Service Center)



##### Aquaculture control cloud system

Feeding data and other information related to culture management are given as input through a tablet and the data is integrated in real time by cloud management.  
(Photo by Fisher's cooperative of Azuma-cho and Minaminihon Information Processing Center)



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

#### Establishing a competitive distribution structure

- Establishment of a distribution structure competitive in terms of quality and cost is aimed at by making efficient the distribution of fishery products in collaboration with producers and processors, realizing electronic transactions, introducing selection and processing technologies with ICT and AI, strengthening quality and sanitary management of processing facilities, and promoting production responding to domestic and foreign demands.
- For wholesale markets, integration and emphasizing of production-area markets are promoted and the quality and sanitary management system is strengthened.
- From a viewpoint of promotion of thorough resource management and eradicating IUU fishing, activities on fishery traceability are promoted.

#### Promoting activities to expand export

- “Headquarters for the Export of Agricultural, Forestry and Fishery Products and Food” was established in April 2020 in the Ministry of Agriculture, Forestry and Fisheries. The headquarters promote negotiation with export destination countries with respect to regulation relaxation or deregulation, development and approval of export facilities, procedure for export, integration of issuing export certificates.
- 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 2020.
- To expand export of fishery products, it is promoted to renovate fishery processing facilities and develop machinery to meet conditions of export destination countries, develop a business method and logistics that can be a model for international markets, use of marine eco-label certificates, develop cargo handling sites with highly controlled sanitary which can receive EU-HACCP certificate, strengthen cargo collection and shipment functions by integrated maintenance with freezing and cooling storage facilities, and strengthening a production function of cultured fishery products.

#### Promoting use of marine eco-label for fishery and aquaculture products

- Marine eco-label provides consumers with information that attention is paid to sustainable use of resources and the environment in the production of products. Activities to enhance the degree of recognition and acquisition of certificates are promoted and expanded.

##### Case Example

#### Town to live with the sea, Ainan-cho -Eco fish of Ainan-

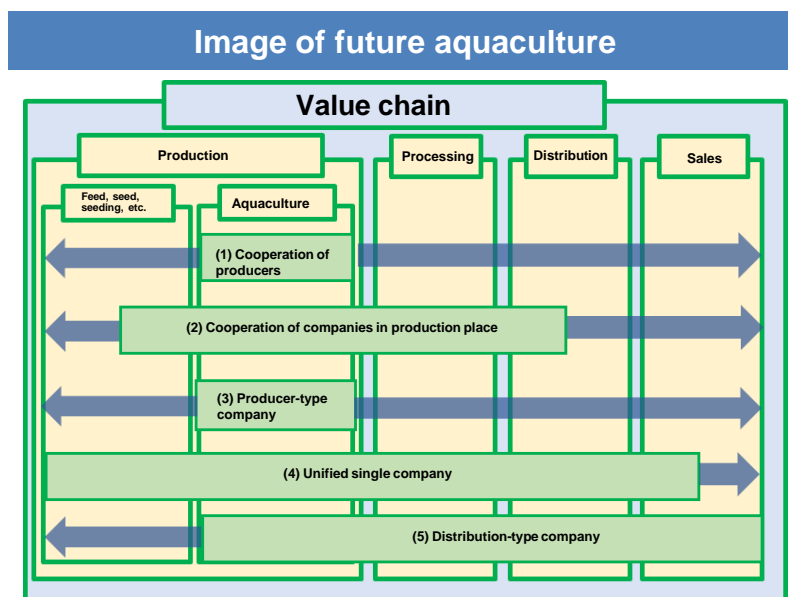
Ainan Fishery Cooperative acquired Aquaculture Eco Label (AEL) certificate in 2017 and aquaculture certificate of Marine Eco-label Japan (MEL) in February 2020 (for red sea bream). Through opportunities such as fair at department stores in Tokyo and surrounding areas, not only products and producers are introduced but also significance of the marine eco-label and importance of sustainable aquaculture production are emphasized in various activities. Acquisition of the certificate enables negotiation with foreign buyers who want products with marine eco-labels and accelerates activities to acquire foreign customers. Future expansion of the activities is expected.



Promotion of certified products  
(Source: Ainan Fishery Cooperative)

#### iv. Transformation of aquaculture to growing industry and promotion of inland water fisheries

- Efforts to transform aquaculture to a growing industry separately for each of domestic and foreign markets are made. In addition, information of quality and quantity of aquaculture products and use forms to respond to demands is acquired and systematic production in accordance with demands and production cycle is planned. Through these activities, transformation from product-out type to market-in type aquaculture industry is attempted.
- For inland water fisheries, promote activities to increase resources by stock enhancement and development of spawning ground by fisheries cooperatives. Moreover, it is promoted to create rivers with a plenty of nature in consideration of coexistence with the nature and harmonization with the environment.



#### v. Demonstration of multifunctional roles of fisheries and fishing villages

- The new Fishery Act provides that the national and prefectural governments are to give sufficient consideration so that the activities of fishers, etc. are conducted in a sound manner and fishing communities are revitalized, given that fisheries and fishing communities have multifunctional roles. In addition, a coastal fishing ground management system is introduced to promote ground preservation activities of fisheries cooperatives with wide support from beneficiaries.

#### vi. Revision of fisheries cooperative system

- It is described in Fishery Cooperative Act that fisheries cooperatives have to pay utmost attention to increase of fishery income. Fisheries Agency promotes activities for added value improvement and sales expansion in fisheries cooperatives.

#### **Column** Response to COVID-19

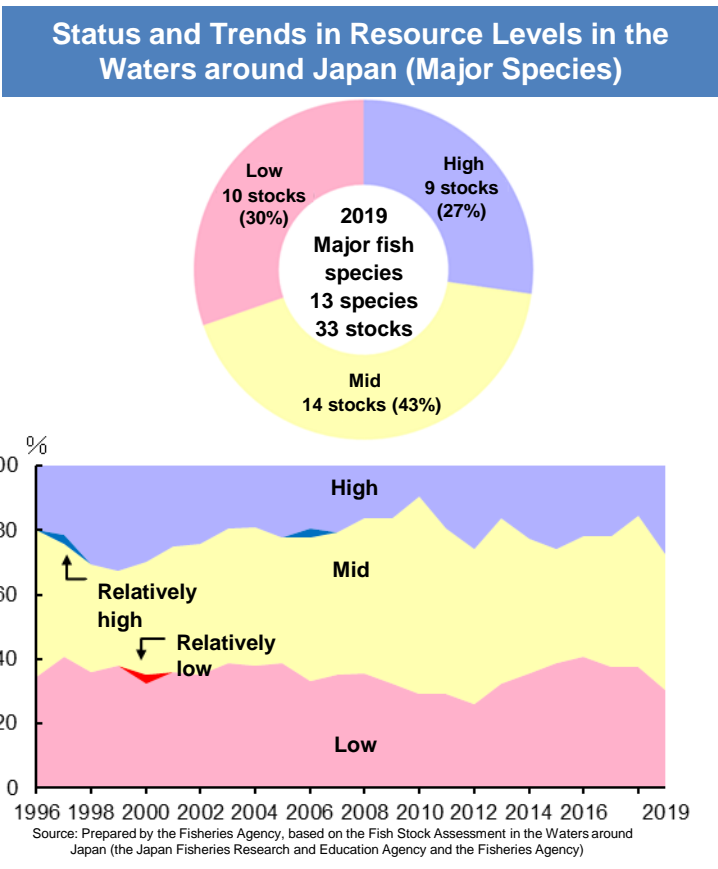
In and after January 2020, there have been reduction of domestic price and decline of export due to decrease of fishery products, such as scallop, yellowtail, bream, etc., caused by influence of COVID-19, and shortage of foreign workers due to regulations on entry, which largely affect business of fishers and fishery processors.

In and after March 2020, fisheries organizations are provided with caution to prevent infections and information about measures to continue business.

For financial support for affected fishers, their burden of interest payments or security on loans for fishing operations or loans for payment of existing debts will be effectively eliminated and their guarantee charge will be supported. Furthermore, the amount of money in the fishery income stabilization fund to compensate for the decrease in income of fishers will be increased and support will be provided for the temporary storage of excess supply of fisheries products affected by reduced demand and for the promotion of sales to new sales channels.

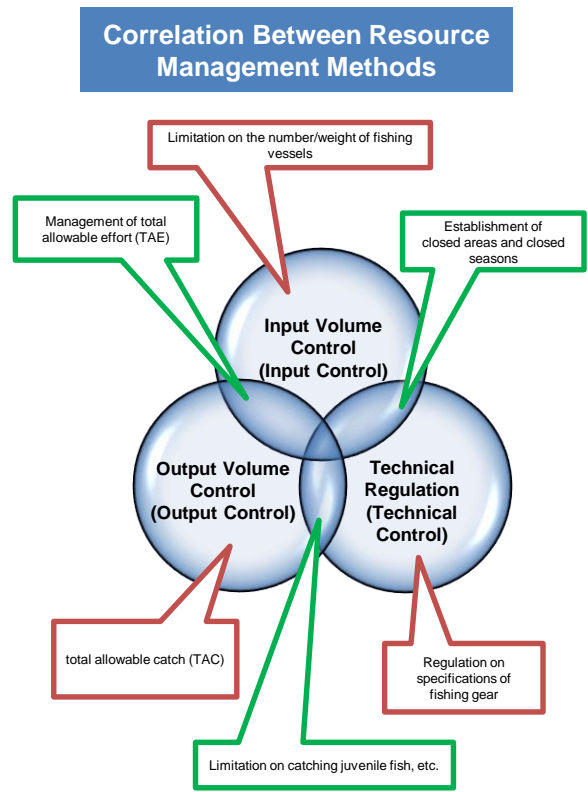
(1) Fisheries Resources in the Waters around Japan

- In the management of fisheries resources, it is indispensable to estimate the resource abundance, catch strength, levels, and trends through stock assessment, and, based on the results of such assessment, to take appropriate management measures.
- In FY 2019, the number of fish species subject to stock assessment was increased from 50 to 67.
- The results of the FY2019 stock assessment in the waters around Japan (for 80 stocks) show that resource levels are high in 19 stocks, moderate in 26 stocks and low in 35 stocks.
- As for particular major 33 stocks of 13 species closely linked to the lives of people, resource levels are high in 9 stocks, moderate in 14 stocks and low in 10 stocks.
- For the implementation of new resource management, resource evaluation based on MSY is carried out for 7 stocks of 4 fish species, and the proposed resource management targets and catch scenarios are announced.



