FY2022 Trends in Fisheries

FY2023 Fisheries Policy

Summary

Table of Contents

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FY2023 Fisheries Policy

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

The maps shown in this document do not necessarily represent the territory of Japan in a comprehensive manner.

Special Issue: Food Security in Japan's Fisheries

Section 1 Japan's Fisheries Against the Backdrop of the Russia-Ukraine Situation

(1) Impact on the Import of Fish and Fishery Products, and Response

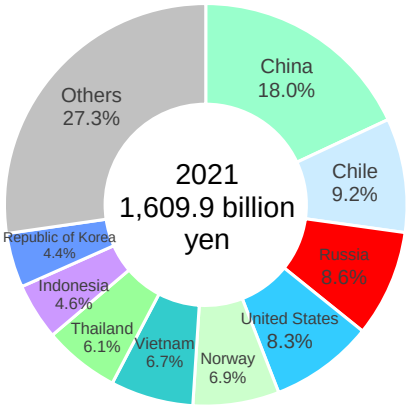
i. Current Situation Surrounding the Import of Fish and Fishery Products from Russia

- Japan's import volume of fish and fishery products in 2021 was 2.20 million tons. A major part of the total supply for domestic consumption of fish and fishery products consists of imports.
- Among Japan's import source countries for fish and fishery products, Russia ranks third in terms of import value. Major items in import percentage terms are cod roe; salmon roe, etc.; sea urchins; and crabs, etc.

Japan's Import Source Countries and Regions for Fish and Fishery Products, and Major Fish and Fishery Products Imported From Russia

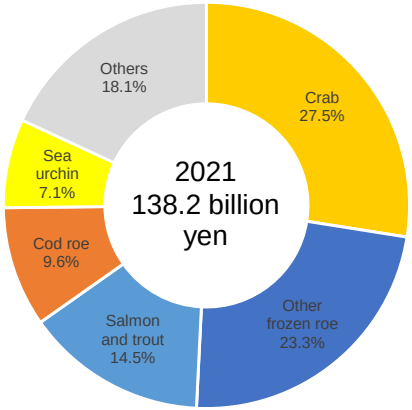
<Import source countries and regions>

Import value in 2021



<Fish and fishery products imported from Russia>

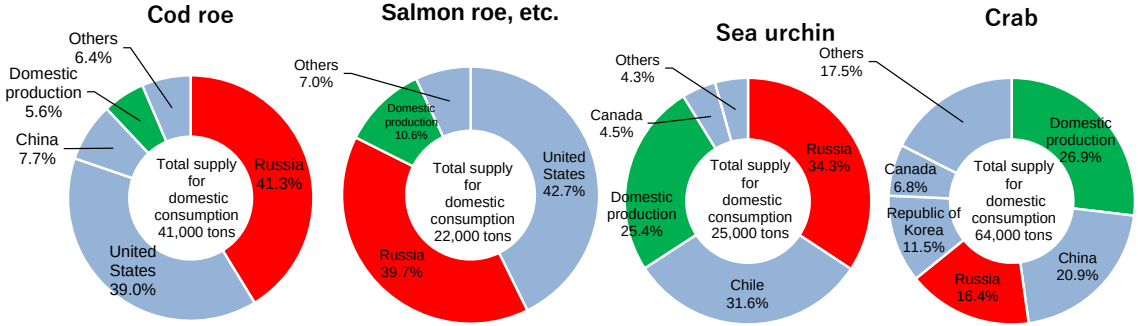
Import value in 2021



Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (for 2021; the Ministry of Finance)
Notes 1) Processed crabs and processed salmon roe are included in "Others" (not in "Crab" or "Other frozen roe").
2) Since the figures less than the unit used are rounded off, the total in each of the breakdowns does not necessarily amount to 100%.

Among Domestically Consumed Fish and Fishery Products, Major Items Imported From Russia in Import Percentage Terms

For 2021



Source: Prepared by the Fisheries Agency, based on the Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries), the Foreign Trade Statistics (for 2021; the Ministry of Finance), and the SUISANBUTSU Power Data Book 2022 (regarding the domestic production volumes of cod roe (Alaska pollock roe) and salmon roe, etc.; Suisantsushin Co., Ltd.)
Notes 1) Total supply for domestic consumption is calculated by subtracting export volume from domestic production volume plus import volume. No increase/decrease in inventory is taken into consideration.
2) Domestic production in each of the graphs represents the value obtained by subtracting export volume from domestic production volume.
3) Import volume and export volume are calculated on a round-fish basis with processed products included.
4) Domestic sea urchin production does not include cultured sea urchins. Also, the domestic production of salmon and trout does not include those from land-based aquaculture or the marine aquaculture of rainbow trout, etc.
5) Since the figures less than the unit used are rounded off, the total in each of the breakdowns does not necessarily amount to 100%.

ii. Sanctions Against Russia on Fish and Fishery Product Imports

- As a sanction against Russia for its invasion of Ukraine, Japan has revoked the preferential tariff rates applied to fish and fishery products imported from Russia.

Raising of the Tariff Rates of Major Fish and Fishery Product Imports From Russia

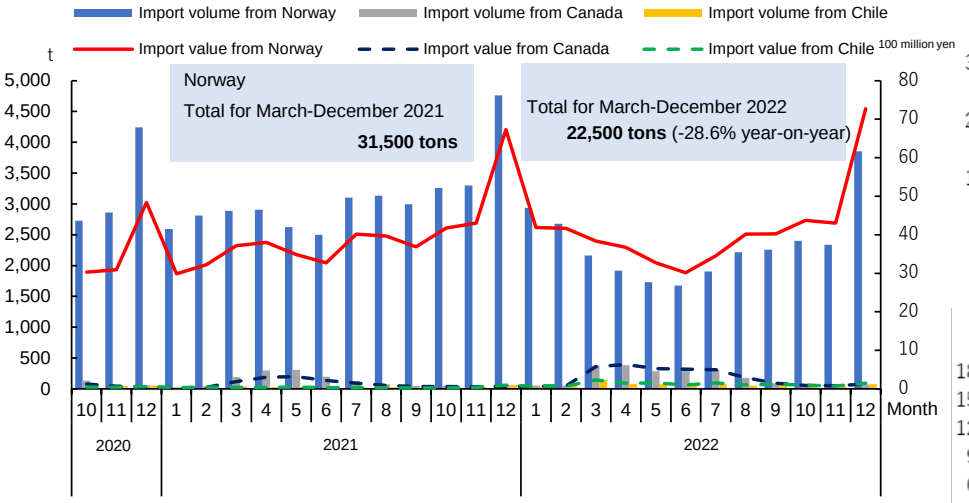
	WTO bound rates (preferential tariff rate)	Tariff rate after revision		WTO bound rates (preferential tariff rate)	Tariff rate after revision
Crab	4%	6%	Cod	6%	10%
Salmon and trout	3.5%	5%	Herring	6%	10%
Other frozen roe (salmon roe, etc.)	3.5%	5%	Herring roe	8.4%	12%

<Main sanctions of the G7 countries, etc.>
(US) Import ban on fish and fishery products produced in Russia
(UK) Additional tariffs on the importation of white-fleshed fish, etc., produced in Russia
(EU) Import ban on shellfish, etc., produced in Russia
(Canada) Import ban on fish and fishery products produced in Russia, except for processed crabs, etc.

iii. Impact on Fish and Fishery Products Imported From Other Countries and Regions

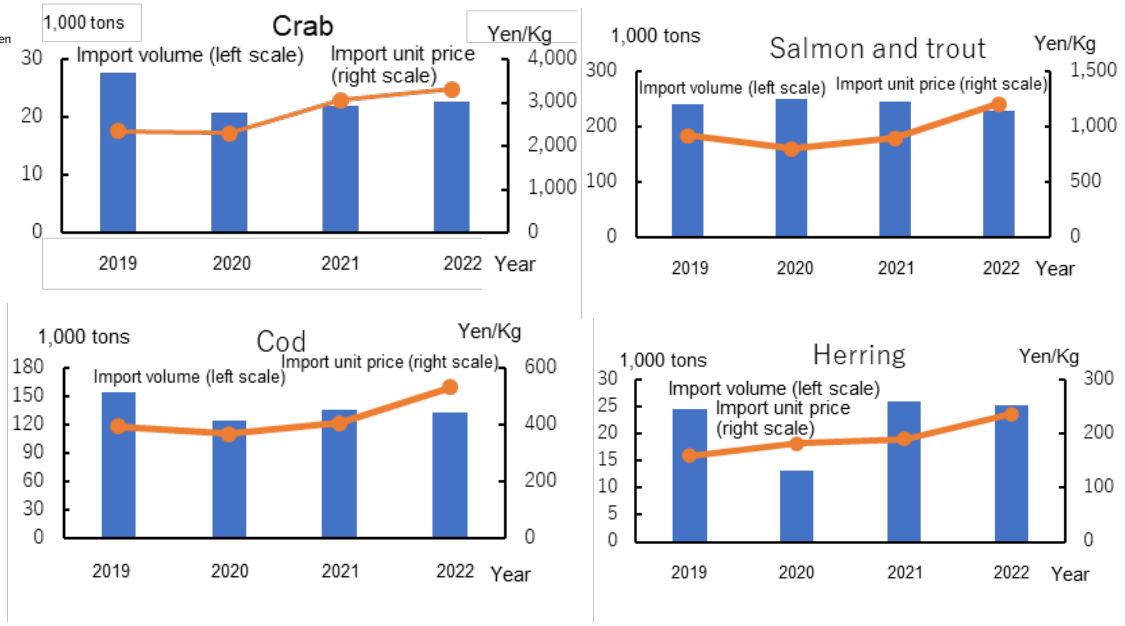
- ○ The importation of Norwegian fresh salmon has significantly declined.
- ○ The prices of various fish and fishery product imports have further risen due to supply chain disruption caused by the Russia-Ukraine situation and rapid yen depreciation in addition to the recovery of economic activities from their global-scale stagnation attributable to COVID-19 infections.

Trends in the Import Volume and Import Value of Salmon and Trout (Fresh/Refrigerated) From Norway



Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)
Note: Including fillets of salmon and trout

Trends in the Import Unit Prices and Import Volume of Major Fish and Fishery Products Whose Prices Have Increased



Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)
Note: For each of these items, processed products are imported in addition to the above import volume.

iv. Measures to Price Increase in Fish and Fishery Product Imports

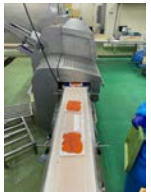
- ○ Since it has been difficult to secure raw materials for processing due to increased import prices among other reasons, support is given to such initiatives as fishery processors' diversification of raw material suppliers.

Case Example Switching to Domestically Produced Raw Materials for Fishery Processing

OJI SALMON Co., Ltd. has switched its raw materials produced overseas to domestically produced ones. This is not only because the cost of procurement of salmon and trout imports as raw materials has increased due to, among other factors, the impact of the Russia-Ukraine situation, but also because its procurement volume of raw materials has declined due to, for example, sluggish air freight transportation, which results in concerns about inventory shortage affecting the stable supply of its products and poses a great risk in the future procurement of raw material imports.

While overseas salmon and trout are imported after having been frozen in the form of dresses or fillets, domestic ones are purchased as fresh fish. Accordingly, the company newly installed a chilled slicer and a vacuum modified-atmosphere packaging machine to process fresh raw materials and arranged a structure enabling chilled processing in a consistent manner across various processes such as smoking, slicing, and packaging. This has enabled the company to develop new products by processing fresh raw materials such that their freshness can be maintained at a high level, thereby expanding its sales channel.

The continuance of production in such manner has enabled the company to maintain its clients and also local jobs.


Products sliced by a chilled slicer

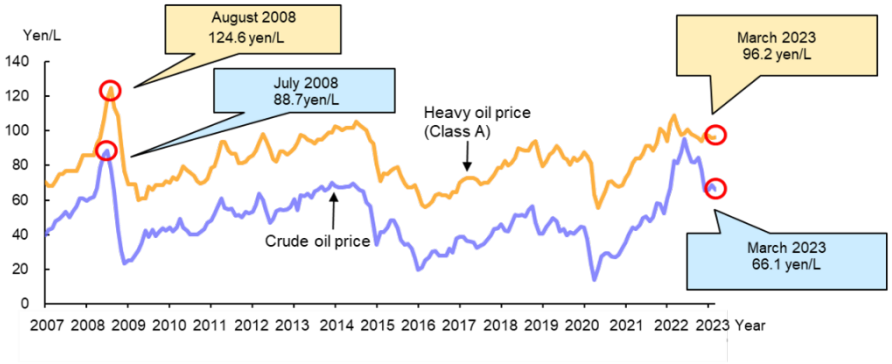

Products packed by a vacuum modified-atmosphere packaging machine

(2) Impact of Fuel Oil, etc., on Production Materials for Fisheries, and Response

i. Fuel Oil

- Fuel oil prices remain at high levels with unstable fluctuations due to the impact of the Russia-Ukraine situation, etc., and rapid yen depreciation in addition to a sharp increase in fuel oil prices following the recovery of economic activities from their global-scale stagnation attributable to COVID-19 infections.
- Measures have been taken against sharply increasing fuel oil prices by increasing the reserve fund of the Fishery Management Safety Net Construction Project and supporting fishers in their introduction of energy-saving devices.

Trends in Fuel Oil Prices

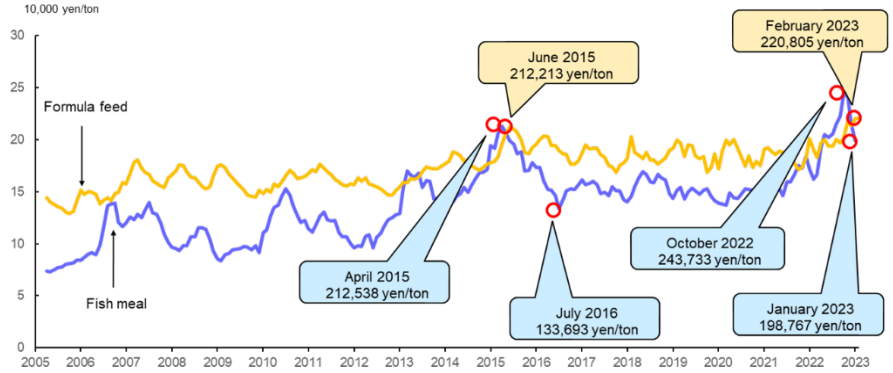


Source: Prepared by the Fisheries Agency

ii. Formula Feed for Aquaculture

- While the price of fish meal has been on the increase with its demand growing in developing countries, the price of formula feed for aquaculture also shows an upward trend owing to the recovery of economic activities from their global-scale stagnation attributable to COVID-19 infections, the impact of the Russia-Ukraine situation, and rapid yen depreciation.
- Measures have been taken against the sharply increasing formula feed price, including the development of new formula feed for aquaculture with a low level of fish meal used and the Fishery Management Safety Net Construction Project.