(2) Japan's Fisheries Resource Management  
i. Japan's Fisheries Resource Management System

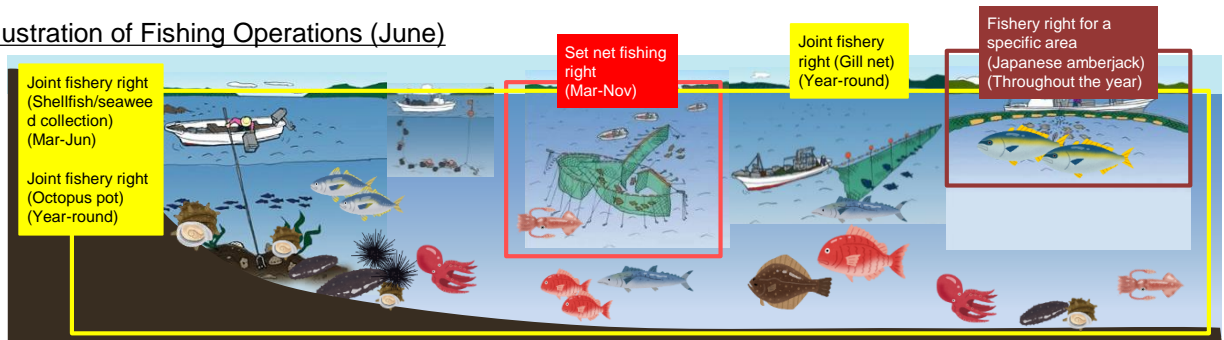
- Techniques for resource management are primarily classified into 1) input control, 2) technical control, and 3) output control. These methods are appropriately used and combined in Japan to properly manage resources, taking into account the characteristics of fisheries, the number of fishers, the status 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. Currently, TAC fish species covers 60% of catch.
- In the future, the TAC will be set according to resource management targets, including the value of resource levels that achieve MSY. The goal is that 80% of the catch will be under control of TAC management by gradually expand the TAC species.
- The IQ system is introduced gradually, starting with the fishery permitted by the minister. For coastal fisheries, the possibility of introducing them when they are ready is discussed.



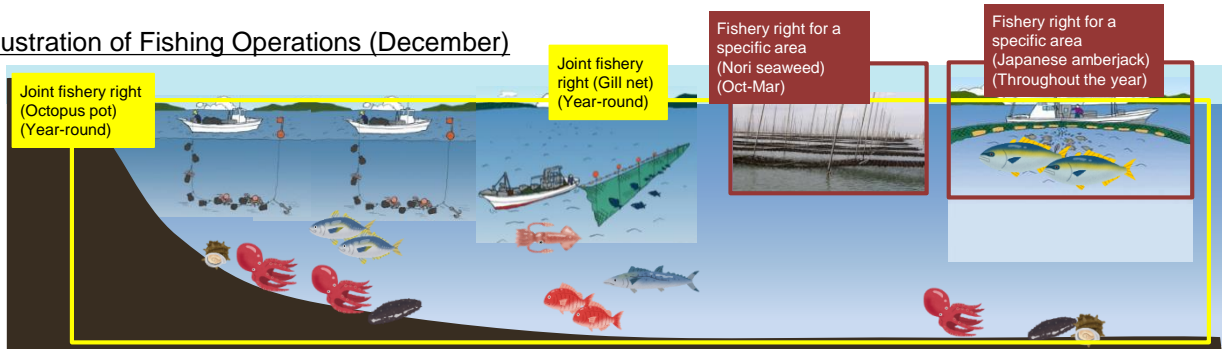


## Illustration of Stereoscopic and Overlapping Use of the Sea Surface in Relation to Fisheries with Fishery Rights

## Illustration of Fishing Operations (June)



## Illustration of Fishing Operations (December)



## ii. Joint Management Based on a Resource Management Plan

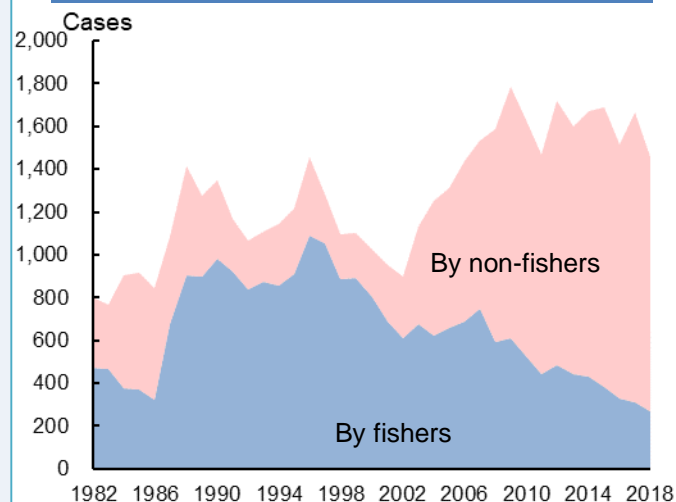
- The national and prefectural governments set the Resource Management Guidelines and implement a resource management system from FY2011 and the fishers and groups of fishers develop and implement a resource management plan. In addition, the “Resource Management and Income Stability Measure” is implemented for fishers who are systematically engaged in resource management.
- The previously-conducted Resource Management Plan based on the Resource Management Guidelines is gradually replaced by the Resource Management Agreement based on the new Fishery Act, with an aim at more effective voluntary resource management by fishers themselves.

## (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 1,569 in 2018 (1,484 in coastal waters and 85 in inland waters). The number of poachings conducted by non-fishers has increased. In particular, the poaching of reef resources, which is systematically conducted by antisocial forces, has become more vicious and sophisticated.
- Authorized fisheries supervisors are engaged in regulatory activities in cooperation with the coast guard and police officers while fishers belonging to fisheries cooperatives patrol fishing grounds and implement measures to prevent poached catches.
- Under the new Fishery Act, the penal provisions are considerably strengthened, such as introducing penal provisions, in order to effectively cause disadvantage to offenders and prevent poaching.

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

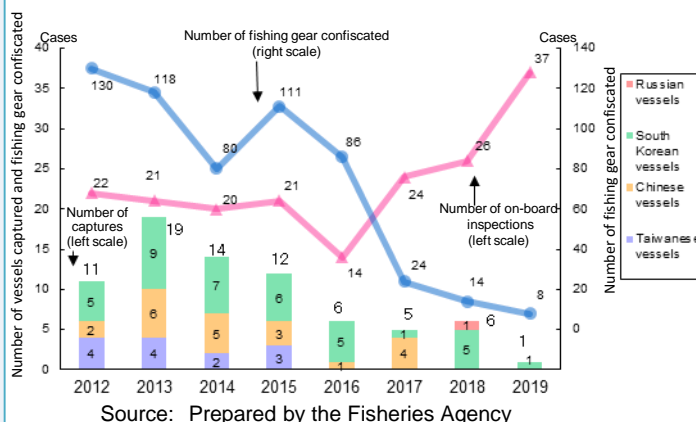


Source: Prepared by the Fisheries Agency

## ii. Monitoring and prevention of foreign fishing vessels

- In 2019, the Fisheries Agency conducted 8 on-board inspections and captured one foreign fishing vessel and the number of confiscations of illegal fishing gear totaled 37.
- In waters surrounding Yamato ridge of the Sea of Japan, illegal operations conducted by fishing vessels belonging to North Korea, etc. is a problem that hinders the safe operation of our fishers. To this end, fishery control vessels have been intensively deployed in the same water area in collaboration with the Japan Coast Guard to address the situation. In 2019, the number of vessels recommended for removal by the Fisheries Agency totaled 5,122.
- In response to illegal fishing operations by foreign fishing vessels in neighboring waters, the government is strengthening its fisheries control system by deploying two new fisheries control vessels to Niigata and Sakaiminato in FY2019.

### Trends in the number of foreign fishing vessels captured or inspected

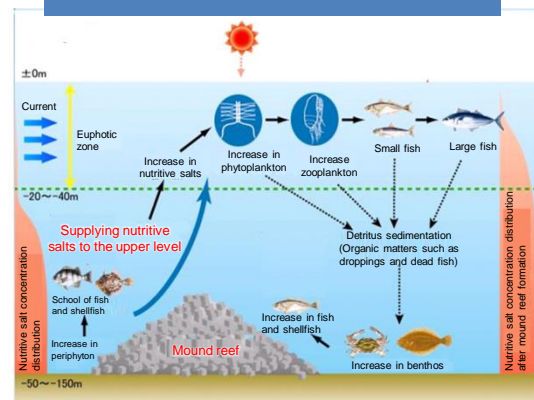


Fisheries control vessels discharging water to Chinese fishing vessels in the waters around Yamato ridge in the Sea of Japan

## (4) Measures to Actively Enhance Fisheries Resources

- In each area, a seedling release program to raise juvenile fish to certain sizes for release in order to increase resources is conducted mostly by prefectural culture fisheries centers.
- The government promotes such programs as the Resource-creating Farming Fisheries, in which part of adult fish are conserved for reproduction.
- For the purpose of increasing fishery resources in the offshore area, the Fisheries Agency is developing preservation and nursery artificial reefs for spawning and rearing of snow crabs and other species, and mound reefs to increase the productivity of the sea area by generating vertical mixing.
- Inland water fisheries cooperatives, meanwhile, are working on programs to release sweetfish/eel seedlings and set up spawning beds.

### Mound Reef Mechanism



### Column

### The 39th National Convention for the Development of an Abundantly Productive Sea

The 39th National Convention for the Development of an Abundantly Productive Sea—Akita Convention—Commemorating the Emperor's accession to the throne was held in Akita Prefecture in September 2019 as an event commemorating accession of the Emperor to the throne, based on the theme of "Sea development, continuing future, and rich community." The Emperor and Empress handed over sailfin sandfish, cherry salmon, ezo abalone, wakame seaweed fry, and other items, and later released them at various locations in Akita Prefecture.



The Emperor and the Empress handing over juvenile fish, etc.  
(Photo courtesy: Akita Prefecture)

## (5) Trends in Fishing Ground Environment

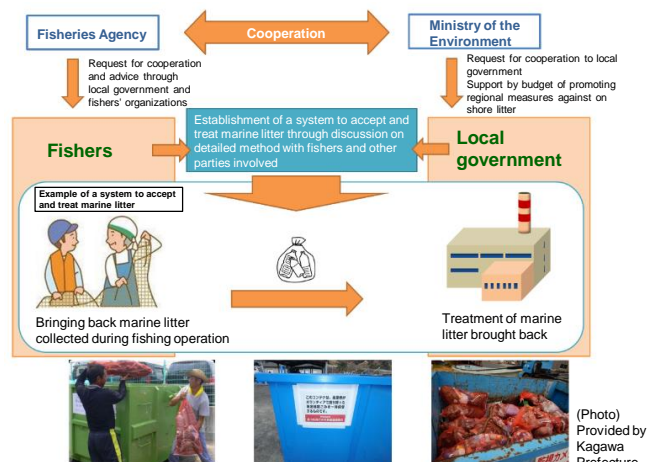
- It is important to raise the productivity of the entire ecosystem by preserving seaweed beds and tidal flats and recovery of their functions. The national government will promote wide-area measures in which the creation of seaweed beds and tidal flats by local governments and the conservation activities of fishers and others are combined.
- For aquaculture grounds, fishery cooperatives and other organizations have formulated a Fishery Ground Improvement Plan that summarizes water quality targets and the amount of fish that can be appropriately cultured. This is supported by the Fisheries Income Stabilization Measure.
- Decreased and unevenly distributed nutrients may have reduced the primary productivity of the sea, leading to fading of seaweed color and a decline in fish and shellfish. The government promotes surveys and research to find out the impact, and examination of the proper nutrient management.
- For inland waters, based on the "Guidelines on Promotion of Inland Water Fisheries", the government promotes activities to recover and conserve the habitat in cooperation with related government ministries and agencies, local public organizations, and inland fisheries cooperatives.
- To mitigate effect of climate change, achievement of Smart Fisheries using ICT and implementation of electric or hydrogen fuel cell fishing vessels are promoted to reduce greenhouse gas emissions. The development of aquaculture breeds that are resistant to high water temperatures is also promoted as adaptation measure.
- Marine plastic litter affects not only the environment and ecosystems, but also fisheries, such as contamination of fish catches. The Fisheries Agency 1) develops and disseminates fishing gear recycling technology and develops fishing gear made of environmentally friendly materials, 2) promotes the collection of marine litter by fishers in cooperation with the Ministry of the Environment, and 3) supports local coastal cleanups.

### Overview of climate change adaptations by the Ministry of Agriculture, Forestry and Fisheries (summary)

	Future forecast	Specific Measures
Marine fisheries	Decrease and downsizing of chum salmon and saury	Development of release methods for juvenile salmon and other fish that can respond to changes in the marine environment
Marine aquaculture	Areas suitable for aquaculture are predicted to move northward, causing some areas to become unsuitable for aquaculture.	Development of aquaculture breeds resistant to high water temperatures
Freshwater fisheries and aquaculture	Decrease in the number of specialty products (Isaza) due to the expansion of poor oxygenated water in Lake Biwa	Assessment of environmental changes in rivers and lakes and of the effects of these changes on the habitat and abundance of important resources
Developed fishing grounds	The distribution area of many of the target species moved north.	Understanding changes in the distribution area of marine organisms due to climate change, and promoting the development of fisheries in response to those changes
Fishing ports and fishing villages	Increased wave heights and increased high-tide deviation may cause damage to fishing port facilities.	Continued promotion to systematically raise fishing port facilities such as breakwaters and landing sites and develop coastal protection facilities with tenacious structures.

Source: Prepared by the Fisheries Agency, based on overview of climate change adaptations by the Ministry of Agriculture, Forestry and Fisheries (the Ministry of Agriculture, Forestry and Fisheries)

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



## (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 *Asciidiella 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.
- Inland water fisheries have been facing the problem of feeding damage to resources caused by largemouth bass, great cormorant, etc. Control measures against them are promoted.

### <Steller Sea Lions>



Steller's Sea Lions' Feeding Damage to Catches



### <Largemouth Bass>

Feeding Damage by Non-native Fish





(1) Trends in Fisheries and Aquaculture

- The volume of domestic fisheries and aquaculture production was 4.42 million tons in 2018, which is higher by 120,000 tons than in the previous year. Marine fisheries production was 3.36 million tons, which was higher by 100,000 tons than in the previous year. The productions of scallops, saury, and skipjack increased, while those of anchovy and horse mackerel decreased. Marine aquaculture production increased by 20,000 tons to 1 million tons. Inland water fisheries and aquaculture production decreased by 5,000 tons to 57,000 tons.
- The production value of domestic fisheries and aquaculture was 1, 557.9 billion yen in 2018, which is lower by 48.2 billion yen than in the previous year. The production value of marine fisheries decreased by 23.5 billion yen to 937.9 billion yen, that of marine aquaculture decreased by 19.1 billion yen to 506.0 billion yen, and that of inland water fisheries and aquaculture decreased by 5.6 billion yen to 114.1 billion yen.

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

<Production volume> (1,000 tons)		2017	2018
Production volume	Total	4,306	4,421
	Marine	4,244	4,364
	fisheries	3,258	3,359
	Distant water fishery	314	349
	Offshore fishery	2,051	2,042
	Coastal fishery	893	968
	aquaculture	986	1,005
	Inland water	62	57
	fisheries	25	27
	aquaculture	37	30

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

<Production value> (100 mil. yen)		2017	2018
Production value	Total	16,061	15,579
	Marine	14,864	14,438
	fisheries	9,614	9,379
	aquaculture	5,250	5,060
	Inland water	1,197	1,141
	fisheries	198	185
	aquaculture	998	956

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

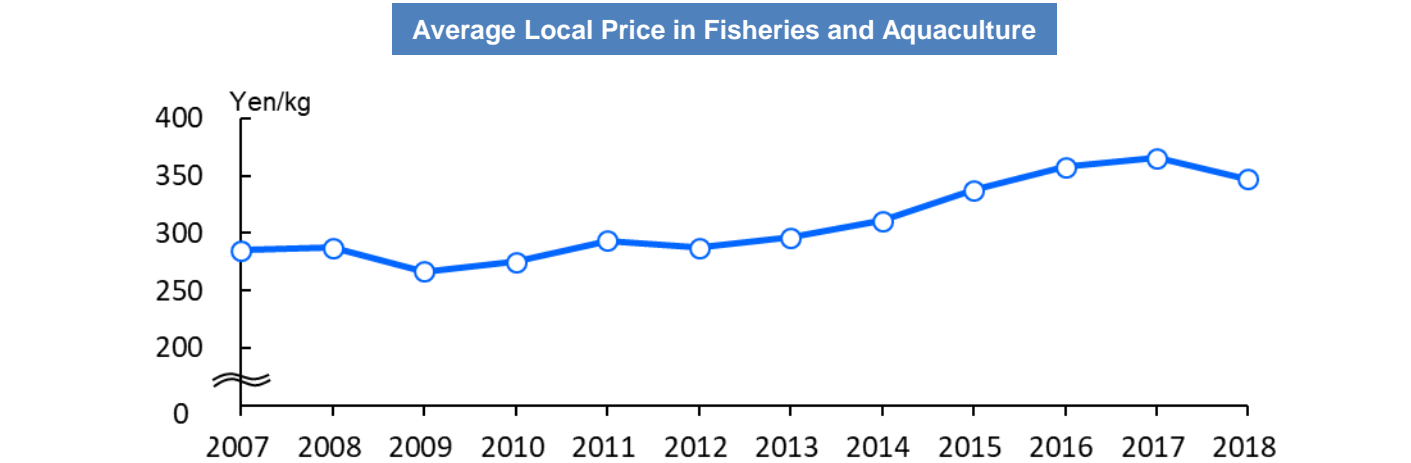
About the poor catch of salmon, saury and squid

The catches of salmon, saury, and squid in 2019 are all at record low levels.  
Causes for the poor catch may include the effect of seawater temperature and fishing of some fish species by foreign fishing vessels.  
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

- The prices of fish and fishery products vary depending on multiple factors such as fluctuations in resources, production status of various fish species due to weather and other factors, and trends in domestic and international demand.
- In recent years, the average local price in fisheries and aquaculture was on an upward trend. In 2018, it decreased by 19 yen/kg from the previous price to 347 yen/kg.

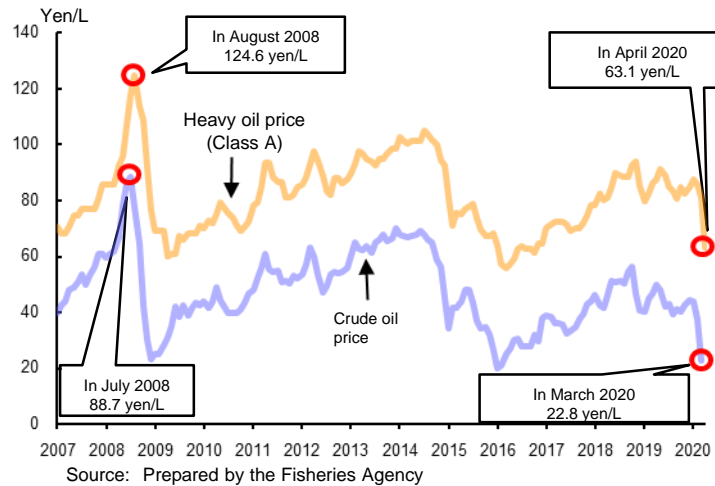


Source: Prepared by the Fisheries Agency, based on the Fisheries and Aquaculture Production Statistics and the Gross Fisheries Output (the Ministry of Agriculture, Forestry and Fisheries)  
Note: Estimated with the fisheries/aquaculture output divided by its production volume.

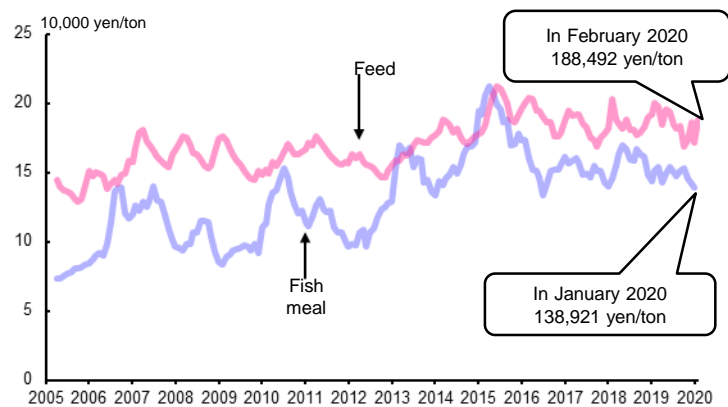
## ii. Trends in Management of Fisheries by Fishing Vessels/Aquaculture

- The average fishing income of private management bodies of coastal fisheries using vessels in 2018 decreased by 320,000 yen to 1,860,000 yen. The business income including non-fishing income was 2,050,000 yen.
- Businesses engaged in fisheries by fishing vessels reported that, in FY2018, the fishing income continued to be in deficit, but the operating profit including the non-fishing profits (from fish processing, etc.) was 2,820,000 yen.
- Fuel oil prices are at their lowest level in four years since 2016.
- The fishing income of marine aquaculture households in 2018 decreased by 4.02 million yen to 7.63 million yen as compared to the previous year.
- Imported fish meal prices in April 2015 increased to nearly 2.6 times the average price in 2005. 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 national government and the fishers, in order to mitigate the impact of the price rise.

### Trends in Fuel Oil Prices



### Trends in Feed Prices and Imported Fish Meal Prices



## iii. Seashore Revitalization Plan to boost incomes

- The "Seashore Revitalization Plan" aims to boost fishing incomes by at least 10% in five years with voluntary efforts to come up with measures and implement them. 647 cases entered an implementation stage by the end of March 2020.
- In FY2015, the "Wide-Area Seashore Revitalization Plan" also started, in which efforts are made to enhance wide-range competitiveness. By the end of March 2020, 154 cases were established and carried out.

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

#### 1) Regional Fisheries Revitalization Committee in Hyogo prefecture and Tajima Offshore Trawl Net Fisheries Subcommittee

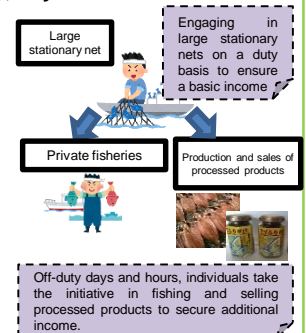
Since FY2014, as part of the Seashore Revitalization Plan, new products have been developed and sold that maintain freshness, flavor, and texture by freezing fish on board, using cooled seawater tanks to maintain freshness, and introducing quick-freezing equipment. Through comprehensive efforts from production to distribution and consumption, an increase in fishing income of more than 10% was achieved in five years.