Trends in the Prices of Formula Feed and Fish Meal

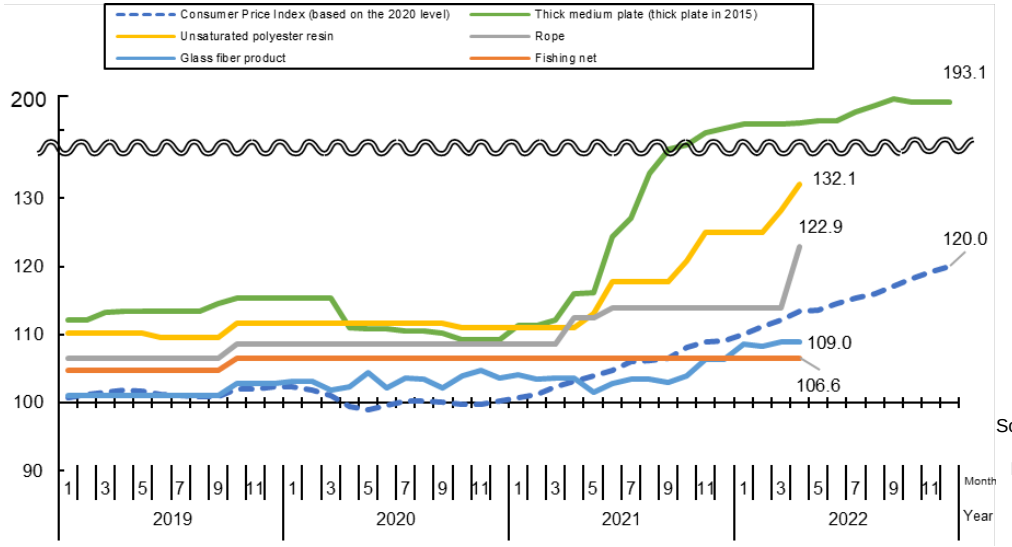


Source: Based on the Foreign Trade Statistics (regarding fish meal; the Ministry of Finance) and according to the Japan Fish Feed Association (regarding formula feed up to June 2013) and the Fisheries Agency (regarding formula feed from July 2013)

iii. Other Production Materials for Fisheries

- The prices of production materials for fisheries have sharply risen due to the impact of the Russia-Ukraine situation and that of rapid yen depreciation in addition to the recovery of economic activities from their global-scale stagnation attributable to COVID-19 infections. By item, the prices of fishery ropes, steel plates (a building material for steel vessels), and unsaturated polyester resin (a building material for FRP vessels) have increased.
- In the Comprehensive Project for Japan's Fisheries Structural Reform, and in relation to the lease-based introduction of fishing vessels, fishing gear, etc., support has been given with the sharply increasing prices of materials taken into consideration.

Trends in the Price Index of Production Materials for Fisheries (2015 Level = 100)



Source: Prepared by the Fisheries Agency, based on price-related statistics published by the Bank of Japan
Notes: 1) The index for each month with the price level in 2015 as 100.
2) The collection of statistical data on fishing nets, ropes, unsaturated polyester resin, and glass fiber products was discontinued in May 2022.

(3) Relations with Russia in Japan's Fisheries in the Northwest Pacific Ocean

In the meeting of the Japan-Russia Fishery Committee held in December 2022 on the basis of the Japan-USSR Offshore Fishery Agreement for reciprocal fishing arrangement in the 200 nautical mile zone of Japan and in that zone of Russia, an agreement was reached on the operational conditions, etc., for 2023.

In the meeting of the Japan-Russia Joint Fishery Committee held in March 2023 on the basis of the Japan-USSR Fishery Cooperation Agreement in order to consult on the operational conditions, etc., of Japan's fishing vessels within Japan's 200 nautical mile zone in relation to Russian salmon and trout, an agreement was reached on the operational conditions, etc., for 2023.

Through private-sector negotiations held from May 2022 on the basis of the Kaigara Island Kelp Agreement, which is a civilian agreement for Japan's fishers to safely gather kelp around the Kaigara Island, an agreement was reached on the operational conditions, etc., for 2022.

With respect to the North Pacific Fisheries Commission, which aims to ensure the long-term conservation and sustainable use of fisheries resources on the high seas of the North Pacific Ocean, its annual meeting held in March 2023 agreed to set, among other matters, a TAC of saury on the high seas at 150,000 tons for 2023 and 2024 (25% reduction from 2022).

Section 2 New Trends Toward Food Security Regarding Fish and Fishery Products

(1) Current Initiatives Concerning Food Security

- The Basic Act on Food, Agriculture and Rural Areas provides, among other matters, that the State is to secure a minimum food supply required for the citizens even if there is any contingent event such as poor harvests or the disruption of import, and to implement specific measures for that purpose, in addition to its provisions on securing a stable supply of food.
- The Basic Act on Fisheries provides, in addition to its provisions on a stable supply of marine products, that food security under contingent circumstances is as provided for in the Basic Act on Food, Agriculture and Rural Areas.
- The Guidelines for Ensuring Food Security in Emergencies were formulated, which specify the details, etc., of the measures that the national government should implement in a situation in which contingent factors may affect the food supply. As responses in relation to fish and fishery products, these guidelines provide that the production of such products should be increased to an extent that can ensure the sustainable utilization of fisheries resources, and that the use of fisheries resources should be switched from their use for non-food fish and fishery products (such as feed for aquaculture) to their use for food products.

Basic Act on Food, Agriculture and Rural Areas (Extract)

(Securing of a Stable Food Supply)

Article 2 (1) Given the fact that food is essential for maintaining human survival and important for humans as a basis for a healthy and fulfilling lifestyle, a stable supply of high-quality food must be maintained into the future at a reasonable price.

(2) Given the fact that the world's food supply and demand and trade is unstable, a stable supply of food to the citizenry must be maintained by increasing domestic agricultural production as a basis for a stable food supply and by combining the supply with import and stockpiling of food.

(3) A supply of food must be maintained to meet the sophisticated and diversified public demand for food through achieving the sound development of agriculture and the food industry in a comprehensive manner, while encouraging an increase in agricultural productivity.

(4) A minimum food supply required for the citizens must be secured so that the stability in the citizens' lives and the smooth operation of the national economy will not be affected even when a domestic food supply shortage occurs or is likely to occur for a reasonable period of time due to contingent factors such as poor harvests or imports that have been stopped.

(Food Security in Emergencies)

Article 19 In the case prescribed in Article 2, paragraph (4), if the State finds it necessary to secure a minimum food supply required for the citizens, the State is to implement measures to increase the production of food, to restrict distribution and other necessary measures.

Basic Act on Fisheries (Extract)

(Maintaining a Stable Supply of Marine Products)

Article 2 (1) In light of the fact that marine products are an important part of a healthy diet and other healthy and fulfilling lives, a stable supply of quality marine products at reasonable prices must be ensured for the future.

(2) In supplying marine products, in view of the fact that marine resources are a limited component of the ecosystem, and in order to ensure their sustainable use, appropriate conservation and management of marine resources must be conducted based on the appropriate implementation of the United Nations Convention on the Law of the Sea, and the propagation and aquaculture of aquatic animals and plants are to be promoted while giving consideration to harmony with the environment.

(3) The stable supply of marine products to the public is to be secured by increasing Japan's fishery production, and appropriately combined with importing, while ensuring the sustainable utilization of marine resources, in view of the unstable state of supply and demand and trade of marine products worldwide.

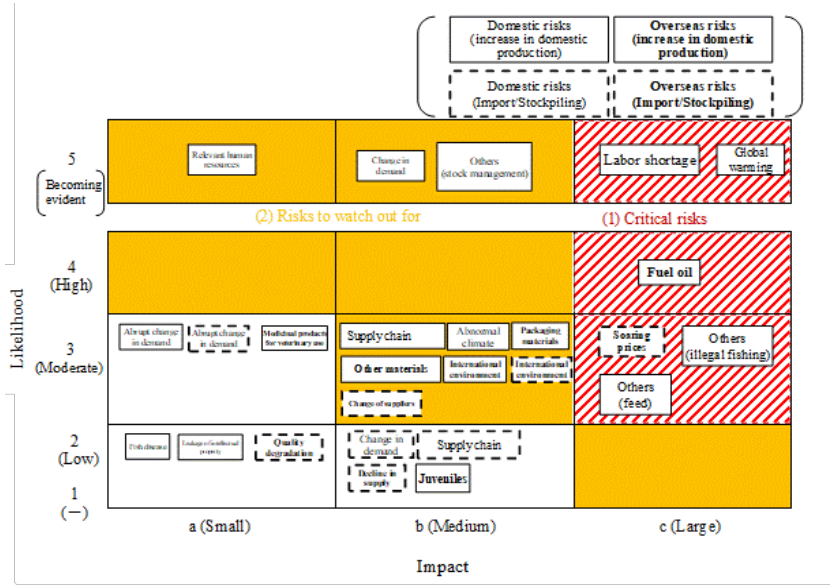
(Ensuring a Stable Supply of Marine Products as Food)

Article 12 Measures to ensure a stable supply of marine products as food are to be as set out in the Basic Law on Food, Agriculture and Rural Areas and in this Section.

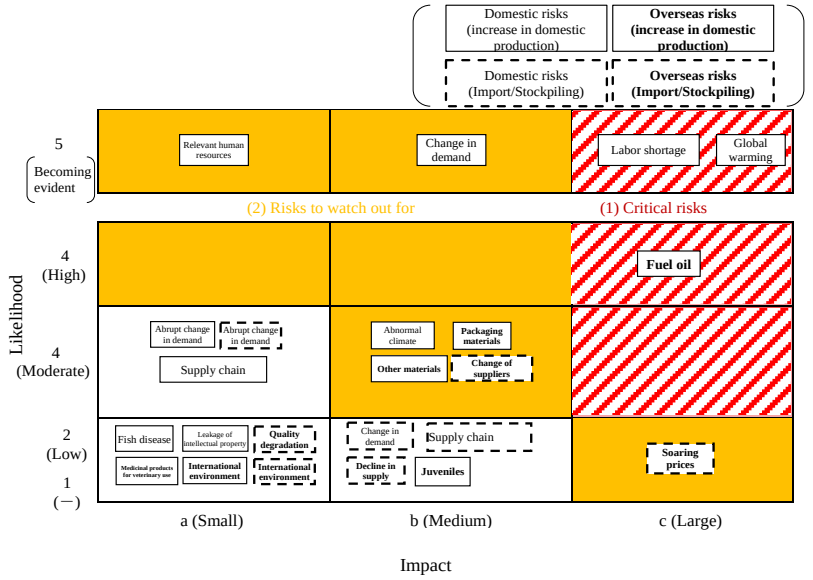
(2) Understanding the Situation Surrounding Food Security

- Amid mounting concerns about food security due to the emergence of new risks in recent years, such as the spread of COVID-19 infections and the invasion of Ukraine by Russia, the Ministry of Agriculture, Forestry and Fisheries identified and comprehensively examined the risks that would potentially affect the stable supply of food and published the results of this examination in June 2022 as the "Examination of Risks for the Stable Supply of Food (2022)."
- In this assessment of risks, each risk was analyzed in terms of its "likelihood" and degree of "impact" and categorized as a "critical risk" or "risk to watch out for." For fish and fishery products, factors such as labor shortage, global warming, and declined fuel oil imports and soaring fuel oil prices were identified as "critical risks," while factors such as change in demand, abnormal climate, and the declined import of materials such as packaging materials and their soaring prices were identified as "risks to watch out for."

Risk Map for Fish and Shellfish



Risk Map for Marine Algae



(3) Upcoming Initiatives to Enhance Food Security Regarding Fish and Fishery Products

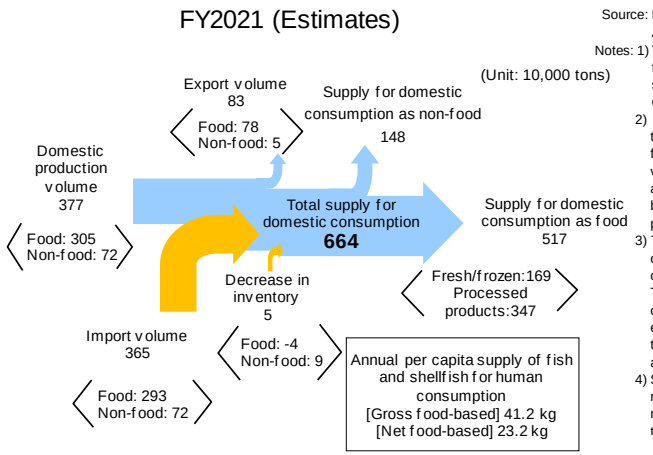
- Taking account of an increase in production volume owing to the steady implementation of resource management as well as initiatives, etc., based on aquaculture strategies and export strategies, the new Basic Plan for Fisheries formulated in March 2022 sets goals for the self-sufficiency rate in FY2032, which are 94% for fish and shellfish for human consumption, 76% for overall fish and shellfish, and 72% for marine algae.
- The "Plan for Creating Dynamism through Agriculture, Forestry, and Fishery Industries and Local Communities," which is the grand design for policy reform to create dynamism in Japan's agriculture, forestry, and fishery industries and local communities, was revised in June 2022, and also the "Guidelines for Policies to Enhance Food Security" were formulated in December of the same year to clarify the necessary measures to be continuously implemented for enhancing food security, and the targets of those measures.
- Since about 20 years have passed after the enactment of the Basic Act on Food, Agriculture and Rural Areas, it is essential to examine and review the Act in order to address issues for the future including the enhancement of food security. Accordingly, the study group on the review of the Basic Act, which was newly established under the Council for Policies on Food, Agriculture and Rural Areas, has actively conducted deliberations since 2022.
- In December 2022, structural shift measures, etc., aimed at enhancing food security were implemented to provide such types of support as the following: supporting fishery processors in ensuring a stable supply of raw materials; the development of formula feed for aquaculture with a low level of fish meal used; the domestic production of raw materials for formula feed; and the introduction of energy-saving fishing devices. Necessary measures will continue to be implemented in the future.

Chapter 1 Trends in the Supply-and-Demand and Consumption of Fish and Fishery Products in Japan

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

- ○ The total supply of domestic consumption of fish and shellfish was estimated at 6.64 million tons for FY2021 (converted on a fresh-fish basis, estimates), of which 5.17 million tons (78%) were for human consumption (food) and 1.48 million tons (22%) for feed and fertilizer (non-food).
- ○ The self-sufficiency rate of fish and shellfish in FY2021 was 59% (estimate).

Japan's Production and Consumption Structure of Fish and Shellfish



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

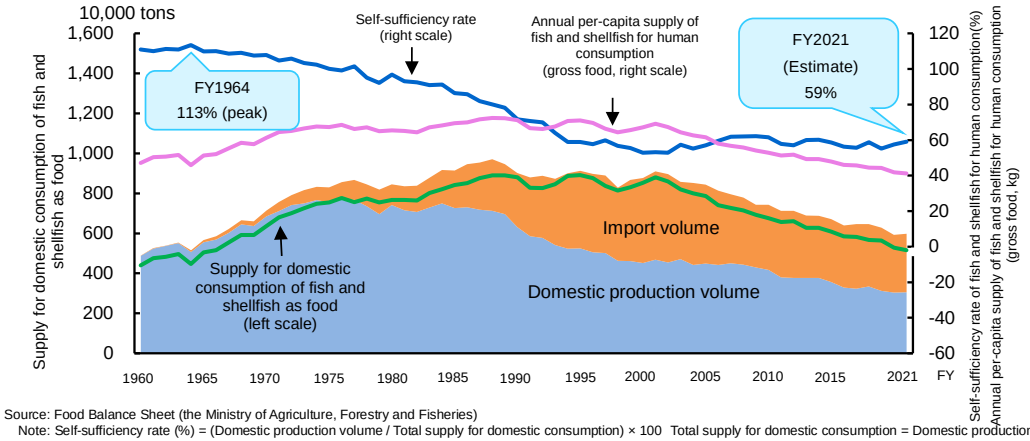
Notes: 1) The figures are after conversion on a round-fish basis (except for net food-based supplies) and do not include marine algae or the whaling industry's catch.