New firefly squid preserved fresh by quick freezing equipment "Hama hotaru" (Photo courtesy: Fisheries association in Hyogo Prefecture)

#### 2) Regional Fisheries Revitalization Committee in Higashi District, Kushima City, Miyazaki Prefecture

Since FY2014, as part of the Seashore Revitalization Plan, the creation of a system that enables all fishers to engage in multiple fisheries, etc., with set net fishing as the mainstream, as well as branding and consumption expansion efforts in unison with the community. By working together as a community, an increase in fishing income of more than 10% was achieved in five years.



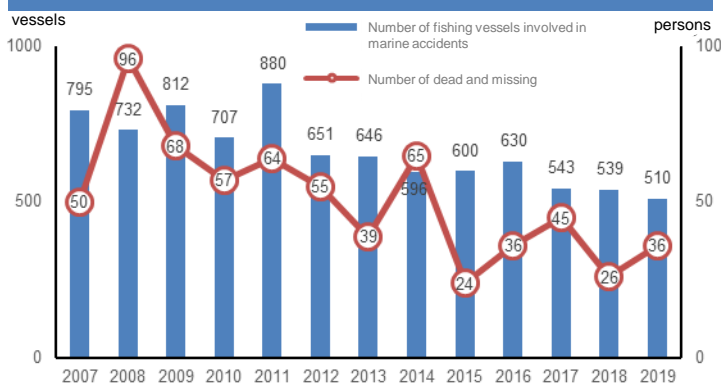
### (3) Trends in Fishers

- The number of fishers follows downward trends and totaled 151,701 in 2018.
- Since 2002, the Fisheries Agency has been providing support for newcomers to the fishing industry, according to their stage of employment, so that even those with no fishing experience can enter and settle 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 national government supports the development of facilities for helping women's activities, consisting of waiting rooms for children, test kitchens, etc. It also sets up the Ocean Treasure! Suisan-joshi Genki Project in November 2018 to back up the reform of fisheries work sites into a women-friendly environment and to increase the appeal of fishery jobs.
- Through the Specified Skilled Worker system, foreign nationals that satisfy certain criteria started to be accepted also in the fisheries field and the fishery processing industry from April 2019.
- In the Technical Intern Training Program for Foreign Nationals, technical intern training is provided for nine types of fisheries/aquaculture work and eight types of fishery processing work.

### (4) Trends in Fisheries Working Environment

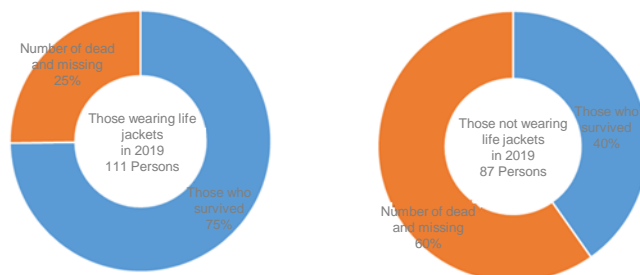
- In 2019, the number of fishing vessels involved in marine accidents was 510, and the number of dead and missing reported in those accidents was 36.
- Excluding those related to marine accidents, 81 fishers fell overboard in 2019, of which 51 persons were dead or missing.
- Life jackets are vital to saving the lives of those who fall overboard (approximately doubling the survival rate.) In 2018 and ahead, all persons on board, in principle, any ship or vessel and outside the cabin are required to wear life jackets. In 2019, the rate of wearing life jackets in the event of a fall overboard was approximately 60%.
- To improve the safety of small fishing vessels, demonstration tests to avoid collisions and grounding accidents by using smartphones are promoted.

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



Source: Marine accident status and measures (the Japan Coast Guard)

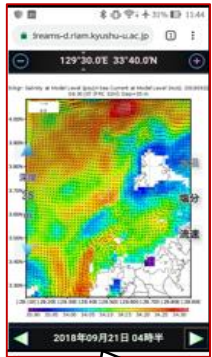
**Survival Rates of Those Who Fell Overboard with and without Life Jackets**



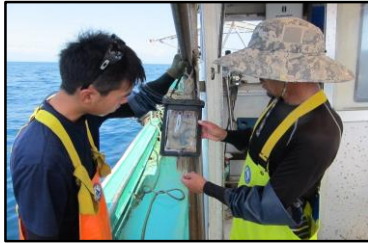
Source: Prepared by the Japan Coast Guard

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

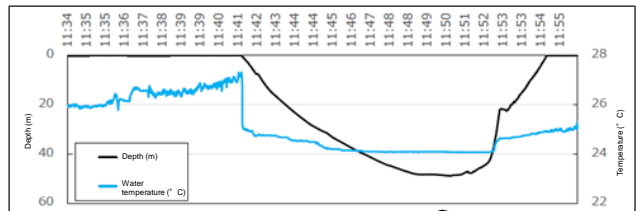
- In order to transform the fisheries industry into a growth industry, it is important to introduce and disseminate ICT, AI and other technologies to the fisheries and aquaculture.
- Support for efficient management, etc., through the development of Fisheries Data Coordination Infrastructure that enables the coordination, sharing, and utilization of data obtained in various fields.
- The Fisheries Agency has held Smart Fisheries Industry Study Workshop for Tomorrow's Fisheries since May 2019 to discuss promotion measures and other issues.



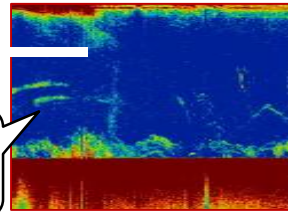
**Seven-day prediction of flow speed and salt concentration**  
Display of motion picture of water temperature, salt concentration, and flow speed for each catch layer from surface to sea bottom



Guide based on data of new fishers



Visualization of underwater fishing gear motion which has not been clarified



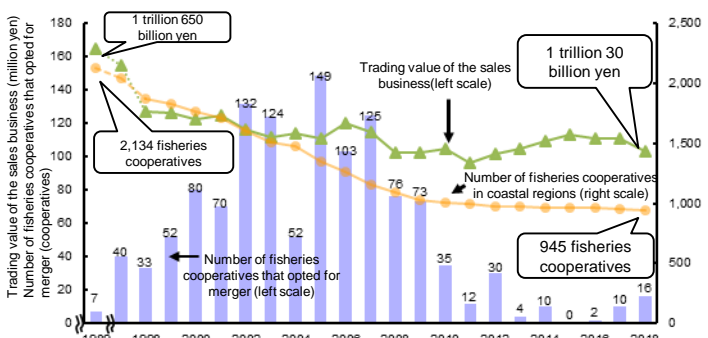
Visualization of fish finder's screen by smartphone

A smartphone-based fishery ground formation forecast screen, 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 2019 was 945.
- The number of fisheries cooperative members has been decreasing in line with a decline in the number of fishers. There are still many micro-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: Statistics Table of Fisheries Cooperatives (the Fisheries Agency)

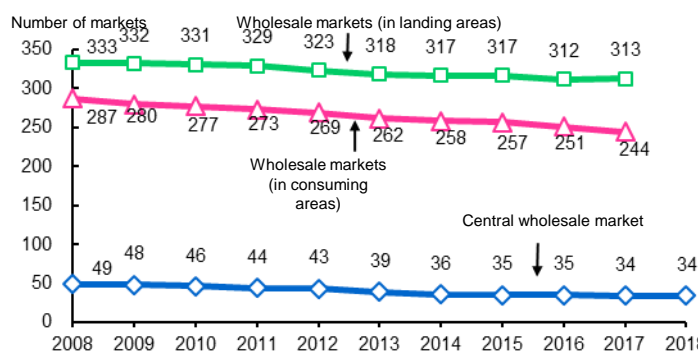


## (7) Trends in the Distribution and Processing of Fish and Fishery Products

### 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.
- Wholesale 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).

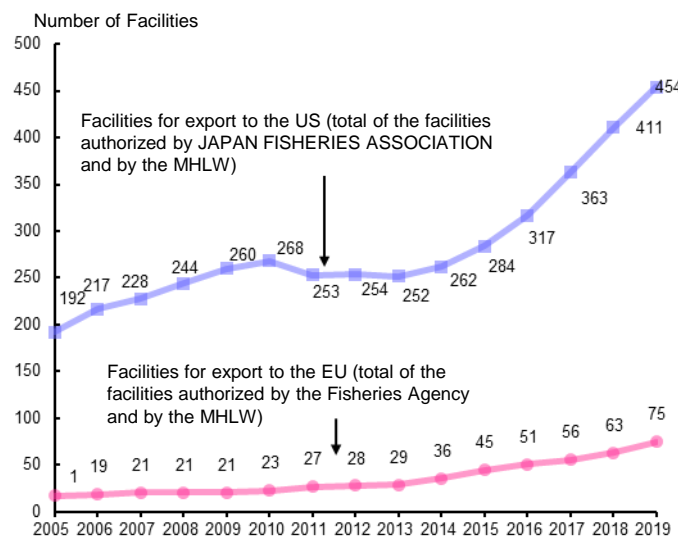
### ii. Role and Problems of the Fishery Processing Industry

- 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.
- Weaknesses in management, as well as strengthening the functioning of the entire region of production, are challenges for many processors.

### iii. Response to HACCP

- 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 2020, in the fishery processing industry, etc., the number of facilities authorized to export to the EU is 75, and the number of facilities authorized to export to the United States is 454.
- 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.)

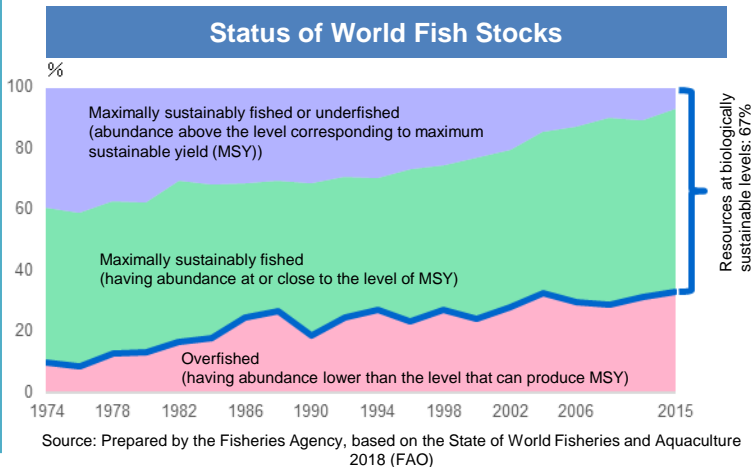
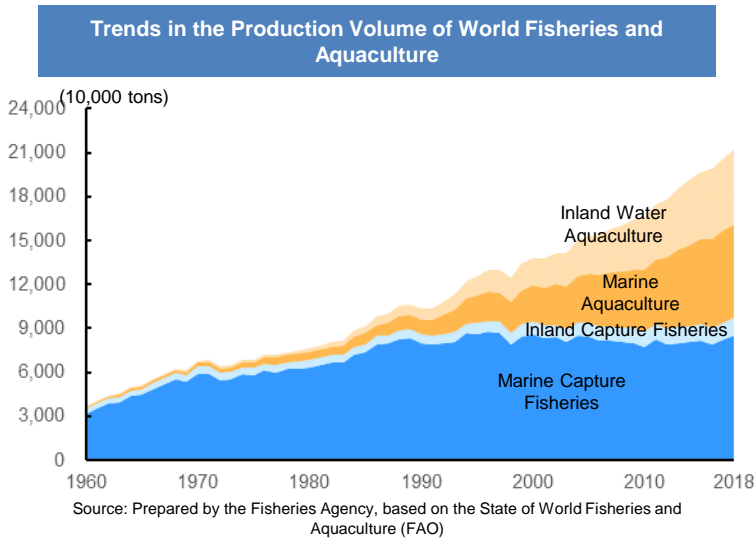
#### Trends in the Number of Facilities Authorized to Export to the EU/US in the Fishery Processing Industry, etc.



Source: Prepared by the Fisheries Agency

(1) Production of World Fisheries and Aquaculture

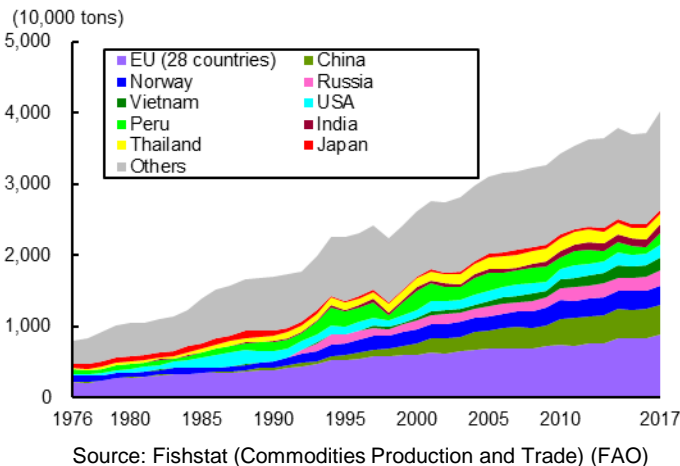
- The production volume of world fisheries and aquaculture increased by 3% from the previous year to 212.09 million tons in 2018. The breakdown of this volume shows that the capture fisheries production volume stayed flat and there was a drastic increase in the aquaculture production volume.
- For example, in the advanced countries and regions including EU, the Unites States, and Japan, 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.
- The aquaculture production significantly increases in China and Indonesia. In terms of fish species, there was a marked increase in carp, crucian carp, and algae.
- The ratio of world fisheries resources being exploited within biologically sustainable levels is on a gradually decreasing trend. In 2015, 67% of world fisheries resources were at biologically sustainable levels (world fisheries resources with enough room for production expansion were 7%), and 33% of the resources were at overfished levels.



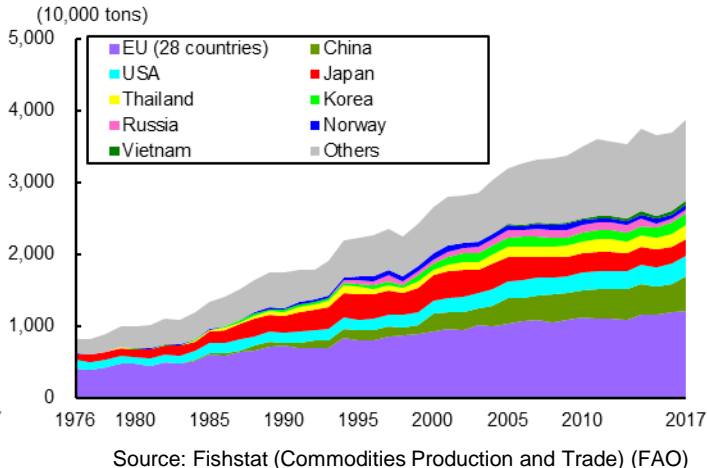
(2) World Trade of Fish and Fishery Products

- Global import and export volumes of fish and fishery products are generally on the rise. In terms of export volume, the EU, China, and Norway are ranked high. In terms of import volume, the EU, China, and the United States are ranked high.
- In terms of export and import value, China is the world's largest net exporter. The EU, the United States, and Japan are major net importers.

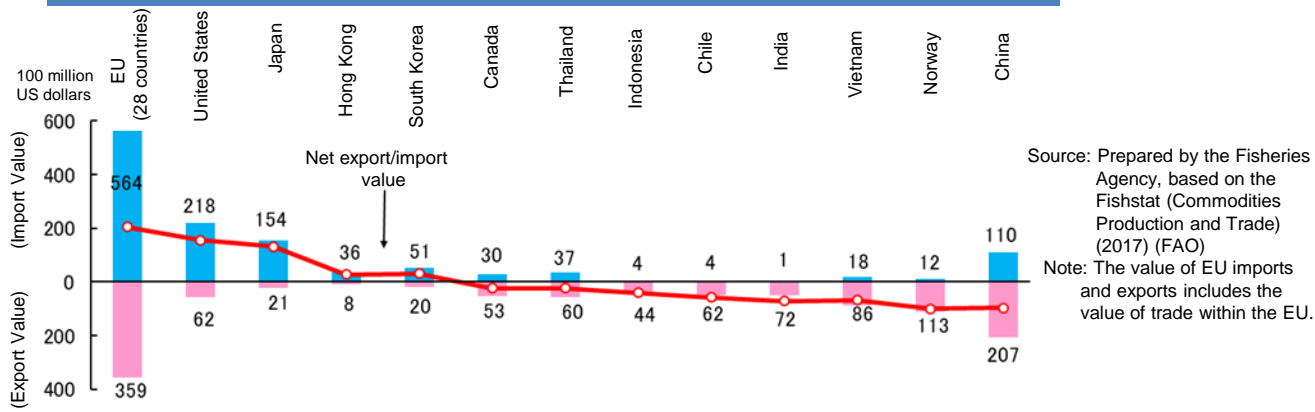
World's Export Volume



World's Import Volume



**Major Countries' and Regions' Export and Import Values and Net Export/Import Values Concerning Fish and Fishery Products**



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

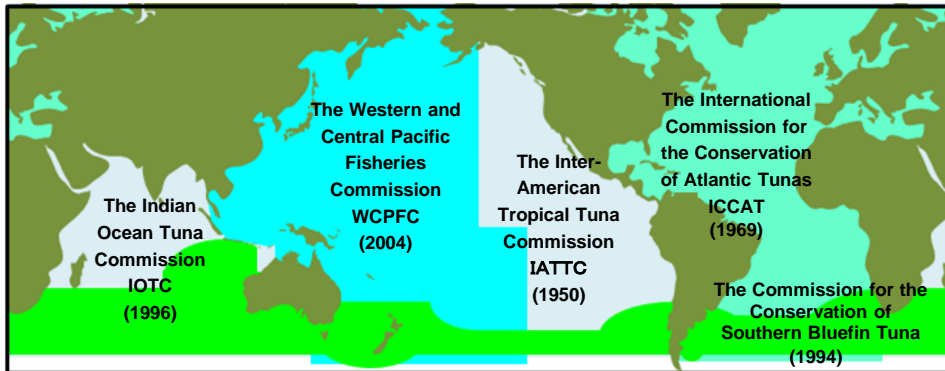
- In WTO rule negotiations, discussions have been made about the establishment of disciplines on fisheries subsidies. Japan takes a stance of limiting prohibited subsidies to those which truly cause overcapacity and overfishing.
- The Japan-U.S. Trade Agreement comes into effect on January 1, 2020. The agreement excludes all fish and fishery products that have been reduced or eliminated under the TPP.

### (4) 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.
- At its 2019 annual meeting, the Western and Central Pacific Fisheries Commission (WCPFC) adopted the following measures for 2020 with regard to Pacific Bluefin Tuna (PBF): 1) an increase in the carry-over rate for the unutilized portion of the catch limit from the current 5% to 17%, and 2) allowing the transfer of 300 tons of the catch limit for large PBF from Chinese Taipei to Japan subject to notification from Chinese Taipei.
- With regard to the Inter-American Tropical Tunas Commission (IATTC), the catch limit for Pacific bluefin tuna was discussed at a joint working group of the IATTC and WCPFC Northern Subcommittee in September 2019.
- At the 2019 annual meeting of the International Commission for the Conservation of Atlantic Tunas (ICCAT), it was agreed to reduce the total allowable catch for bigeye tuna to 62,500 tons (of which Japan's quota of 13,980 tons) in 2020.
- At the 2019 annual meeting of the Indian Ocean Tunas Commission (IOTC), the IOTC agreed on yellowfin tuna stock management measures where the excess amount could be deducted from the next year's catch limit if the current catch reduction measures cannot be achieved, and restrictions on the number of FADs that can be used for purse seine fishery that catches a large number of small fish, could be strengthened.
- At the 2019 annual meeting of the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), the CCSBT agreed on a new program to automatically calculate the proposed TAC based on the status of the southern bluefin tuna stock.

## Tunas Regional Fisheries Management Organizations (tRFMOs)

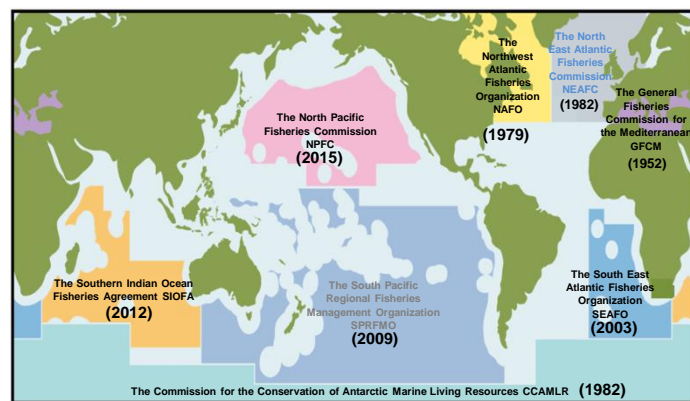


Note: The years in parentheses are the years of effectuation of the relevant treaties.

### 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.
- In July 2019, the management of the quantity of Pacific saury catches in the high seas was discussed, and it was agreed that the TAC of Pacific saury in the high seas for the 2020 fishing season shall be limited to 330,000 tons, that the allocation of TAC among members of the commission shall be considered at the commission meeting in 2020, and that each member of the commission shall ensure that its total catch of Pacific saury in 2020 will not exceed its reported 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.  
2) The years in parentheses are the years of effectuation of the relevant treaties.

### iii. Developments Toward Eliminating IUU Fishing

- IUU fishing, which does not comply with regulatory measures and carry out disorderly operations, has a risk of having adverse effects on fisheries resources and undermining appropriate resource management.
- 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.

### iv. Bilateral Relations in Fisheries

- The Japanese and Russian governments had consultations on the conditions for mutual fishing access and the operating conditions for Japanese fishermen, etc. The payment of cooperation fund was suspended in relation to the conditions for mutual fishing access in 2020.
- 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.
- Based on Japan - Taiwan Fisheries Arrangement, the areas were designated where Japanese and Taiwanese fishermen can conduct their fishing operations under their own rules, and fishing operations have been carried in those areas on a trial basis.
- 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.