2) Conversion on a round-fish basis means that a volume involving different product forms according to items, such as import volume and export volume, is converted into an equivalent volume based on round fish by using the coefficient prescribed for each product form.

3) The term "gross food" refers to the amount of fish and fishery products for human consumption, including disposal volume. The term "net food" refers to the amount of only the edible parts obtained after excluding, from gross food, the parts subject to disposal in ordinary eating habits (such as fish heads, internal organs, and bones).

4) Since the figures less than the unit used are rounded off, the total in the breakdown does not necessarily match the actual total of those figures.

Trends in the Self-Sufficiency Rate of Fish and Shellfish(for human consumption)



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

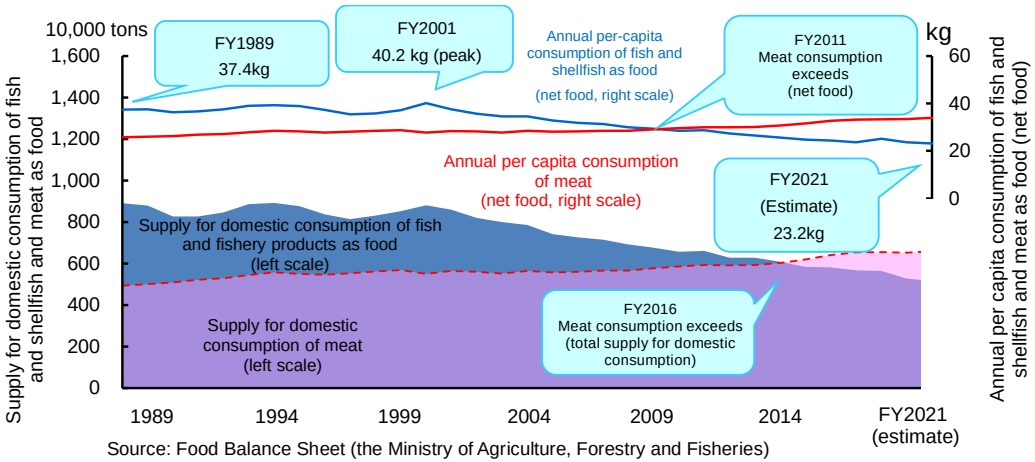
Note: Self-sufficiency rate (%) = (Domestic production volume / Total supply for domestic consumption) × 100 Total supply for domestic consumption = Domestic production volume + Import volume - Export volume ± Increase/decrease in inventory

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

i. Trends in the Consumption of Fish and Fishery Products

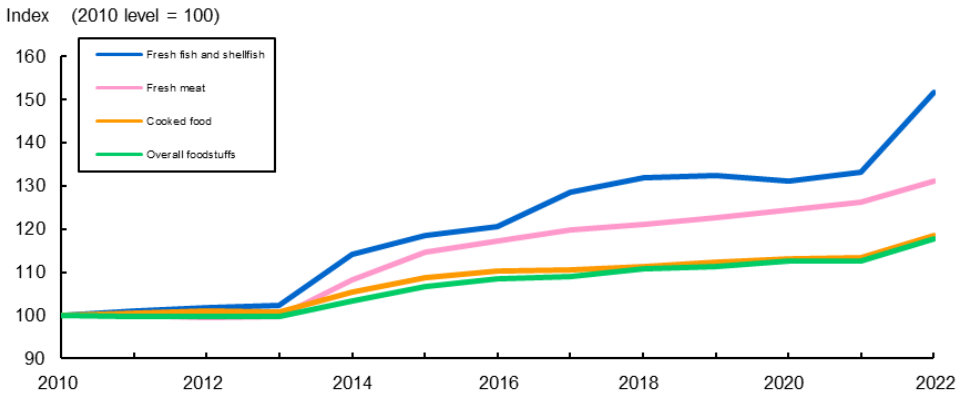
- ○ Annual per-capita consumption of fish and fishery products (net food base) has been on a decreasing trend from the peak of 40.2 kg in FY2001 and lower than meat consumption since FY2011. It was 23.2 kg (estimate) in FY2021.
- ○ The prices of fresh fish and shellfish have risen, and their annual per-capita purchase volume has been on a decreasing trend. In 2022, partly due to the impact of the increased prices of fish and fishery product imports, the Consumer Price Index for fresh fish and shellfish increased by 14% from the previous year, and the annual per-capita purchase volume of fresh fish and shellfish declined by 14%.
- ○ The factors that keep consumers away from purchasing many fish and shellfish include high prices and the time and effort required for cooking. Consumers' orientation is changing with growing orientation toward simplification and convenience in terms of eating.

Changes in Supply for Domestic Consumption and Annual Per-Capita Consumption of Fish and Shellfish for human consumption



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

Trends in the Consumer Price Index for Foodstuffs

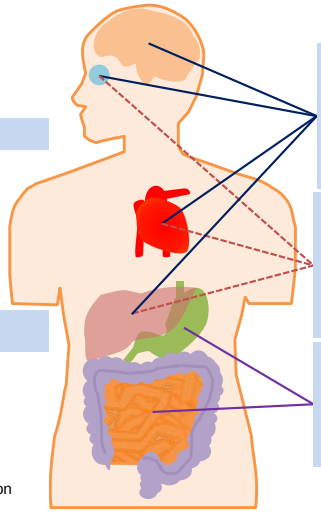


Source: Prepared by the Fisheries Agency, based on the Consumer Price Index (the Ministry of Internal Affairs and Communications)

ii. Health Benefits of Fish and Fishery Products

- Docosahexaenoic acid (DHA) and icosapentaenoic acid (IPA), which are omega-3 polyunsaturated fatty acids, contained abundantly in the fat of fish and shellfish as well as that of whales, have effects such as promoting the development and function maintenance of the brain, etc., and reducing LDL cholesterol and neutral fats.
- Fish protein is not only a high-quality protein containing a good balance of the nine essential amino acids, which are essential for human life, but also is easily digested and taken into the body compared to soy protein and milk protein.

Main Functional Components Contained in Fish and Fishery Products



Astaxanthin	Salmon, brit, **sakura shrimp**, and **red seabream**	- Antioxidant action (anti-atherogenic action, antitumor action, anti-aging action, etc.)
Balenine	**Red whale meat**	- Anti-fatigue action and anti-stress action etc.
DHA、IPA (EPA)	**Whale skin**, **bluefin tuna fatty meat**, salmon roe (sujiko), **mackerel**, and **yellowtail**	- Development and function maintenance of the brain, retina, and nerves - Platelet aggregation inhibition action - Reduction of LDL cholesterol and neutral fats etc.
Taurine	Short-necked clam, **oyster**, cuttlefish, octopus, and tuna dark-colored meat	- Reduction of LDL cholesterol - Enhancement of the functions of the heart and liver - Recovery in vision - Prevention of high-blood pressure - Stimulation of insulin secretion etc.
Fucoidan	Brown algae (**kelp**, **dried nemacystus decipiens**, hizikia fusiforme, wakame seaweed, etc.)	- Antitumor action, - Immune function improvement - Prevention of gastric ulcers etc.

Note: Each of the fish and fishery products **in red color** has a high percentage of domestic production volume.
Production volume and import volume are estimated based on statistics and materials similar thereto.

Source: Prepared by the Fisheries Agency, based on various materials

Column Effect of Muscle Increase by Intaking of Muscle Protein

The Food Function R&D Center of Nissui Corporation found that APP (Alaska Pollack Protein), which is a protein contained in Alaska pollack, has as its functionality a “muscle hypertrophy effect equivalent to intensive physical exercise,” inducing muscle hypertrophy (particularly for fast muscle) without concurrent exercise intervention. This research result led to the commercialization of a product series “Sokkin-tanapaku (Fast Muscle Protein),” and thereby the company won the Minister of Agriculture, Forestry and Fisheries Award of the 2022 (23rd) Commendation of Private-Sector Contributors to R&D in Agriculture, Forestry and Fisheries.

速筋タンパク®

Logo of Sokkin-tanapaku (Nissui Corporation)

iii. Approaches to Expansion of Consumption of Fish and Fishery Products

- Approaches taken include the provision of fish according to consumer needs through such services as face-to-face sale and pretreatment; and direct selling through the Internet.
- The Fisheries Agency has supported value chain approaches based on cooperation among parties involved in production, processing, distribution, and sale, such as efforts to improving distribution and reducing costs and high added value.
- Activities actively conducted in recent years include the development of school meals using fish and shellfish centrally by fishers, processors/distributors, etc.; and the promotion of fish-eating by fishers personally making visits to deliver lessons.
- The Fisheries Agency designated the 3rd day to 7th day of each month as "*sakana no hi* (fish day)," for the promotion of public and private approaches to expansion of consumption of fish and fishery products.

Column The 3rd Day to 7th Day of Each Month as "Fish Day" to Eat Fish

In the promotion of public and private approaches to expansion of consumption of fish and fishery products, the Fisheries Agency has designated the 3rd day to 7th day of each month as "*sakana no hi* (fish day)" and the 3rd day to 7th day of November as "*ii sakana no hi* (good fish day)" to treat these periods as the weeks to reinforce activities toward expansion of consumption of fish and fishery products. Companies and other organizations supporting the fish day (726 companies, etc.; as of the end of March 2023) implement their approaches related to the expansion of consumption of fish and fishery products on the fish day as supporting members. In addition, a fish day kickoff event to disseminate information on the fish day was held within the "8th Fish-1 Grind Prix" event (organized by the National Federation of Fisheries Co-operatives Associations) held in November 2022.

Fish day logo

Fish day kickoff event (the 8th Fish-1 Grand Prix)

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

- There are various marine eco-labels around the world that certifies resource management and environmental efforts. In Japan, MSC, ASC, and MEL are mainly used, and their use has been promoted.
- Other systems of providing information to consumers and protecting intellectual property include the obligation to label the place of origin under the Food Labeling Act, the system for food with function claims, and the geographical indication (GI) protection system.

Main Marine Eco-Label Certificates Used in Japan

MSC Certificate

<UK>
[Number of certificates in Japan]
14 fisher organizations
- Scallops (Hokkaido Pref.)
- Skipjack (Miyagi and Shizuoka Prefs.)
- Albacore (Miyagi and Shizuoka Prefs.)
- Oysters (Okayama Pref.), etc.

353 enterprises (distributors and processors)

ASC Certificate

<Netherlands>
[Number of certificates in Japan]
15 aquaculture organizations (101 fish farms)
- Oysters (Miyagi Pref.)
- Japanese yellowtail (Miyazaki, Oita, and Kagoshima Prefs.)
- Purplish amberjack (Kagoshima Pref.), etc.

187 enterprises (distributors and processors)

Certificates from abroad

Fisheries

Aquaculture

MEL Certificate

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

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

129 enterprises (distributors and processors)

Certificate from Japan

* The number of certificates is that as of March 31, 2023 (according to the Fisheries Agency).

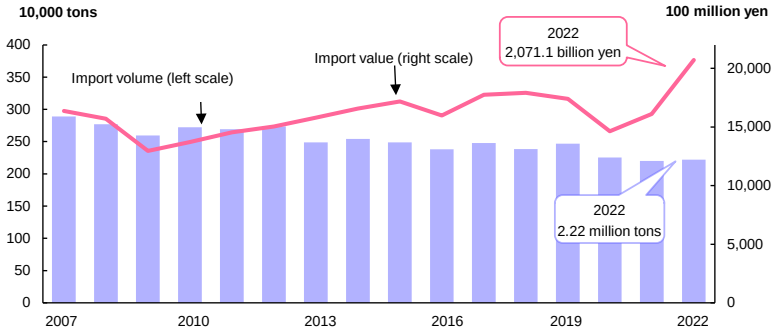
"Miyagi Salmon" whose GI was registered in Vietnam in 2022

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

i. Trends in Importation of Fish and Fishery Products

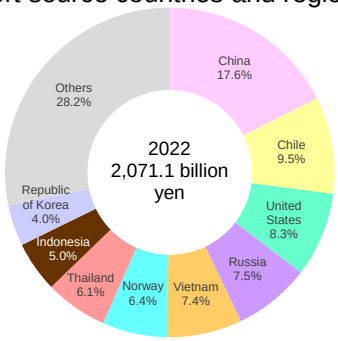
- ○ The import volume of fish and fishery products (on a product weight basis) increased by 0.9% from the previous year to 2.22 million tons in 2022. The import value increased by 28.6% from the previous year to 2,071.1 billion yen.
- ○ Major import items in terms of import value are salmon and trout, skipjack and tuna, and shrimp, etc.

Trends in the Import Volume and Import Value of Fish and Fishery Products, Import Source Countries/Regions, and Breakdowns of Items

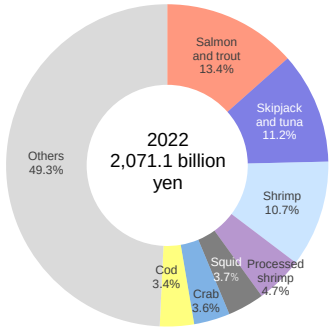


Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)
Note: Since the figures less than the unit used are rounded off, the total in each of the breakdowns does not necessarily amount to 100%.

<Import source countries and regions>



<Import items>

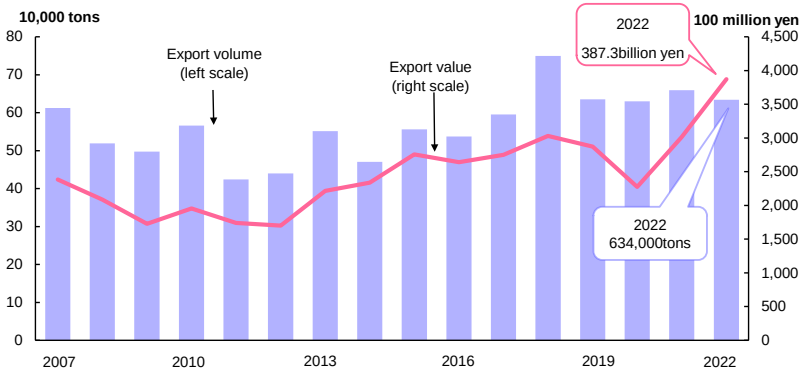


Share in the total import value of agricultural, forestry, and fishery products and food: 15.4%

ii. Trends in Export of Fish and Fishery Products

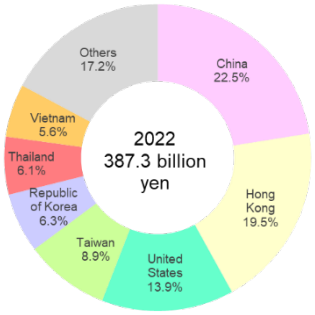
- ○ The export volume of fish and fishery products (on a product weight basis) decreased by 3.8% from the previous year to 0.634 million tons in 2022. The export value increased by 28.5% from the previous year to 387.3 billion yen.
- ○ Major export destinations are China, Hong Kong, and the United States, accounting for over 50% or more of the total export value.
- ○ Major export items are scallop, yellowtail, etc., in terms of export value.
- ○ A target for export of agricultural, forestry, and fishery products and foodstuffs to reach 5 trillion yen (including fishery products of 1.2 trillion yen) by 2030 was established in March 2020. Priority items of fish and fishery products are yellowtail, sea bream, scallops, pearls, and colored carp.

Trends in the Export Volume and Export Value of Fish and Fishery Products, Export Destination Countries/Regions, and Breakdowns of Items

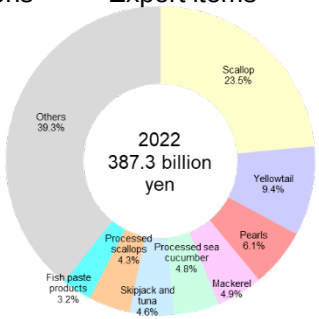


Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)
Note: Since the figures less than the unit used are rounded off, the total in each of the breakdowns does not necessarily amount to 100%.

<Export destination countries and regions>



<Export items>



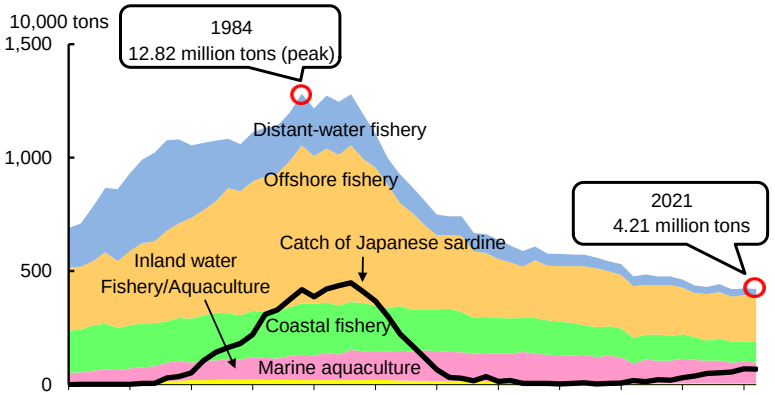
Share in the total export value of agricultural, forestry, and fishery products and food: 27.4%

Chapter 2 Trends in Japan's Fisheries

(1) Trends in Domestic Fisheries and Aquaculture Production

- The volume of domestic fisheries and aquaculture production decreased by 20,000 tons from the previous year to 4.21 million tons in 2021, of which that of marine fisheries increased by 20,000 tons from the previous year to 3.24 million tons. In particular, the volume of mackerel, skipjack, etc., increased. The volume of marine aquaculture decreased by 40,000 tons to 0.93 million tons. The volume of inland water fisheries and aquaculture increased by 1,000 tons to 50,000 tons.
- The production value of domestic fisheries and aquaculture increased by 60.2 billion yen from the previous year to 1,399.9 billion yen in 2021, of which that of marine fisheries increased by 34.6 billion yen to 806.7 billion yen, that of marine aquaculture increased by 14.4 billion yen to 469.3 billion yen, and that of inland water fisheries and aquaculture increased by 11.2 billion yen to 124.0 billion yen.

Trends in the Production Volume of Fisheries and Aquaculture

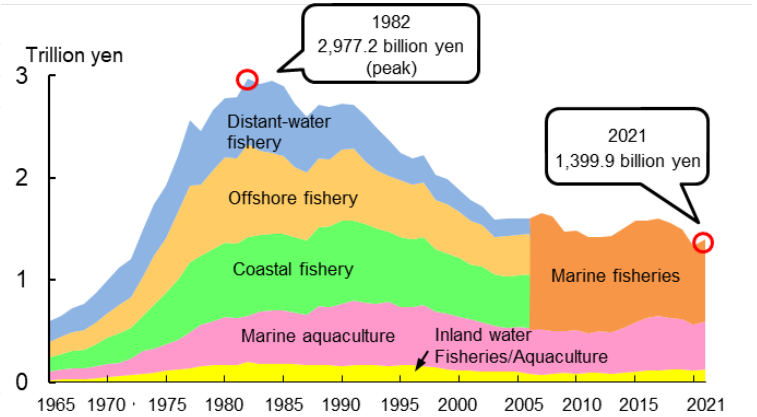


(1,000 tons)

Production volume		2021
	Total	4,215
	Marine	4,163
	Fisheries	3,236
	Distant-water fishery	279
	Offshore fishery	2,020
	Coastal fishery	938
	Aquaculture	927
	Inland water	52
	Fisheries	19
	Aquaculture	33

Source: Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries)
Note: For the production volumes of "distant-water fishery," "offshore fishery," and "coastal fishery," which are breakdown items of the production volume of fisheries and aquaculture, surveys of the catches of fishing vessels by tonnage group were discontinued in 2007. Therefore, the figures for 2007 to 2010 are estimates. For surveys in 2011 and beyond, the catch of each type of fisheries that belongs to "distant water fishery," "offshore fishery," and "coastal fishery" are added up.

Trends in the Production Value of Fisheries and Aquaculture



(100 million yen)

Production value		2021
	Total	13,999
	Marine	12,759
	Fisheries	8,067
	Aquaculture	4,693
	Inland water	1,240
	Fisheries	154
	Aquaculture	1,086

Source: Prepared by the Fisheries Agency, based on the Gross Fisheries Output (the Ministry of Agriculture, Forestry and Fisheries)
Notes: 1) The fishery production value was obtained by adding the juveniles 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.).
2) Compilation of the production value by sector of marine fisheries was discontinued in 2007.

(2) Trends in Management of Fisheries and Aquaculture

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

- The average fishing income of private management bodies engaged in coastal fisheries using vessels increased by 20,000 yen from the previous year to 1.14 million yen in 2021. The business income including non-fishing income in the same year was 1.34 million yen. The average fishing income of private management bodies engaged in fisheries using fishing vessels of 10 tons or more was 2.69 million yen in the same year, and the business income of the same was 3.02 million yen.
- Corporate management bodies engaged in fishing vessel fisheries have been experiencing deficits in average fishery income. Operating losses, including non-fishery losses, posted were 11.58 million yen in FY2021.
- The average fishing income of private management bodies engaged in marine aquaculture decreased by 0.31 million yen from the previous year to 4.96 million yen in 2021.
- The production value of fisheries and aquaculture per fisher in Japan was 10.83 million yen, and the fishery income produced was 5.32 million yen.

Trends in Management of Private Management Bodies

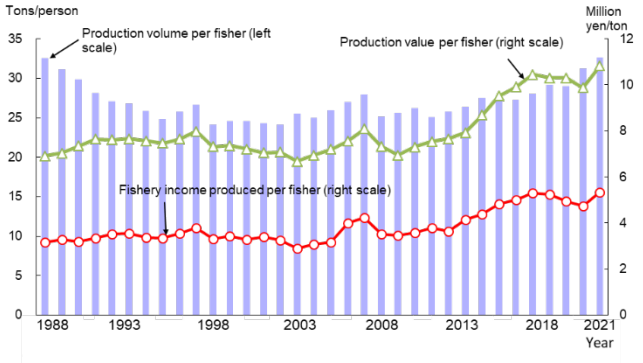
(Unit: 1,000 yen)

	<Coastal fishery by fishing vessels>		<Fishery by fishing vessels of 10 tons or more>		<Marine aquaculture>	
	2020	2021	2020	2021	2020	2021
Business income	1,347	1,338	3,701	3,023	5,473	5,156
Fishing income	1,124	1,141	3,300	2,686	5,269	4,960
Fishing revenue	5,121	5,412	32,445	30,818	30,891	31,765
Fishing expenditure	3,997 (100.0)	4,271 (100.0)	29,145 (100.0)	28,133 (100.0)	25,622 (100.0)	26,806 (100.0)
Employee wages	499 (12.5)	531 (12.4)	7,301 (25.1)	7,307 (26.0)	3,741 (14.6)	3,860 (14.4)
Fishing vessel and fishing gear expenses	345 (8.6)	339 (7.9)	2,251 (7.7)	1,813 (6.4)	1,055 (4.1)	1,276 (4.8)
Repair costs	355 (8.9)	397 (9.3)	2,236 (7.7)	2,049 (7.3)	1,620 (6.3)	1,661 (6.2)
Oil costs	575 (14.4)	668 (15.6)	4,479 (15.4)	4,764 (16.9)	1,253 (4.9)	1,472 (5.5)
Feed costs					5,448 (21.3)	4,863 (18.1)
Juveniles costs					1,237 (4.8)	1,027 (3.8)
Selling charges	365 (9.1)	375 (8.8)	1,977 (6.8)	1,796 (6.4)	1,079 (4.2)	1,357 (5.1)
Depreciation	645 (16.1)	678 (15.9)	2,517 (8.6)	2,713 (9.6)	3,395 (13.3)	3,645 (13.6)
Others	1,213 (30.3)	1,282 (30.0)	8,385 (28.8)	7,691 (27.3)	6,795 (26.5)	7,643 (28.5)
Non-fishing income	223	196	400	337	204	196

Source: Statistical Survey on Fishery Management and Census of Fisheries (the Ministry of Agriculture, Forestry and Fisheries)

Notes: 1) Each of the figures in parentheses indicates a percentage to fishing expenditure (%) and is rounded off if it is less than the unit used. For that reason, the total of these figures may not match the total in the breakdown.
2) The figures for coastal fishery by fishing vessels are weighted-averaged using the number of private management bodies using fishing vessels with outboard motors or powered fishing vessels of less than 10 tons in the "Census of Fisheries," based on the results of fishery by fishing vessels in the survey on private management bodies under the "Statistical Survey on Fishery Management."
3) The figures for fishery by fishing vessels of 10 tons or more are weighted-averaged using the number of private management bodies using powered fishing vessels of 10 tons or more in the "Census of Fisheries," based on the results of fishery by fishing vessels in the survey on private management bodies under the "Fishery Management Survey."
4) The figures for marine aquaculture are weighted-averaged using the number of private management bodies by fisheries species in the "Census of Fisheries," based on the results of the survey on private management bodies under the "Statistical Survey on Fishery Management."
5) The figures for fishery by fishing vessels in 2020 are the results excluding those concerning management bodies in Fukushima Prefecture, as they were unable to carry out fisheries due to the Great East Japan Earthquake.
6) Fishing revenue does not include amounts received from subsides.

Productivity per Fisher



Source: Prepared by the Fisheries Agency, based on the Census of Fisheries (number of fishery workers for 1988, 1993, 1998, 2003, 2008, 2013, and 2018), the Survey on Movement of Fishery Structure (number of fishery workers in 2019 and beyond), the Survey of Persons Engaged in Fishery (number of fishery workers for other years), the Statistics on Fishery and Aquaculture Production (production volume), and the Fisheries Output (production value and fishery income produced) (the Ministry of Agriculture, Forestry and Fisheries)

Note: The figures for 2011 and 2012 exclude Iwate, Miyagi, and Fukushima prefectures (the production value of inland water fisheries and aquaculture was estimated from the nationwide average price by fisheries species).

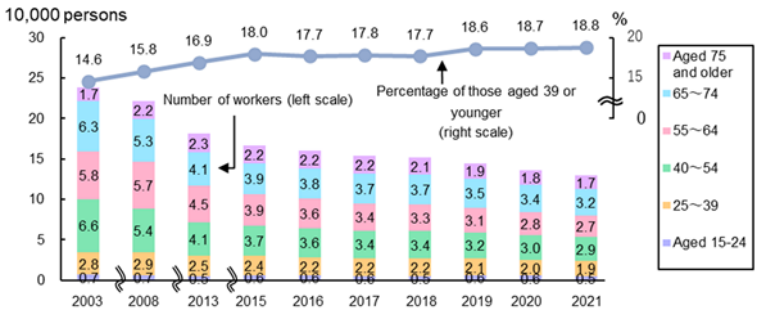
ii. "Seashore Revitalization Plan" to Boost Incomes

- Under the "Seashore Revitalization Plan," each district considers and implements measures aimed at revitalizing fishing communities by increasing the income of fishers by at least 10% in five years. As of the end of FY2022, it is implemented in 554 districts.
- As of the end of FY2022, the "Wide-Area Seashore Revitalization Plan," in which efforts are made to enhance wide-ranging competitiveness, is implemented in 142 districts.
- On the basis of the Wide-Area Seashore Revitalization Plan, etc., support has been given to, among other matters, the lease-based introduction of fishing vessels, the restructuring of facilities in landing areas, the introduction of fishing devices, etc., which can enhance productivity or realize labor-saving or energy-saving, and the development of fishing port facilities.

(3) Trends in Fishery workers

- The number of fishery workers has been consistently declining, reaching 129,320 in 2021.
- The number of new fishery workers was 1,744 in FY2021. The government, etc. provides support for initiatives that seek to secure new fishery workers, such as employment counseling, internship, and training.

Trends in the Number of Fishery Workers

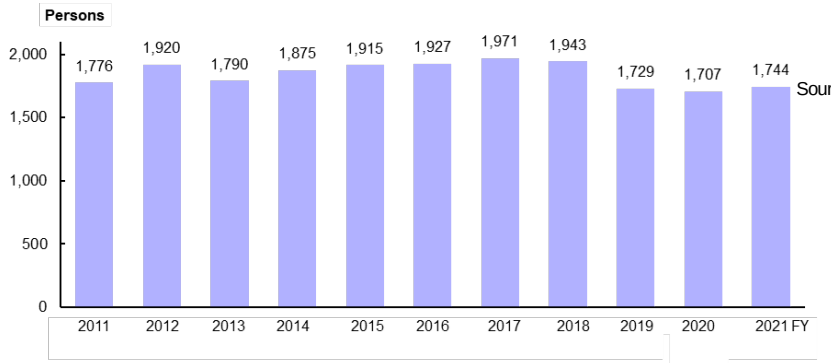


Source: Survey on Movement of Fishery Structure (2019 and beyond), Census of Fisheries (2003, 2008, 2013, and 2018), and Survey of Persons Engaged in Fishery (other years) (the Ministry of Agriculture, Forestry and Fisheries)

Notes: 1) A "fishery worker" refers to a person aged 15 or older who has been engaged in offshore fishery operations for at least 30 days in the past year.

2) For 2008 and beyond, the surveys were conducted on the fishery management body (employer) side and included those residing in non-coastal municipalities who had not been previously included. Therefore, those surveys are not in line with the 2003 survey.