## (5) New 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.
- The resumed commercial whaling operates in Japan's territorial waters and EEZ, targeting three species, of which stock conditions have been confirmed as abundant and is managed within the catch limits 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 December 2019, an amendment to the Act on Scientific Whale Research Execution for the Implementation of Commercial Whaling, etc. was enacted. The name was changed to the Act for Ensuring the Sustainable Use of Cetaceans and revisions were made to position whale scientific research as continuing to play an important role in ensuring the proper development of the whaling industry.



Yoshikawa, the Minister of Agriculture, Forestry and Fisheries (as of that time) addressing the Factory Ship Type Whaling Vessels Departure Ceremony



A view of the auction of whales caught in the resumed commercial whaling

## (6) 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.
- With regard to coastal countries such as Pacific Ocean island countries, in the waters of which Japanese fishing vessels operate, the Japanese government supports private organizations' cooperation provided to such countries in the repair, etc. of fisheries facilities and in the transfer or dissemination of fisheries technologies.
- 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.

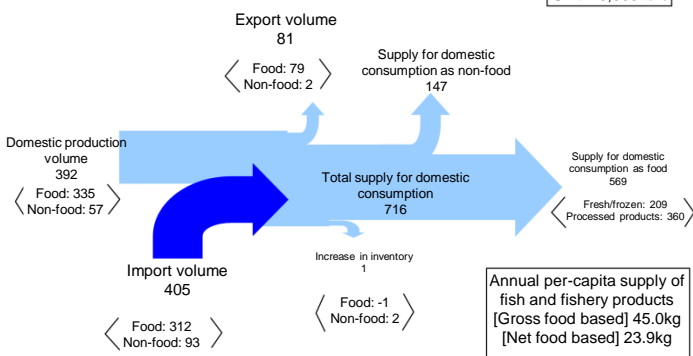
## (1) Supply-Demand Situation in Fish and Fishery Products

- The supply of fish and fishery products for domestic consumption was estimated at 7.16 million tons for FY2018 (converted on a fresh fish basis, estimates), of which 5.69 million tons (80%) were for human consumption (food) and 1.47 million tons (20%) for feed and fertilizer (non-food).
- The self-sufficiency rates (estimates) of fish and fishery products for human consumption for FY2018 increased by 3 point from the previous year to 59%.

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

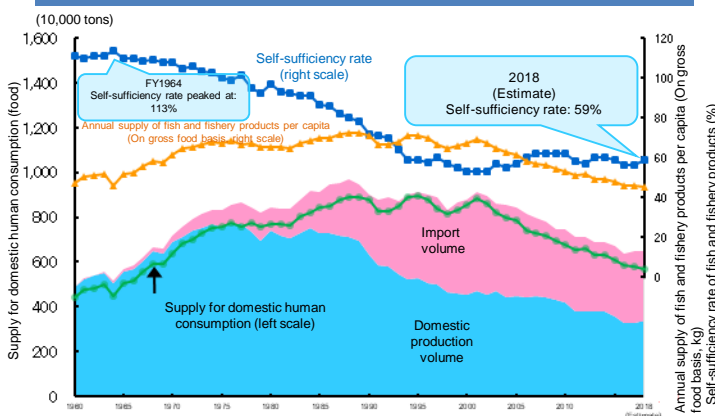
<In FY2018 (Estimates)>

Unit: 10,000 tons



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

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



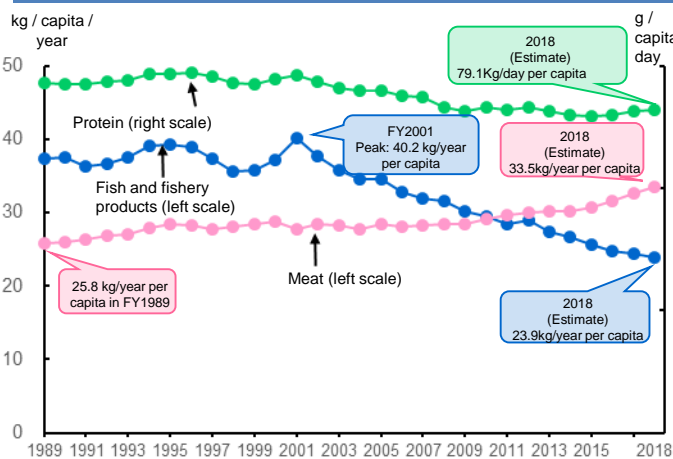
Source: Food Balance Sheet (the Ministry of Agriculture, Forestry and Fisheries)

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

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

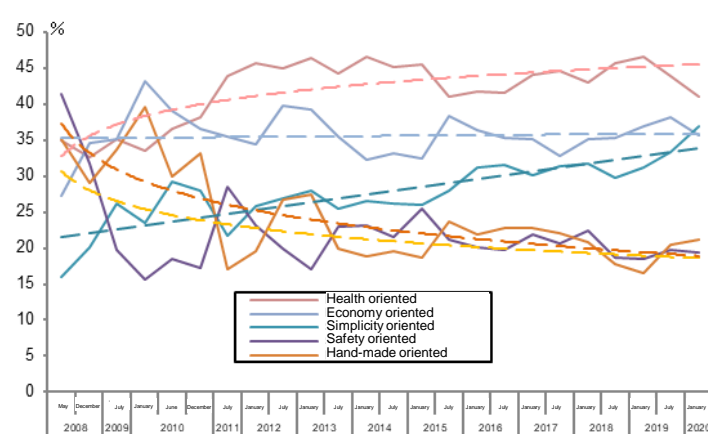
- The annual consumption of fish and fishery products per capita decreased by 0.5kg from the previous year to 23.9kg in FY2018.
- The annual spending per household on fresh fish and fishery products had been flat in recent years, but has been on a decline over the past three years.
- A survey on consumers' diet preference showed an increase in the rate of those who prefer a healthier and simpler diet.
- The percentage of fish and shellfish to be processed for consumption has increased in recent years.

Trends in Annual Per Capita Consumption of Fish and Fish Products and Meat (Net Food) and Daily Per Capita Consumption of Protein



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.

## ii. Health benefits of fish and fishery products

- Various studies have shown that the consumption of fish and fishery products has positive health benefits.
- n-3 (omega-3) polyunsaturated fatty acids, such as docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), which are found in fish fats, play an important role in the development of the brain of the fetus and children.
- 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.

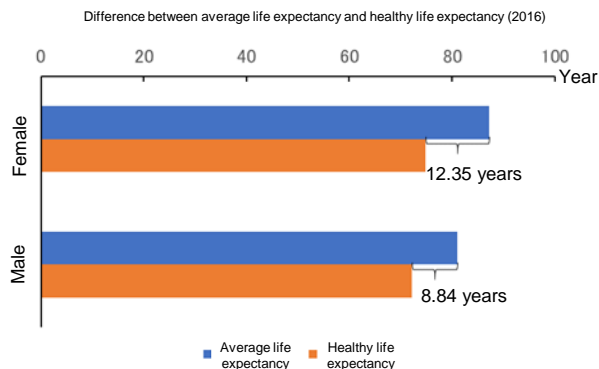
### Column Would you like some fish to go with your strength training?

In Japan's aging society, the term "healthy life expectancy," which refers to the period of time during which there are no restrictions on daily life, has been attracting a lot of attention.

In recent years, there has been a boom in strength training (muscle training) as a result of increased interest in one of the elements of good health among a wide range of people.

Protein supplementation is essential for muscle building. Fish is rich in protein with a high amino acid score. In addition, fish protein is easier to digest and absorb than soy and milk proteins.

In recent years, fish products for people who do muscle training and dieting are also developed. Eating fish and exercising are expected to keep people healthy and increase people's healthy life expectancy.

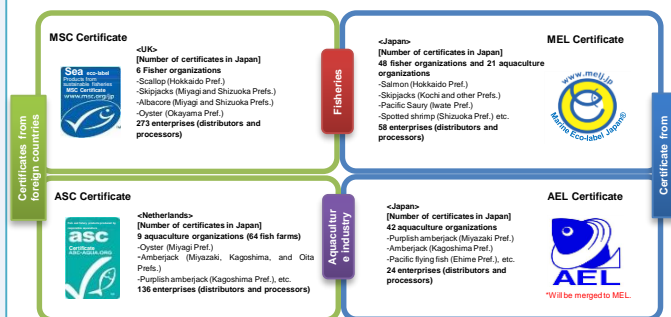


Source: Prepared by the Fisheries Agency, based on the "Simplified Life Chart for 2016" and the "11th Specialized Committee for the Promotion of Health Japan 21 (Secondary)" (the Ministry of Health, Labour and Welfare)

### (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).
- Utilization of the Marine Eco-Label Certification System has expanded around 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.
- To the protection system of Geographical Indications (GI), 12 cases of fish and fishery products were registered by the end of March 2020.

#### Marine Eco-Label Certificates mostly used in Japan



\*The number of certificates is that as of March 31, 2020 (according to Fisheries Agency).

#### Products registered under the GI protection system (examples in fisheries) in FY2019

Registration No.	Name	Photo	Place of Production of Specific Agricultural, Forestry and Fishery Product and Feedstuff
84	Toyoshima beltfish		Sea area off Toyoshima, Toyohama-cho, Kure City, Hiroshima Prefecture
88	Tanoura Gintachi beltfish		Off the coast of Tanoura, Ashikita-machi, Ashikita-gun, Kumamoto Prefecture and the surrounding waters (Yatsushiro-kai)
89	Ono littleneck clam		Hatsukaichi-shi, Hiroshima Prefecture
92	Hiyama sea cucumber		Setana-cho, Kudo-gun, Hokkaido Prefecture; Yakumo-cho, Futami-gun; Orobe-cho, Nishigun; Esashi-cho and Kamikuni-cho, Hiyma-gun; Okushiri-cho, Okushiri-gun

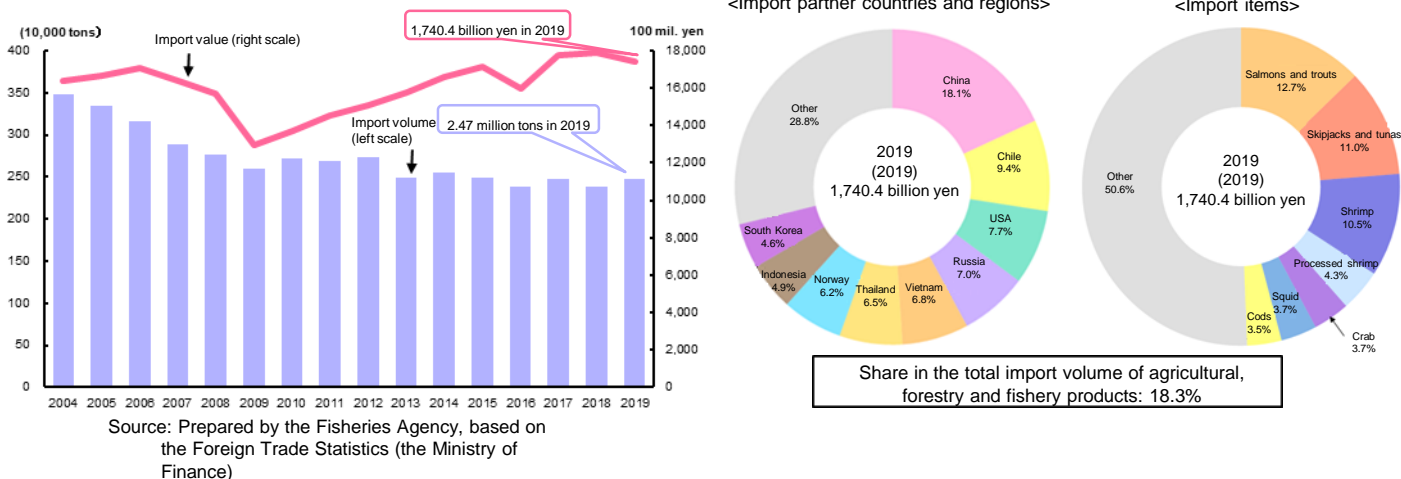


## (4) Trends in the Trade of Fish and Fishery Products

### i. Import Trends in Fish and Fishery Products

- The import volume of fish and fishery products (on a product weight basis) increased by 4% from the previous year to 2.47 million tons in 2019, The import value decreased by 3% from the previous year to 1,740.4 billion yen.
- Major import items in terms of value are salmons and trouts, skipjacks and tunas, shrimp.