Trends in the Number of New Fishery Workers

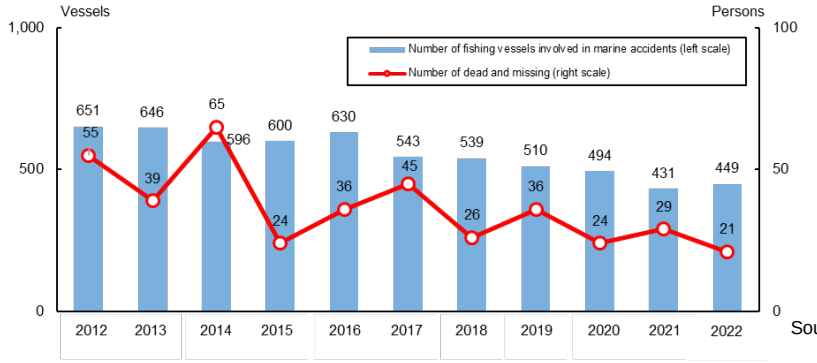


Source: Estimated by the Fisheries Agency, based on surveys conducted by prefectures on new fishery workers

(4) Trends in Fishery Working Environments

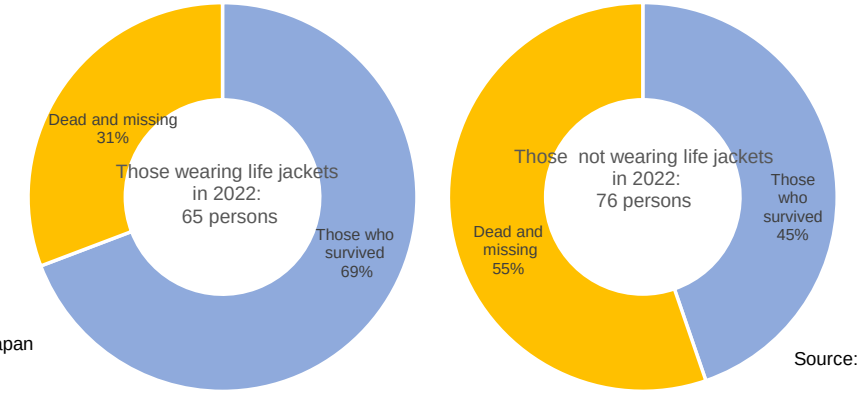
- In 2022, the number of fishing vessels involved in marine accidents was 449, and the number of dead and missing reported in those accidents was 21.
- Excluding those related to marine accidents, 65 fishers fell overboard in 2022,* 43 of whom were dead or missing. (*: The number of fishers who fell overboard herein refers to the number of persons on board vessels who fell into the sea for reasons other than marine accidents such as collision and capsizing.)
- Life jackets are vital to saving the lives of those who fall overboard (an approximately 1.5 times better survival rate). In principle, all persons on board outside the cabin are required to wear life jackets. Starting in February 2022, violation points are given to captains violation points for violating the requirement of wearing life jackets.

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



Source: Prepared by the Japan Coast Guard

Survival Rates of Those Who Fell Overboard With or Without Life Jackets

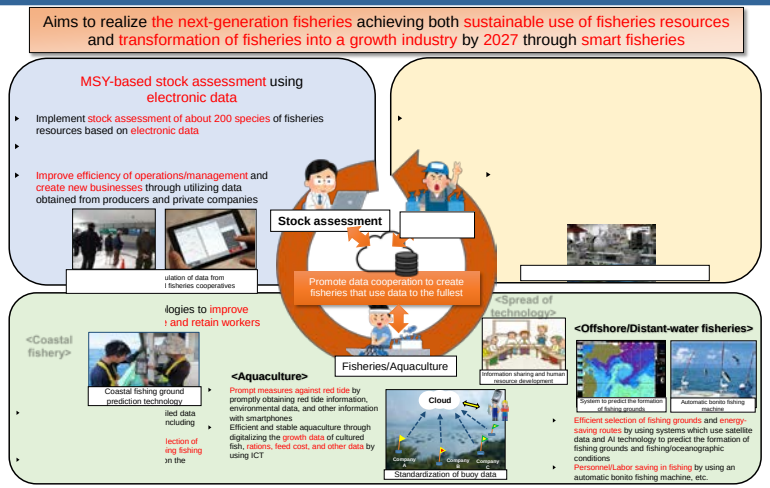


Source: Prepared by the Japan Coast Guard

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

- ○ Development, introduction, and advancement of technologies related to efficiency-related initiatives utilizing ICT, IoT, AI, and drones in each of the stock assessment, fisheries/aquaculture, and processing/distribution sectors are promoted in order for the fisheries industry to be a growing industry.
- ○ The “Guidelines for Data Utilization in the Fisheries Sector” was formulated to promote the utilization of data.

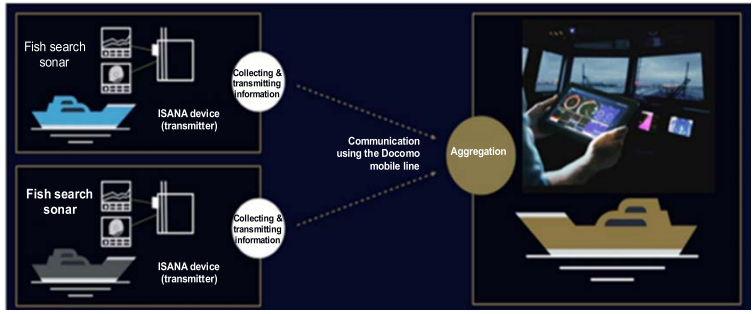
Vision of Smart Fisheries in 2027



Case Example Visualization of Information by Utilizing IoT —Streamlining of Fleet Operations Such as Purse Seine Fishery—

“ISANA,” an IoT service for fishing vessels, enables data from fish detectors, tidal current meters, shipboard cameras, etc., to be shared and recorded real time on tablets, replacing the conventional, wireless or oral manner of information sharing.

The adoption of the service is expected to help develop successors by enabling an onshore veteran fisher to give instructions to an offshore chief fisher, in addition to the use of the service in streamlining operations through, for example, reduction of fuel oil costs and operating hours.

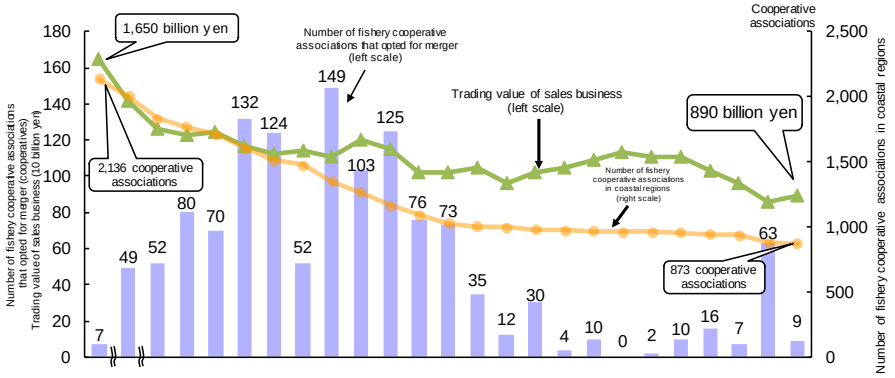


Service Conceptual Diagram (Image Provided by Lighthouse Inc.)

(6) Trends in Fishery Cooperative Associations

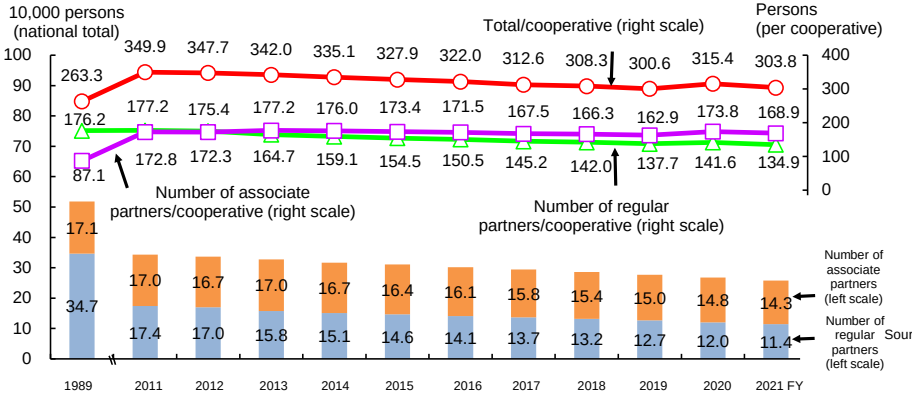
- ○ A fishery cooperative association contributes to stabilization and development of fishery business management by implementing sales business, etc. It is an organization that plays a core role in supporting the regional economy and social activities of a fishing community, such as by using and managing fisheries resources appropriately.
- ○ The number of fishery cooperative associations (in coastal areas) as of the end of March 2022 was 873.
- ○ The number of fishery cooperative association partners has been decreasing in line with a decline in the number of fishers. There is a need to strengthen cooperatives’ business and management foundation through mergers and to further reinforce their sales business.

Trends in the Number of Fishery Cooperative Associations in Coastal Areas, the Number of Fishery Cooperative Associations That Opted for Mergers, and the Trading Value of Sales Business



Source: Annual Report of Fishery Cooperative Associations (number of fishery cooperative associations in coastal regions) and Statistical Table of Fishery Cooperative Associations (trading value of sales business) (the Fisheries Agency), and data prepared by the National Federation of Fisheries Co-operatives Associations (number of fishery cooperative associations that opted for mergers)

Trends in the Number of Fishery Cooperative Associations Partners



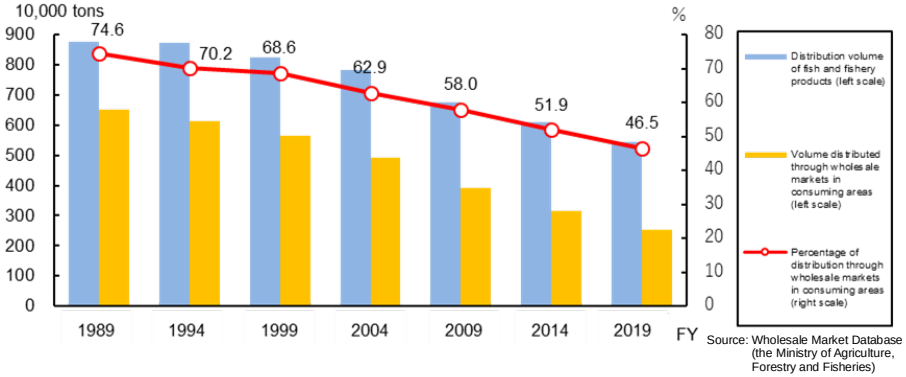
Source: Statistical Table of Fisheries Cooperatives (the Fisheries Agency)

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

i. Trends in the Distribution of Fish and Fishery Products

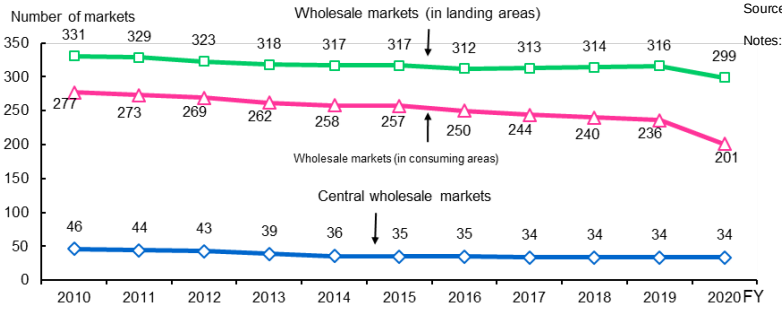
- The number of wholesale fishery markets in landing areas had been flat in recent years, and that of wholesale markets in consuming areas decreased.
- The percentage of fish and fishery product distribution through wholesale markets in consuming areas has been on a decreasing trend, and non-market distribution has been increasing.
- Wholesale markets play a critical role in effectively distributing fish and fishery products. It is necessary to strengthen quality and sanitary control systems in anticipation of export and to maintain/strengthen market functions.

Trends in the Volume and Percentage of Fish and Fishery Product Distribution Through Wholesale Markets in Consuming Areas



Source: Wholesale Market Database (the Ministry of Agriculture, Forestry and Fisheries)

Trends in the Number of Wholesale Fishery Markets



Source: Wholesale Market Database (the Ministry of Agriculture, Forestry and Fisheries)

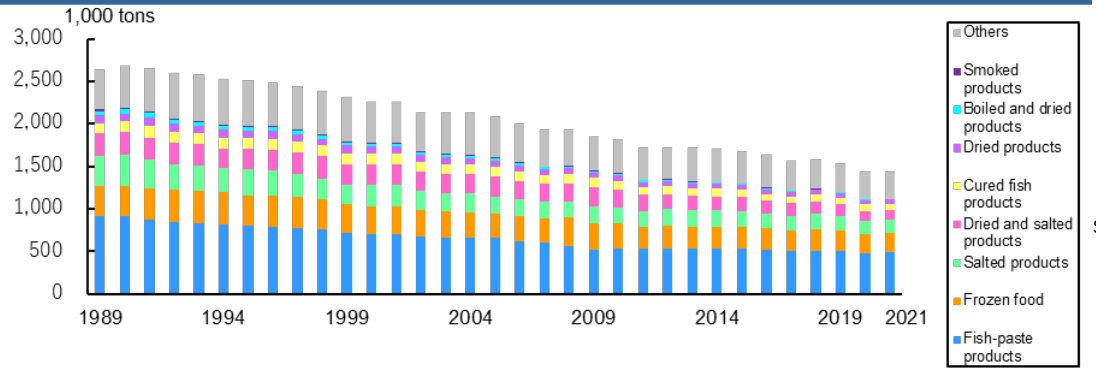
Notes: 1) Data for central wholesale markets are the data at the end of every fiscal year, whereas data for local wholesale markets are the data at the beginning of each fiscal year (up to FY2011) and at the end of each fiscal year (FY2012 and later).

2) The Amended Wholesale Market Act has been in force since June 21, 2020. Accordingly, for data up to FY2019, a central wholesale market refers to a wholesale market which a prefecture or a city, etc., with a population of 200,000 people or more opened upon the authorization of the Minister of Agriculture, Forestry and Fisheries. A local wholesale market refers to a wholesale market which is other than central wholesale markets, has a wholesale area of at least a certain size (330 m^2 for a market in a landing area or 200 m^2 for a market in a consuming area), and was opened upon the permission of a prefectural governor. For data from FY2020 onward, a central wholesale market refers to a wholesale market authorized by the Minister of Agriculture, Forestry and Fisheries. A local wholesale market refers to a wholesale market authorized by a prefectural governor.

ii. Trends in Fishery Processing

- 70% of the total supply of fish and shellfish for domestic human consumption in Japan is supplied as processed fishery products.
- Among processed fishery products, the production volume of processed products for human consumption has been on a decreasing trend, but the production volume of fish paste products and frozen food has been flat.
- It is necessary to develop products that meet diversifying consumer needs and build a production system that enables the switching of raw materials in the midst of a shortage of raw materials for processing.

Trends in the Production Volume of Processed Fishery Products for Human Consumption



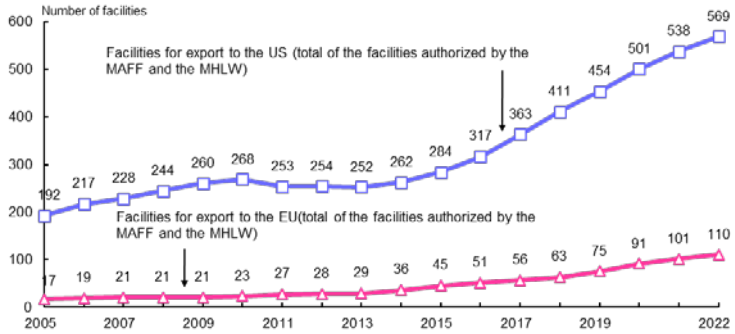
Source: Annual Report on Fish and Fishery Product Distribution Statistics (2009 and before), Census of Fisheries (2013 and 2018), and Fishery Processing Statistics Survey (other years) (the Ministry of Agriculture, Forestry and Fisheries)

Note: Processed fishery products refer to processed products for human consumption and fresh/frozen fish and fishery products which are produced with aquatic animals and plants used as their main raw materials (a raw material ratio of at least 50%). Toasted/Flavored seaweed, canned or bottled products, agar, and oils and fats are excluded.

iii. HACCP Compliance

- Intended for, in principle, all food business operators including fishery processors, the implementation of HACCP-based hygiene control has been institutionalized.
- When exporting fish and fishery products to the EU, the United States, etc., fishery processing facilities 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. The government supports the renovation of facilities to obtain the facility certification required for export to the EU and the United States.
- As of the end of March 2023, in the fishery processing industry, etc., the number of facilities certified to export to the EU is 110, and the number of facilities certified to export to the United States is 569.

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



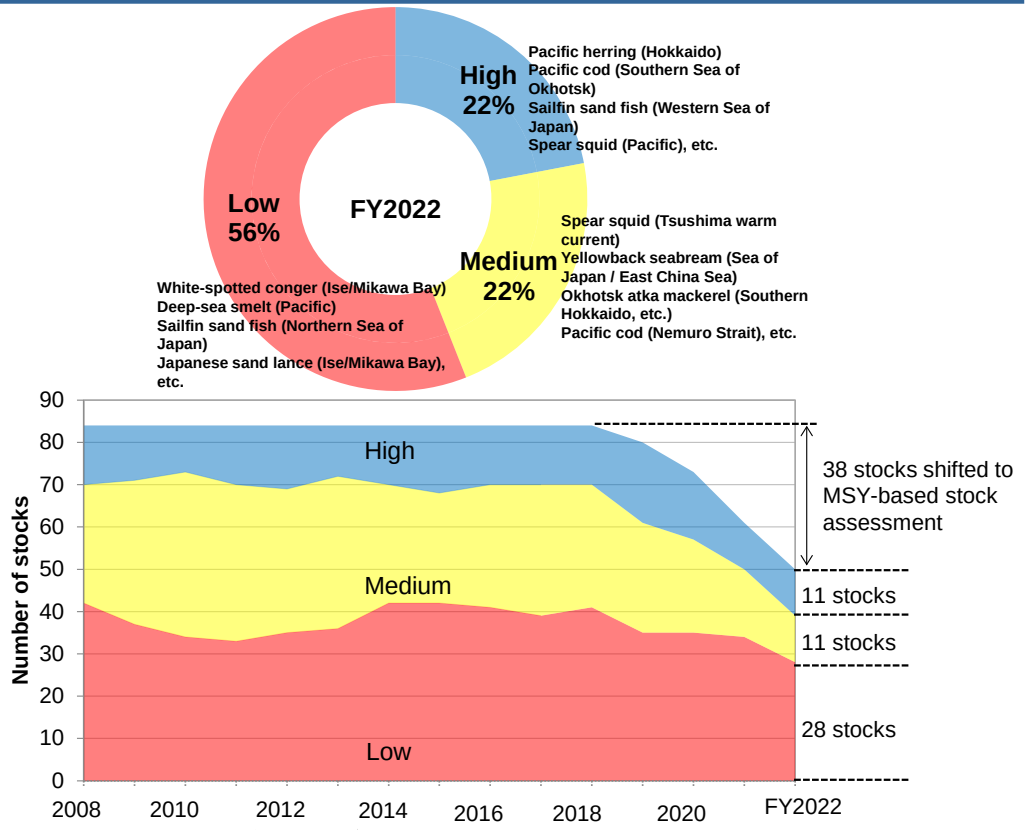
Source: Prepared by the Ministry of Agriculture, Forestry and Fisheries

Chapter 3 Trends in Fisheries Resources and the Fishing Ground Environment

(1) Fisheries Resources in the Waters Around Japan

- To manage fisheries resources, it is important to take appropriate management measures based on stock assessment.
- Under the new Fishery Act enforced in December 2020, the number of fisheries species subject to stock assessment was expanded from 119 to 192 in FY2021.
- Among these species, the number of those fisheries species subject to the estimation of abundance and fishing intensity for the purpose of achieving the MSY (Maximum Sustainable Yield) was expanded from 26 stocks of 17 fisheries species to 38 stocks of 22 fisheries species.
- For 50 stocks of 36 fisheries species, stock assessments were made with three levels of stock condition: high, medium, and low.

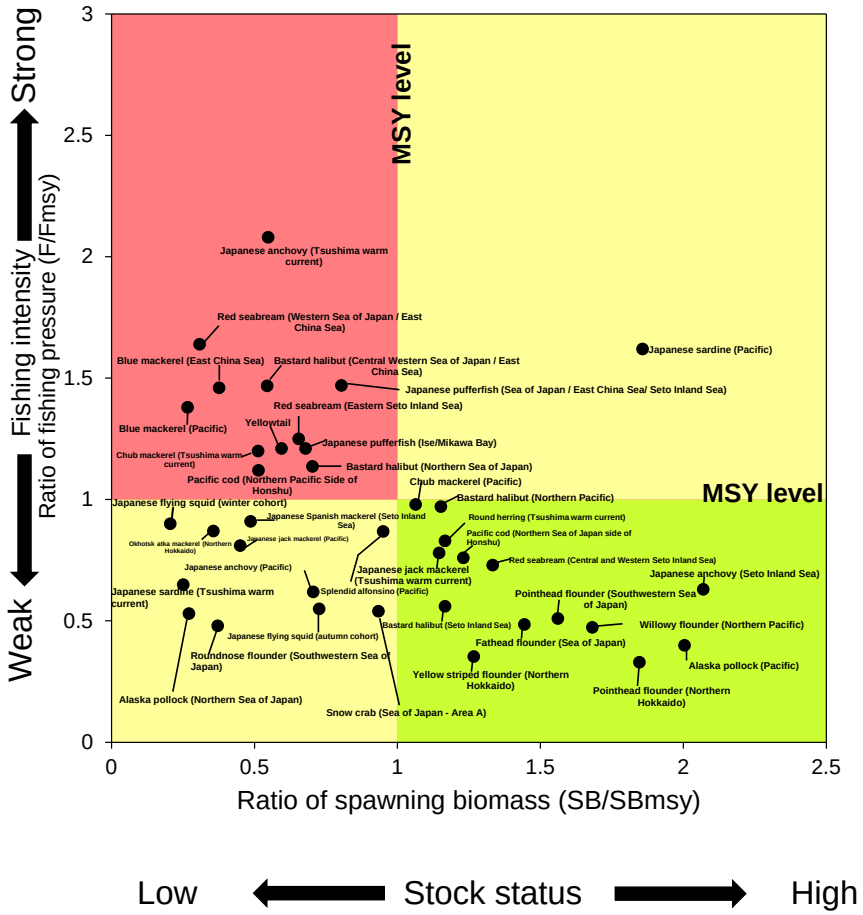
Stock Assessment With Three Levels of Condition: High, Medium, and Low



Source: Prepared by the Fisheries Agency, based on the Marine Fisheries Assessment and Evaluation for Japanese Water (the Fisheries Agency and Japan Fisheries Research and Education Agency)

Note: The stocks and fisheries species whose stock levels and trends were assessed were as follows.
2019: 80 stocks of 48 fisheries species excluding the 7 stocks of 4 fisheries species which were shifted to MSY-based stock assessment, such as mackerel
2020: 73 stocks of 45 fisheries species excluding the 14 stocks of 8 fisheries species which were shifted to MSY-based stock assessment, such as Japanese jack mackerel and Japanese sardine
2021: 61 stocks of 42 fisheries species excluding the 26 stocks of 17 fisheries species which were shifted to MSY-based stock assessment, such as Japanese anchovy and round herring
2022: 50 stocks of 36 fisheries species excluding the 38 stocks of 22 fisheries species which were shifted to MSY-based stock assessment, such as Japanese pufferfish and splendid alfonsino
From 2020 onward, for 6 stocks of 2 fisheries species such as Alaska pollack (Southern Sea of Okhotsk), the three levels of condition "high, medium, and low" are judged on the basis of the stock status index, etc., stated in the stock assessment result report.

Stock Assessment Based on MSY



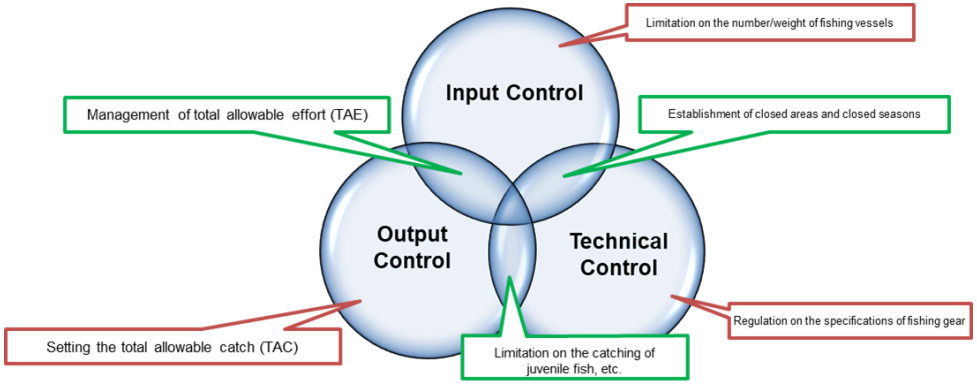
Source: Prepared by the Fisheries Agency, based on the Marine Fisheries Assessment and Evaluation for Japanese Water (the Fisheries Agency and Japan Fisheries Research and Education Agency)

(2) Japan's Fisheries Resource Management

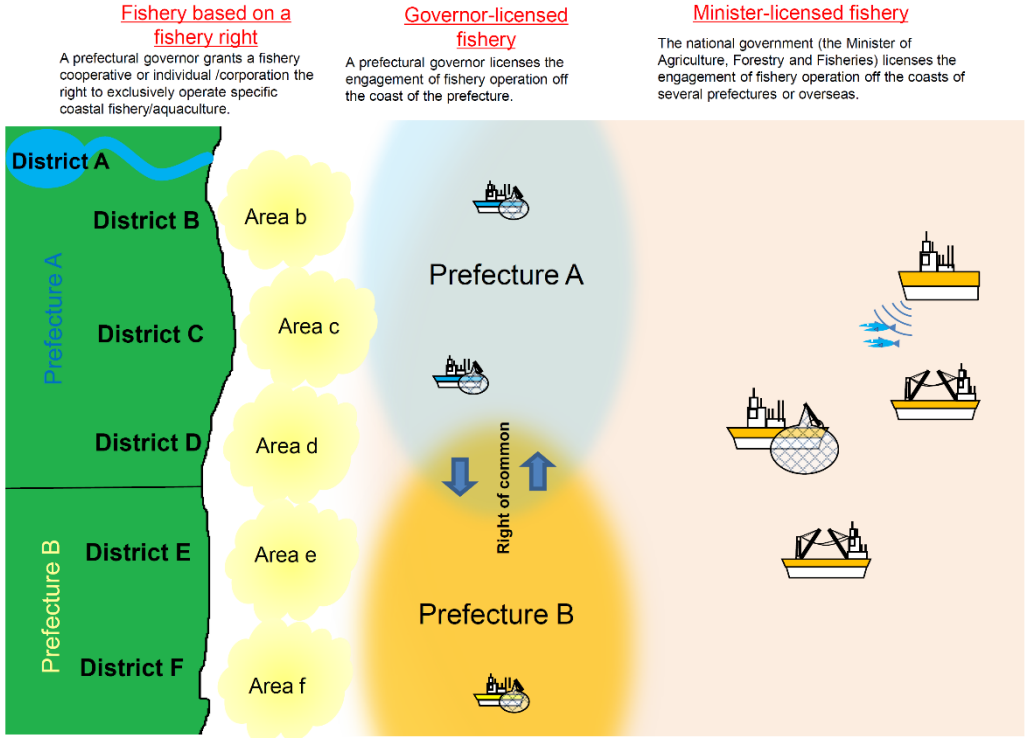
i. Japan's Fisheries Resource Management System

- Methods 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 stocks, etc.
- Shellfish and algae harvesting, set-net fishing, aquaculture, and inland water fisheries are managed under a fishery rights systems. Offshore and distant fisheries are managed on the basis of fishing permit systems.

Correlation Between Resource Management Methods

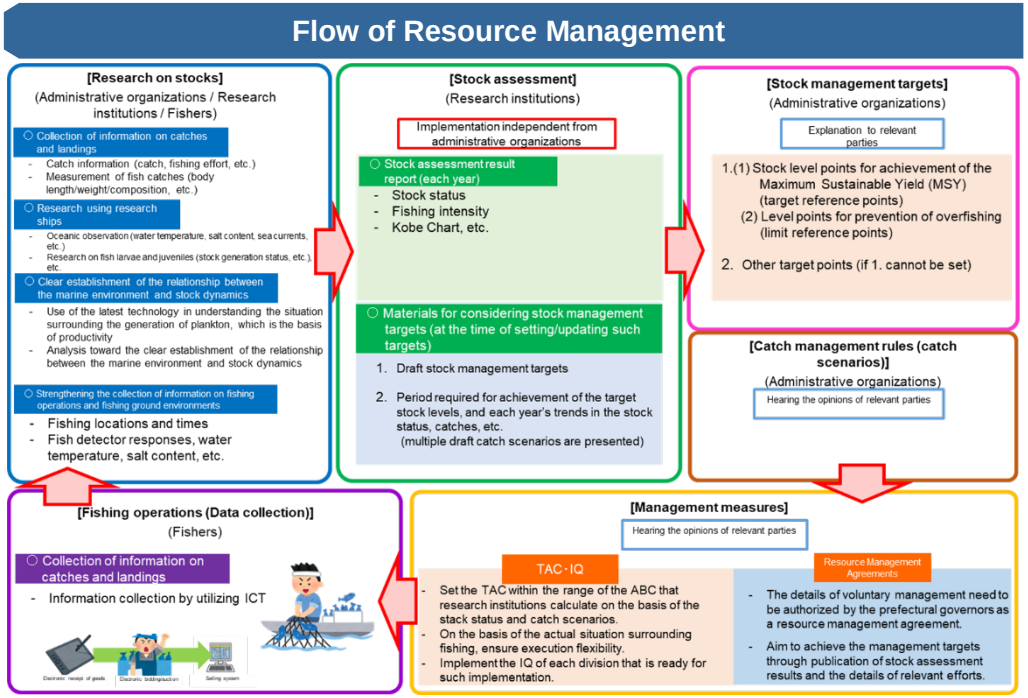


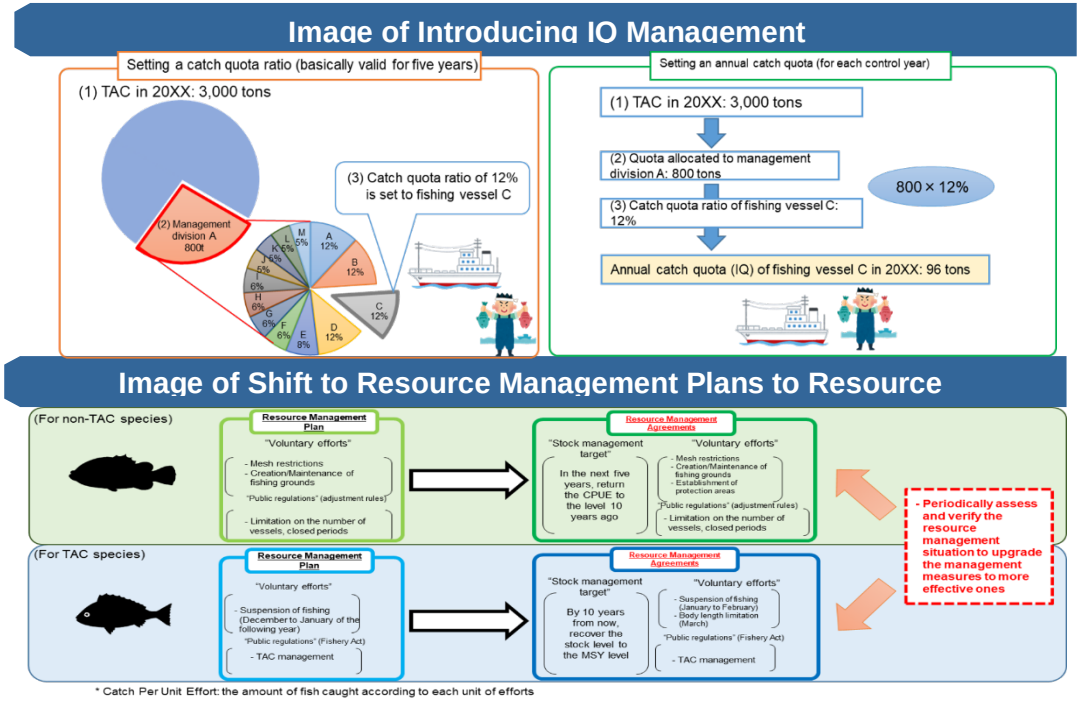
Conceptual Diagram of the Fishery Rights System and Fishing Permit Systems