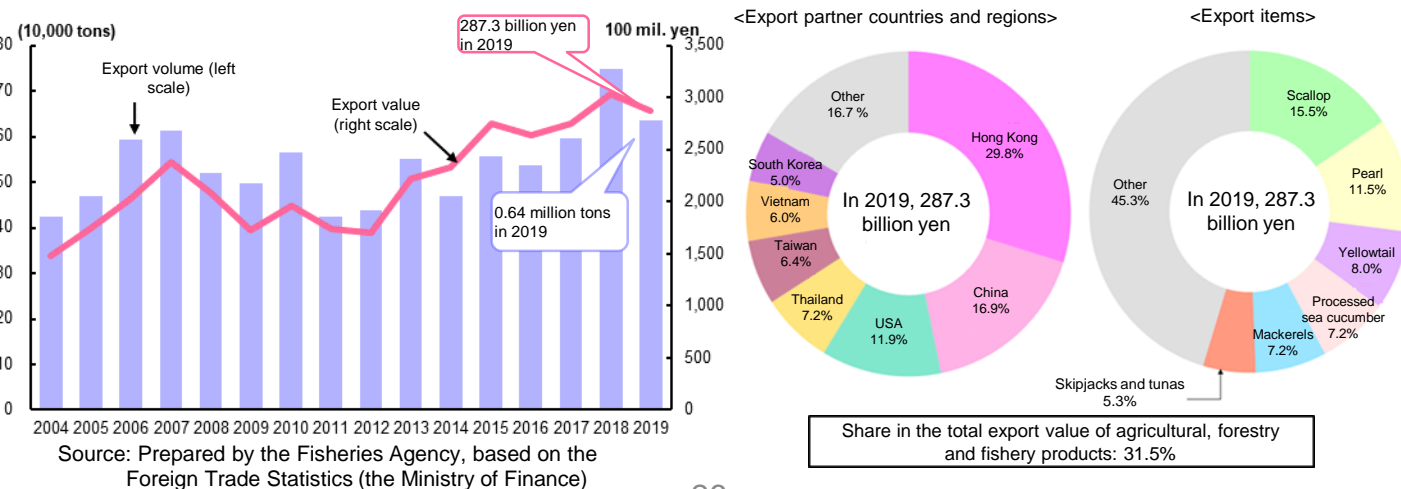
#### Trends in the Import Volume and Value of Fish and Fishery Products



### ii. Export Trends in Fish and Fishery Products

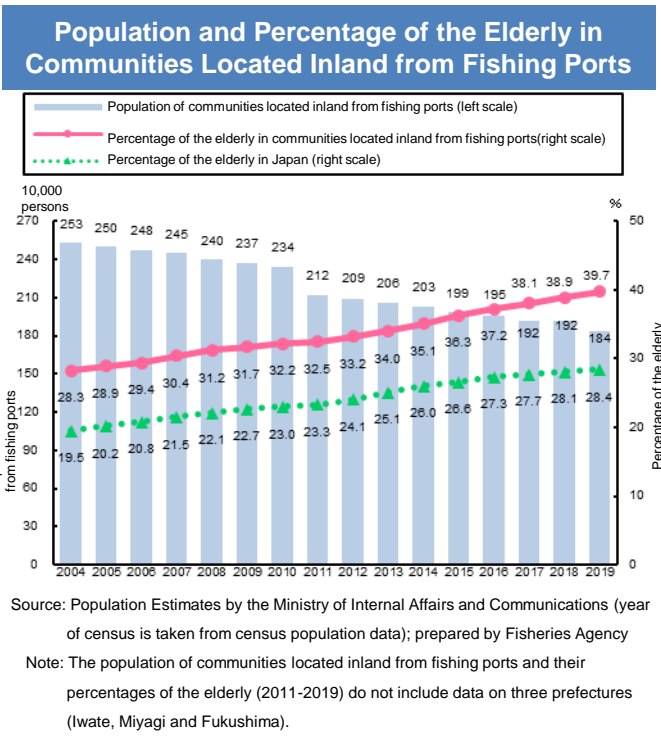
- The export volume of fish and fishery products (on a product weight basis) decreased by 15% from the previous year to 0.64 million tons in 2019, The export value decreased by 5% from the previous year to 287.3 billion yen.
- Major export partners are Hong Kong, China, and the United States and the export value to these countries and regions accounts for about 60% of total exports.
- Major export items are scallop, pearl, etc. in terms of export value.
- The Agricultural, Forestry and Fishery Products and Food Export Facilitation Act was promulgated in November 2019. Ministry of Agriculture, Forestry and Fisheries establishes “Headquarters for the Export of Agricultural, Forestry and Fishery Products and Food”.
- 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 2020.

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

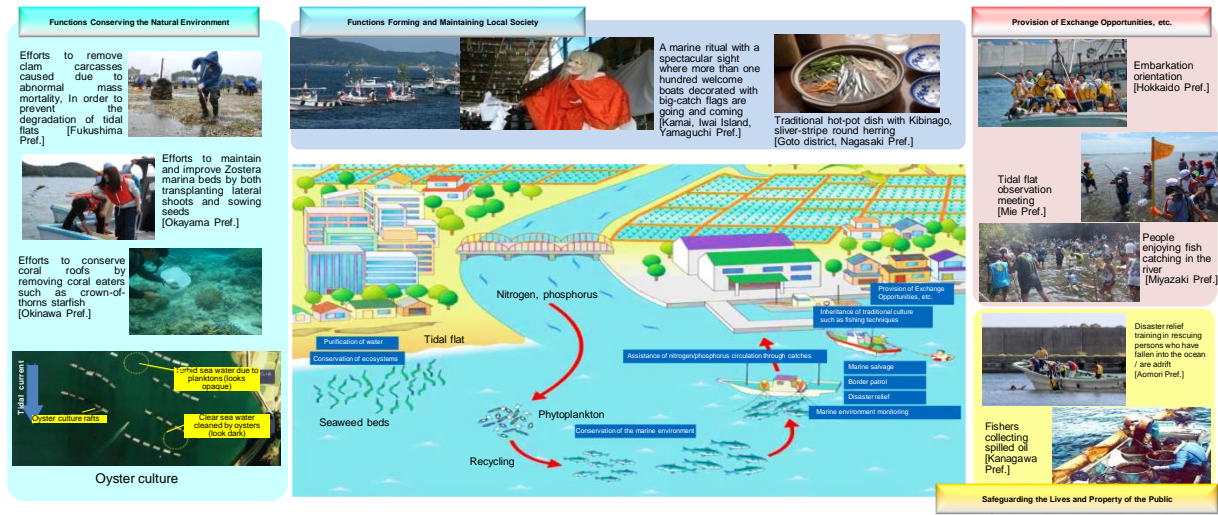


# (1) Current Status and Role of Fishing Communities

- Many fishing communities are situated in advantageous locations for fishery production but are vulnerable to natural disasters (34% of communities located inland from fishing ports are in peninsular areas, and 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.
- 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 sea rescue and border and water monitoring are supported by the government.



## 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

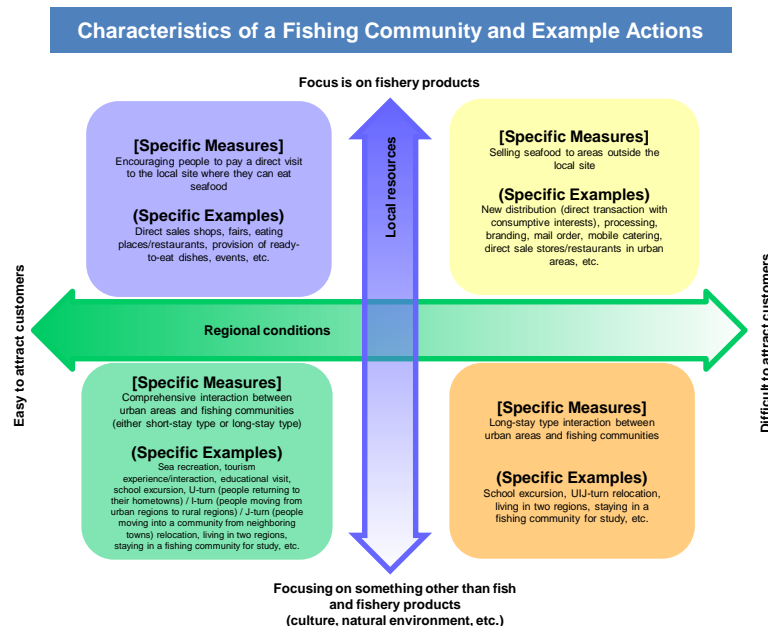
- Fishing ports and fishing communities require both the improvement of disaster prevention capabilities and the promotion of disaster risk reduction measures. Multiple protection measures for fishing communities using breakwaters and seawalls, the construction of breakwaters and seawalls that are resistant to tsunamis, the preparation of evacuation routes, etc. have been promoted.
- A variety of support measures are taken for the damage caused by natural disasters such as typhoon No. 19, including support for the restoration of damaged facilities.
- 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 government-wide issues. The maintenance and renewal of infrastructures in fishing ports and communities have been promoted in accordance with 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. In order to achieve this, it is important to implement measures tailored to the characteristics of the fishing villages and to work together as a community in cooperation with the people involved.

○ 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.



Source: Prepared by the Fisheries Agency, based on Key Points of Action for the Revitalization of Fishing Villages by the Japanese Institute of Fisheries Infrastructure and Communities (Local Area Council Activity Support Project using Grant for Promotion of Fisheries Industries)

#### Case Example Seaside Stay activity in Ine-cho, Kyoto Prefecture

In the Ine district of Kyoto Prefecture, about 230 buildings called boathouses stand along the surrounding Ine Bay, with the first floor as a boat yard and the second floor as secondary living quarters. This area with its scenic townscape and preserved nature has been selected as an important traditional building preservation district.