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

- Under the new Fishery Act, the objectives of resource management are to set the fisheries catches based on the MSY, and TAC (Total Allowable Catch) are used as a basic management method.
- To establish a new resource management system, the “Roadmap for Promoting the New Resource Management” was developed and published in September 2020.
- The roadmap aims to recover catch to 4.44 million tons by FY2030 through the following measures: by the end of FY2023, 1) expanding the fisheries species subject to stock assessment to about 200 species; 2) putting 80% of catch under TAC management; 3) introducing management based on IQs (individual quotas) to Minister-licensed fisheries, which mainly targets, in principle, TAC species; and 4) shifting the current voluntary resource management by fishers (Resource Management Plans) to “Resource Management Agreements” based on the new Fishery Act.
- With regard to the expansion of TAC species, TAC management as well as the concept of step-up will be introduced to Japanese anchovy and round herring (Tsushima warm current) from January 2024. Ideas for the operational aspect of such management will continue to be discussed, including during the step-up period. With respect to pacific cod (Northern Sea of Japan side of Honshu and Northern Pacific Side of Honshu), the first study session on the resource management policy was held. Additionally, for other new candidate resources for TAC management, meetings of the Study Group on Resource Management Methods, etc., have been held to discuss the gradual expansion of TAC species.
- IQs have been introduced into, in addition to two types of fisheries and three fisheries species in the 2021 management year, the medium- to large-scale purse seine fishery of Japanese sardine and bluefin tuna (large fish) and also into bonito/tuna fishery in relation to bluefin tuna (large fish) since the 2022 management year. It has been decided that IQs are to be introduced, from the 2023 management year, into the driftnet fishery of marlin, etc., in relation to bluefin tuna (small fish and large fish), and into the minister-licensed squid jigging fishery of Japanese flying squid.
- With respect to Resource Management Agreements, eight agreements have been formulated as of March 2023. The plans for coastal fishery have also been gradually shifted to Resource Management Agreements certificated by prefectural governors.





iii. Pacific Bluefin Tuna Resource Management

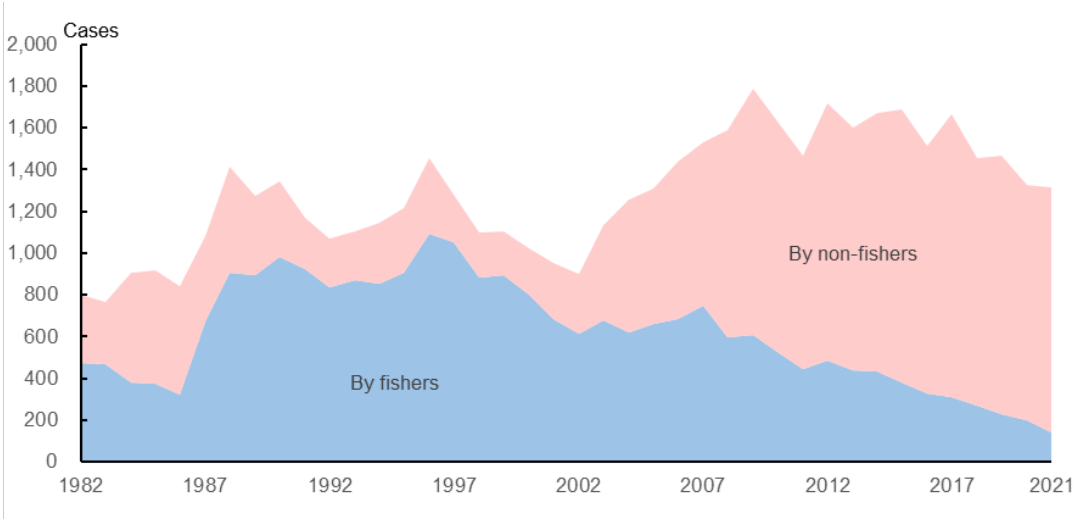
- For Pacific bluefin tuna, with agreement of the Western and Central Pacific Fisheries Commission (WCPFC), the catch limit was set for large fish (30 kg or more) and small fish (less than 30 kg), and the TAC was distributed among divisions controlled by the Minister and prefectures.
- For the 2022 fishing season onward, the distributed shares were reviewed in light of, among other matters, an increase in the catch limit determined in the 2021 annual meeting of the WCPFC.
- Regarding recreational fishing, since June 1, 2021, catching of small fish is prohibited, and it is mandatory to report the number and weight of fish caught in the case of large fish.

(3) Approaches to Practical and Effective Resource Management

i. Prevention of Poaching and Fishery Control in Coastal Areas of Japan

- The nationwide number of arrests for poaching was 1,361 in 2021 (of which 1,316 were in coastal waters and 45 in inland waters). The number of poaching cases by non-fishers has significantly exceeded the number by fishers and have become more aggressive and sophisticated.
- Based on the new Fishery Act, abalones, sea cucumbers, and juvenile eels,* which have been the subject matters of malicious pouching, have been designated as “specified aquatic animals and plants,” and catching of them is, in principle, prohibited except for catching based on a fishery right or permission. A person who violates the prohibition is punished by imprisonment with work for not more than three years or a fine of not more than 30 million yen. The same penal provision applies also to a person who transports, retains, or acquires any specified aquatic animals or plants knowing that they have been illegally gathered or caught. (*: The Act will apply to juvenile eels from December 2023.)

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



Source: Prepared by the Fisheries Agency

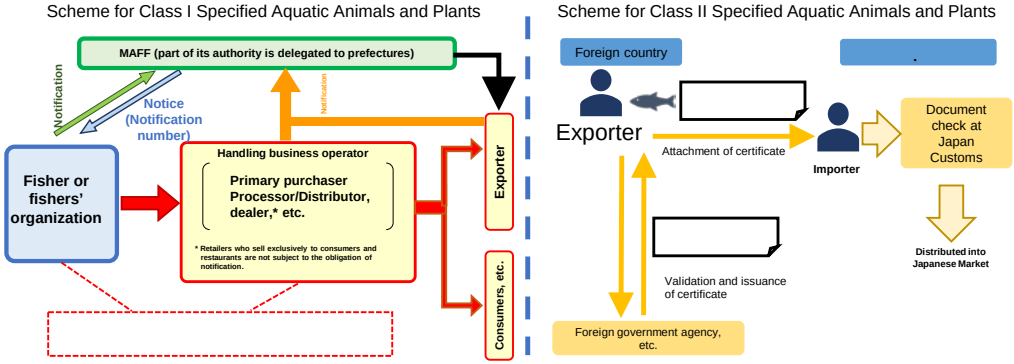
Outline of Harsher Punishment Based on the New Fishery Act

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

ii. Introduction of the Scheme for Proper Distribution of Fishery Products against IUU Fishing

- The Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants came into force in December 2022, with the aim of preventing the laundering, etc., of illegally gathered or caught specific aquatic animals and plants at home or abroad into distribution channels. Domestically, the Act requires handling fishers, etc., to complete such procedures as notification to the relevant administrative organizations and communication of the catch numbers. For importation from abroad, among other procedures, the attachment of certificates, etc., issued by foreign government agencies is mandatory.
- Abalones, sea cucumbers, and juvenile eels* are designated as class I aquatic animals and plants, for which domestic distribution control is in place. Mackerel, saury, Japanese sardine, and squid are designated as class II aquatic animals and plants, for which import control is in place. (*: This will apply to juvenile eels from December 2025. A juvenile eel refers to an eel that is 3 cm long or shorter.)

Outline of the System for Proper Distribution of Fisheries Products

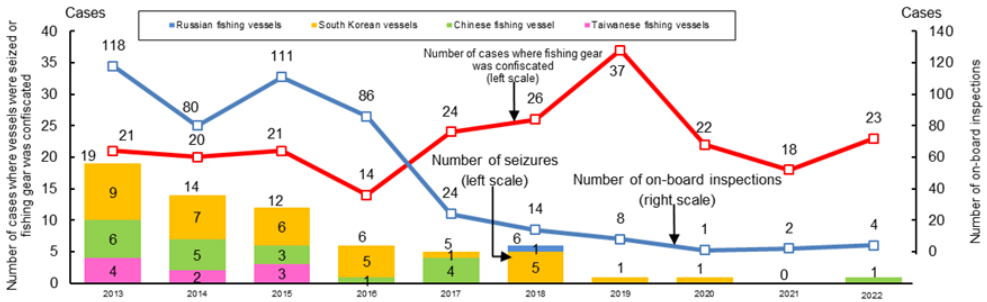


Note: There are penalties against violations of the obligations of notification, communication, recording of transactions, attachment of certificates for import/export, and others.

iii. Monitoring and Inspection of Foreign Fishing Vessels, etc.

- In 2022, with respect to the results of the Fisheries Agency's inspections of foreign fishing vessels, etc., it conducted four on-board inspections, captured one vessel, and had 23 cases of confiscation of illegal fishing gear.
- Illegal fishing by Chinese and North Korean fishing vessels around the Yamato Bank of the Sea of Japan is an extremely serious problem. The Fisheries Agency concentrates on conducting enforcement activities by using fisheries inspection vessels and responds in cooperation with the Japan Coast Guard. In 2022, the Fisheries Agency issued a warming 38 Chinese fishing vessels, etc., to leave from Japanese EEZ in total.

Trends in the Number of Foreign Fishing Vessels, etc., Captured and Inspected, etc.



Source: Prepared by the Fisheries Agency
Note: On-board inspection on the high seas is not included.

Authorized fishery inspectors wearing protective gear are conducting an on-board inspection of a foreign vessel

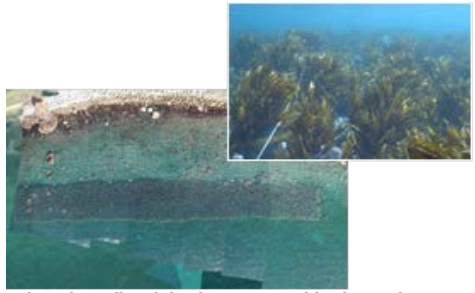
(4) Approaches to Actively Enhance Fisheries Resources

- The Fisheries Agency implements the release of juvenile fish as part of resource management, properly sharing roles with prefectures and prioritizing effective ones.
- Stocks of salmon (chum salmon) have declined in recent years due to a low return rate of released juvenile fish. It is also pointed out that changes in marine environments due to climate change also affect the survival of juvenile fish. The Fisheries Agency is therefore providing support for initiatives to improve release methods such that these methods can respond to environmental changes.
- In order to protect and increase fisheries resources, the Fisheries Agency develops protective and nursery reefs and mound reefs.

(5) Trends in Fishing Ground Environments

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

- Seaweed beds play a vital role in conserving fisheries resources. Especially marine algae on many seaweed beds absorb carbon dioxide and thereby supply oxygen, and act as spawning beds of fishes. Tidal flats have a high productivity of marine organisms by provide nutrients from land to ocean due to effects of tidal movements.
- It is important to raise the productivity of the entire ecosystem by preserving and recovering functions of seaweed beds and tidal flats, therefore the Fisheries Agency promotes comprehensive measures conservation and creation of seaweed beds and tidal flats by local governments.
- The growth of marine algae and the multiplication of plankton that is food for fish, bivalves, etc., require nutrient salts including nitrogen and phosphorus compounds. It is suggested that, in enclosed water areas, a decline in nutrient salts, among other reasons, may potentially cause problems such as the decoloring of cultured nori seaweed.
- For the Seto Inland Sea, a nutrient salt management system to enable the supply and management of nutrient salts has been introduced following the enforcement of the amended Act on Special Measures Concerning Conservation of the Environment of the Seto Inland Sea in April 2022.
- To rejuvenate the Ariake Sea and Yatsushiro Sea, etc., measures are taken based on the Act on Special Measures Concerning Rejuvenation of Ariake Sea and Yatsushiro Sea, etc., to improve the marine environment and conserve fisheries resources in these regions.



Marine algae flourish after seaweed bed creation (black-colored part)

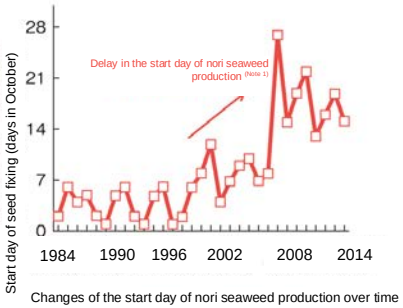
Preservation of seaweed beds (removal of sea urchins)

Maintenance of tidal flats (tilling of tidal flats)

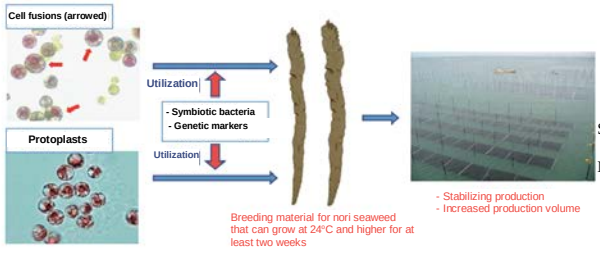
ii. Impact of Climate Change and Countermeasures

- Climate change affects fisheries resources and fisheries/aquaculture through rising sea water temperatures due to global warming. It has caused bountiful catches of Yellowtail in Hokkaido Prefecture, and a northward shift of the distribution area of Japanese Spanish mackerel and the spawning beds of chub mackerel.
- As mitigation measures against climate change, initiatives toward carbon neutrality are also promoted in the fisheries sector, including the electrification of fishing vessels, conversion to hydrogen fuel cells, and exploring the potential of blue carbon as a carbon sink.
- As an adaptive measure, the development of a method of releasing juvenile salmon that can adapt to changes in the marine environment and aquaculture species with tolerance to high temperature is promoted.