In recent years, several "Hotels in Funaya" have opened. They are lodging facilities converted from boathouses and the number of tourists who come to stay at the Hotels in Funaya has increased. Since 2016, the number of foreign tourists from Asian countries and regions has also increased.

In addition to "staying" at the boathouses, visitors can also "taste" fresh fish and shellfish of Ine Bay and pickled mackerel, a specialty of Ine, as well as "experience" things such as hands-on tours with a boathouse guide, rope work and bin-dama rope weaving by fishers, and raw fish slicing, all of which are part of the Seaside Stay initiative to fully enjoy the region.



Boathouses along the coast



"Hotels in Funaya" using boathouse



Bin-dama rope weaving



Slicing raw fish

(Photo courtesy: Ine-cho Tourist Association)

## Chapter 6 Reconstruction from the Great East Japan Earthquake

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

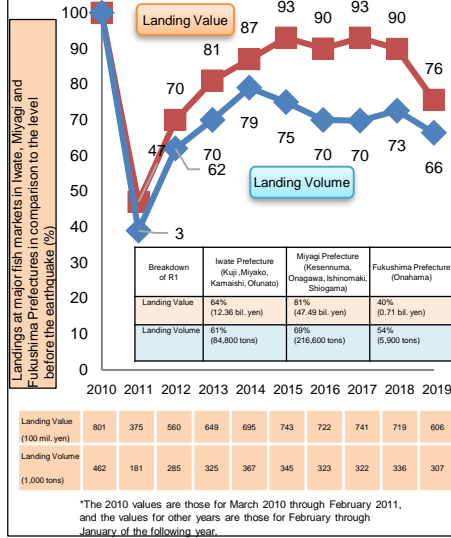
○ The government continues to make efforts to restore and reconstruct the fisheries industry in the disaster-affected areas.

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



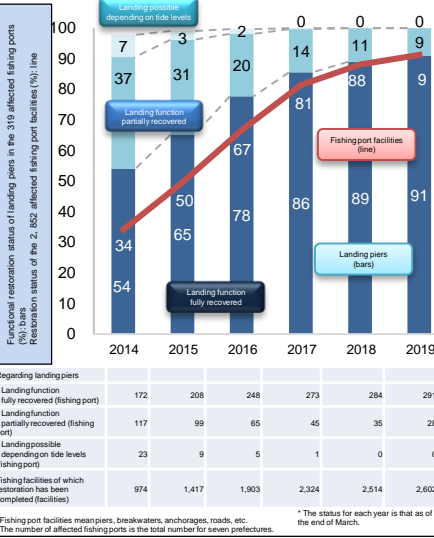
## Summary of Restoration of the Fisheries Industry Following Great East Japan Earthquake (as of March 2020)

## 1. Landings



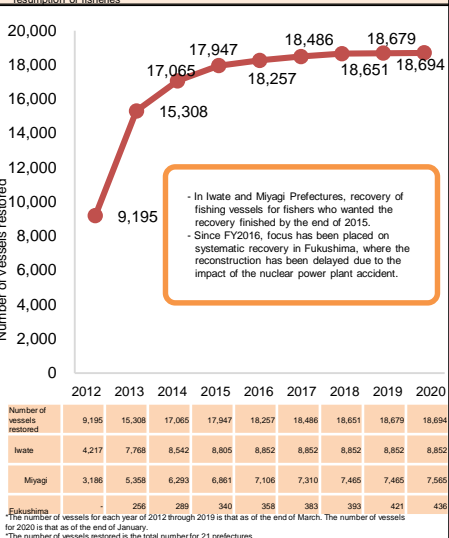
## 2. Fishing Ports

The landing functions have recovered in all affected fishing ports.



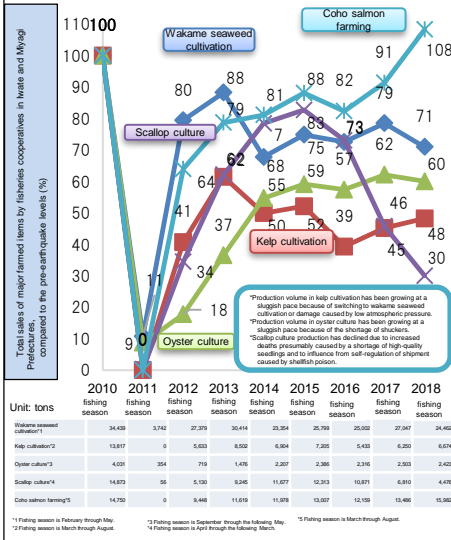
## 3. Fishing Vessels

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



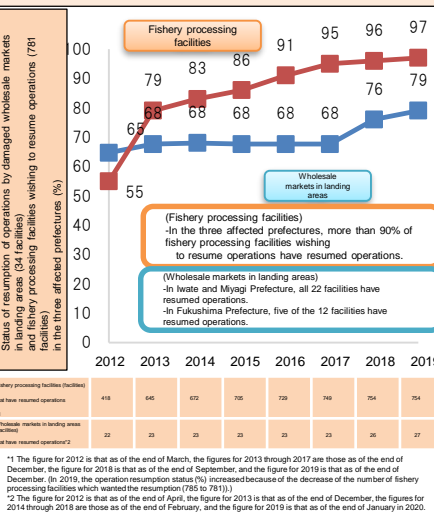
## 4. Aquaculture

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



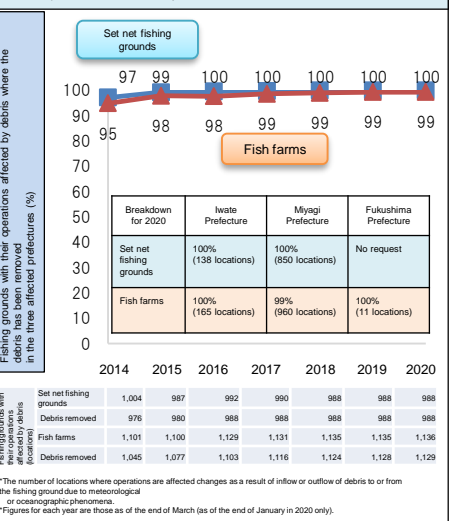
## 5. Processing and Distribution Facilities

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



## 6. Debris

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



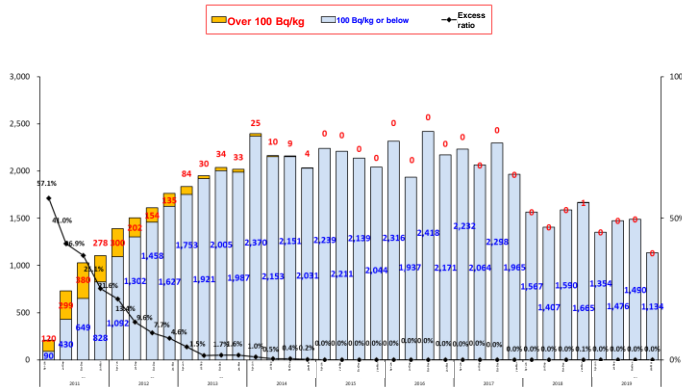
## (2) Response to the Impact of the Accident at TEPCO's Fukushima Daiichi Nuclear Power Plant

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

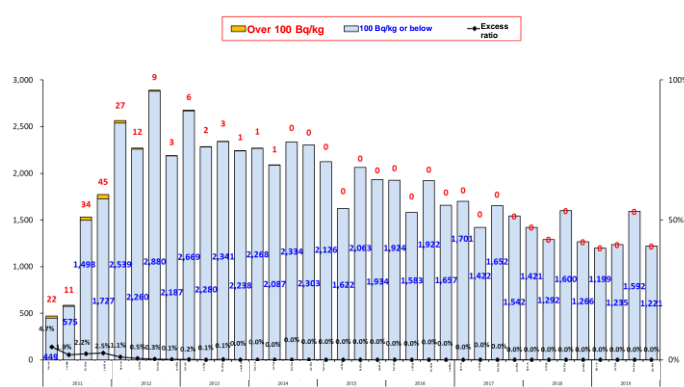
- The government, in cooperation with prefectural governments and fisheries cooperatives concerned, implements monitoring of radioactive materials in fish and fishery products. Results of the monitoring are to be announced.
- In FY2019, the number of specimens that exceeded the standard value (100 Bq/kg) in Fukushima Prefecture was zero for marine species and four for freshwater species. Outside Fukushima Prefecture, there have been no specimens exceeding the standard values for marine species, but two specimens for freshwater species since 2014.
- Distribution of fish and fishery products whose radioactive material monitoring results exceed the standard values is prevented through the cooperation of the national government, related prefectural governments, and fishery-related organizations. In FY2019, all restrictions on shipments of marine species off the coast of Fukushima Prefecture have been lifted.
- After full evaluation of the results of monitoring, trial fishing operation/selling was implemented for coastal fishery and bottom trawl fishery off Fukushima Prefecture.

## Monitoring Results of Radioactive Materials in Fish and Fishery Products (as of the End of March 2020)

## &lt;Marine species from Fukushima Prefecture&gt;



## &lt;Marine species from areas other than Fukushima Prefecture&gt;



## Case Example

## Revival! Joban Products! -Fukushima Joban Products Fair-

To widely promote "Joban Products" (seafood from offshore Fukushima Prefecture), the Fukushima Prefectural Government and Fukushima Fisheries Cooperatives Associations held Fukushima Joban Products Fair in FY2019 jointly with Foodison and Kakaku.com (Tabelog) at restaurants in the Tokyo metropolitan area, where people could eat seafood from Fukushima Prefecture. Flatfish, Mexicali and flounder, which are typical examples, are offered as original menu items for a limited time only at each store to promote the appeal and taste of Fukushima Prefecture's marine products.

It is expected that this fair will allow many people to learn about the appeal and taste of Fukushima Prefecture's marine products, which will lead to increased consumption and sales channels.



Logo of the Fukushima Joban Products Fair  
(Source: Fukushima Prefecture)



Original menu with flounder from Fukushima Prefecture for a limited time  
(Photo courtesy: Fukushima Prefecture)

## ii. Sweeping away Unfounded 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 has continued to monitor radioactive materials in fish and fishery products and to publish the results to consumers in an easy-to-understand manner and its website provides Q&A on radioactive materials and fish/fishery products to ensure that correct information is given to every consumer.
- Results of the monitoring in English, Chinese and Korean are announced and 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, 35 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 2020.
- In April 2019, the WTO released the WTO Appellate Body Report on "Restrictions on Importation of Japanese Fish and Other Products by South Korea," in which Japan had lodged a complaint with South Korea. The Appellate Body reversed the judgment of the Panel Report, which found that it arbitrarily or unfairly discriminated against Japanese fish and fishery products and was more restrictive of trade than necessary. On the other hand, the panel's finding of fact that Japanese food products sufficiently meet the numerical safety standard set by South Korea (100 Bq/kg, the same as in Japan) was not reversed by the Appellate Body.
- The government has continued to encourage countries and regions that still impose an import ban on agricultural, forestry and fishery products produced in Japan to abolish or ease their import ban, while explaining once again the safety of Japanese foods and Japan's safety management initiatives.

# Structure of "FY2020 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
- Increasing the number of visitors to fishing communities through the promotion of Seaside Stay (seaside overnight stay)

### 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