Case Example of an Initiative Based on the Assessment of the Impact of High Water Temperature in Autumn on Nori Seaweed Cultivation, and on an Adaptation Plan



Changes of the start day of nori seaweed production over time



Flow of development of high water temperature-adaptive materials by using breeding technologies such as cell fusion technology and protoplast(*2) selection technology

Source: Japan Fisheries Research and Education Agency
Notes 1) A delay in the start day of production and a change in the production volume may be attributable to factors other than global warming.
2) Cells generated by stripping the cell wall from plant cells, bacterial cells, fungal cells, etc.

Case Example Utilization of Reviewable Energy in the Fisheries Industry

Misaki Megumi Suisan Co., Ltd., a tuna wholesaler, utilizes electricity, etc., from Shizen Energy Inc., which engages in the generation of renewable energy, etc., for the operation of freezers among other purposes. Executing a partnership agreement with Shizen Energy, Misaki Megumi Suisan established "*Maguro Denki*" to support other business operators, etc., in their adoption of renewable energy.

* Due to the surging price of wholesale electricity, the retail sale of electricity by *Maguro Denki* was discontinued at the end of November 2022.

まぐろでんき
Sustainable choices for our blue planet

Logo of Maguro Denki

iii. Marine Plastic Litter

- ○ Marine plastic litter affects not only the environment and ecosystems but also fishing operations, such as through intermixing with fish catches.
- ○ There are several measures taken by the Fisheries Agency, such as 1) formulating guidelines to promote well-planned disposal of used fishing gear, 2) developing of fishing gears made with environmentally friendly materials such as marine biodegradable plastics and promoting their recycling, 3) promoting the bringing back of marine litter by fishers, and 4) verifying the impact of microplastics on marine organisms, etc.

Prototype and demonstration of floats using marine biodegradable plastics (Photos provided by the Clean Sea and Beach Foundation)

Case Example Recycling of Used Fishing Nets

It was regarded as difficult to recycle used fishing nets due to sea salt stuck thereto, many foreign substances attached thereto, and their complex structure.

However, in January 2023, recycled fishing nets were successfully produced from polyester materials derived from used fishing nets . A team called Re:ism has been formed by the purse seine industry, net manufacturers, textile manufacturers, etc., beyond the borders of their respective industries and is developing a system of resource recycling through the collection, washing and pelletization of waste polyester fishing nets, their horizontal recycling for reproduced fishing nets as well as the development and sale of new products made from the recycled material.

Food tray produced from used fishing nets (First item to obtain the Eco-Mark certification as a product made from recycled fishery-related waste plastics)

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

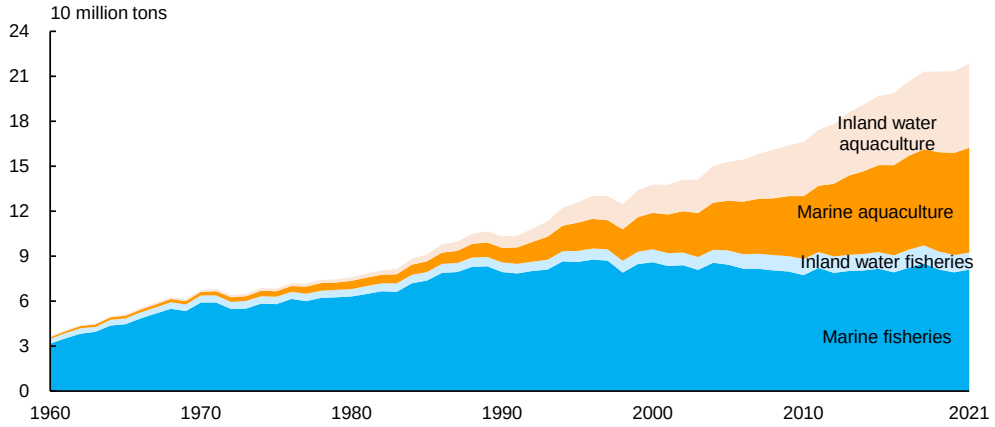
- ○ Reports have come out about damage to fisheries caused by wildlife such as Steller sea lions and Ascidiella aspersa. The Fisheries Agency provides support in survey on appearance of such wildlife, provision of information concerned, development of technologies on damage mitigation and vermin control activities.
- ○ The amount of damage to fisheries caused by Steller sea lions was reduced from about 2 billion yen in FY2013 to about 0.7 billion yen in FY2021.
- ○ Also, support has been provided in relation to approaches that seek to remove great cormorants and non-native species such as largemouth bass from inland waters.

Chapter 4 International Situation Surrounding the Fisheries Industry

(1) Production of World Fisheries and Aquaculture

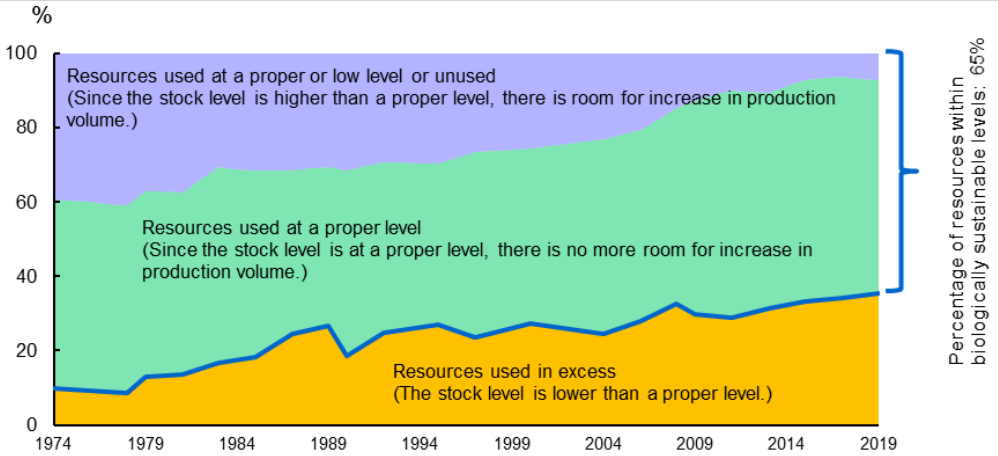
- ○ The production volume of world fisheries and aquaculture has been on the increase. While fishery catches have remained flat, the global aquaculture production has been significantly increasing.
- ○ In developed countries and regions including the EU, the United States, and Japan, fishery catches have remained almost flat or seen a declining trend. In contrast, an increasing trend has been observed in developing countries including China, Indonesia, and Vietnam.
- ○ The aquaculture yield has been significantly increasing in China and Indonesia.
- ○ The ratio of world fisheries resources caught within sustainable levels declined to 65% in 2019, meaning that overfishing accounted for 35%.

Trends in the Production Volume of World Fisheries and Aquaculture



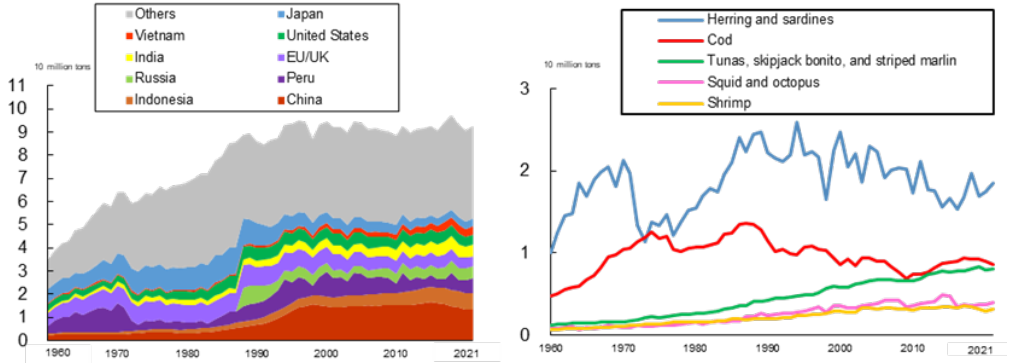
Source: Prepared by the Fisheries Agency, based on the Fishstat (Global capture production, Global aquaculture production) (FAO) (other than Japan) and the Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries) (Japan)

State of World's Fishery Resources



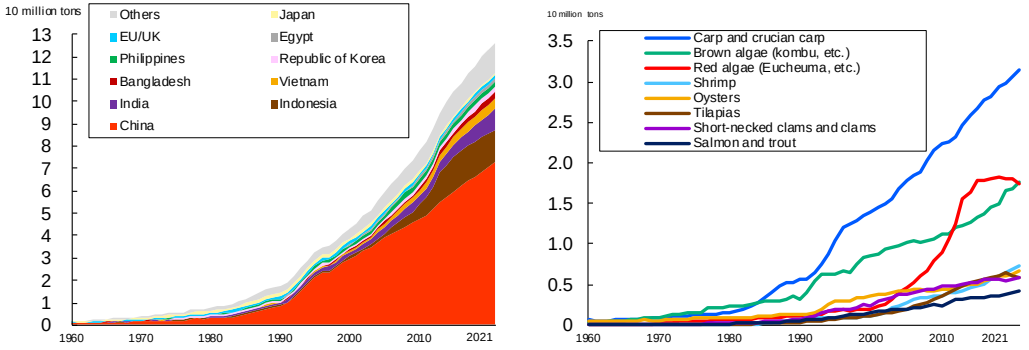
Source: Prepared by the Fisheries Agency, based on the State of World Fisheries and Aquaculture 2022 (FAO)

Trends in World Fisheries Catch by Country and by Fisheries Species



Source: Prepared by the Fisheries Agency, based on the Fishstat (Global capture production) (FAO) (other than Japan) and the Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries) (Japan)

Trends in World Aquaculture Production by Country and by Fisheries

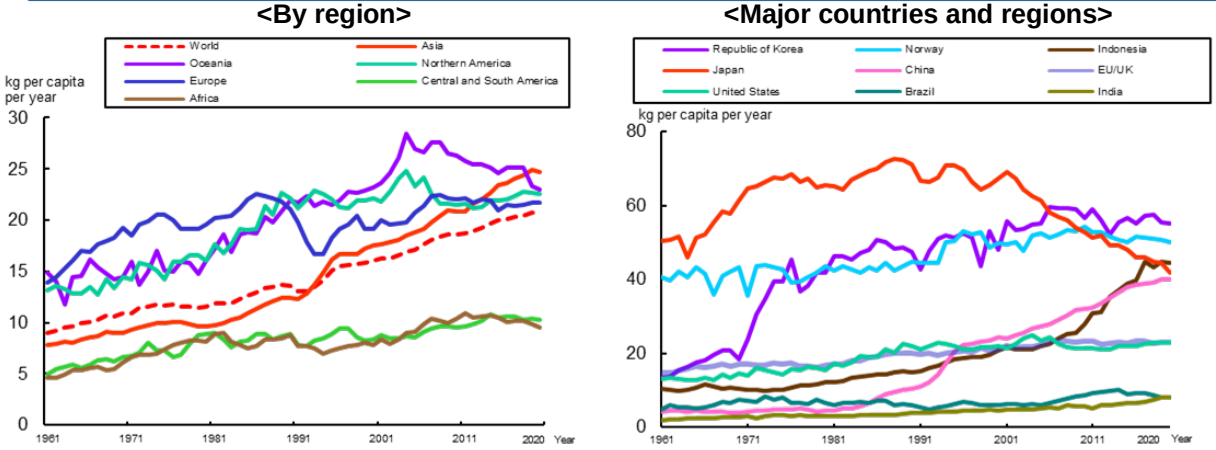


Source: Prepared by the Fisheries Agency, based on the Fishstat (Global aquaculture production) (FAO) (other than Japan) and the Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries) (Japan)

(2) World Consumption of Fish and Fishery Products

○ The world's annual per-capita consumption of fish and shellfish as food has nearly doubled in a half century, whereas Japan's annual per-capita consumption of them has fallen to a level below the level of about 50 years ago.

Trends in the World's Annual per-Capita Consumption of Fish and Shellfish (gross food volume-based)

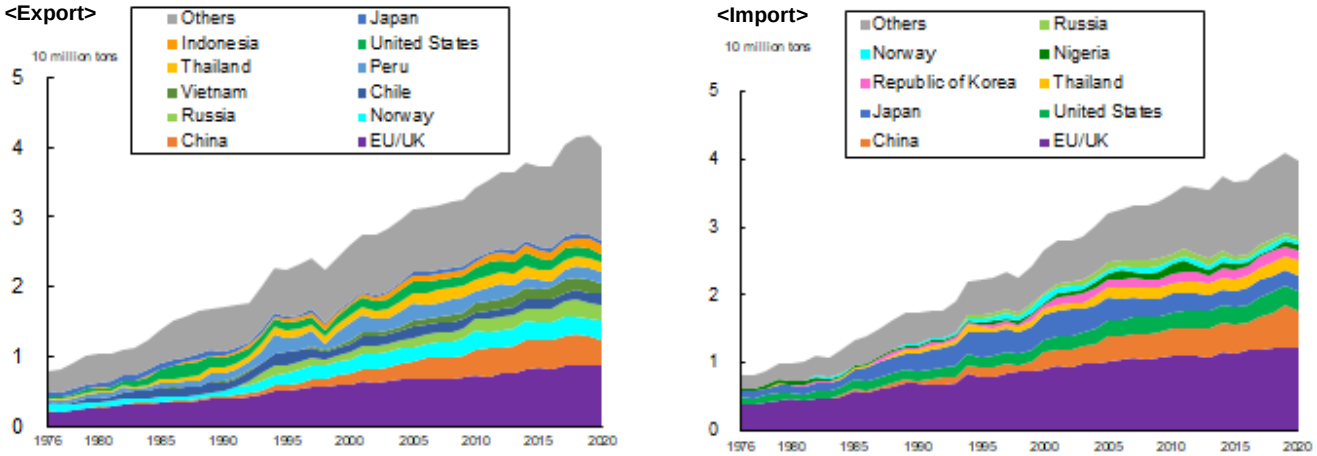


Sources: Prepared by the Fisheries Agency, based on the FAOSTAT (Food Balance Sheets) (FAO) (other than Japan) and the Food Balance Sheet (the Ministry of Agriculture, Forestry and Fisheries) (Japan)
Notes: 1) "Gross food" refers to the amount of fish and fishery products for human consumption, including disposal volume.
2) Central and South America includes the Caribbean.

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

○ The trade volume of the world's fish and fishery products has been on the increase due to advancement in distribution technology and the relocation of processing factories to countries with lower labor costs, among other factors. At least 30% of the world's fisheries and aquaculture production volume is for export.
○ The World Trade Organization (WTO) ministerial meeting held in June 2022 adopted the protocol of amendment to the WTO agreement inserting the Agreement on Fisheries Subsidies that provides for the ban on subsidies leading to IUU fishing and the general ban on subsidies that facilitate the depletion of those resources that have already been overfished.

Trends in the World Trade Volumes of Fish and Fishery Products



Source: Prepared by the Fisheries Agency, based on the Fishstat (Global fish trade) (FAO)
Note: The volume of EU imports and exports includes the volume of trade within the EU.

(4) International Resource Management

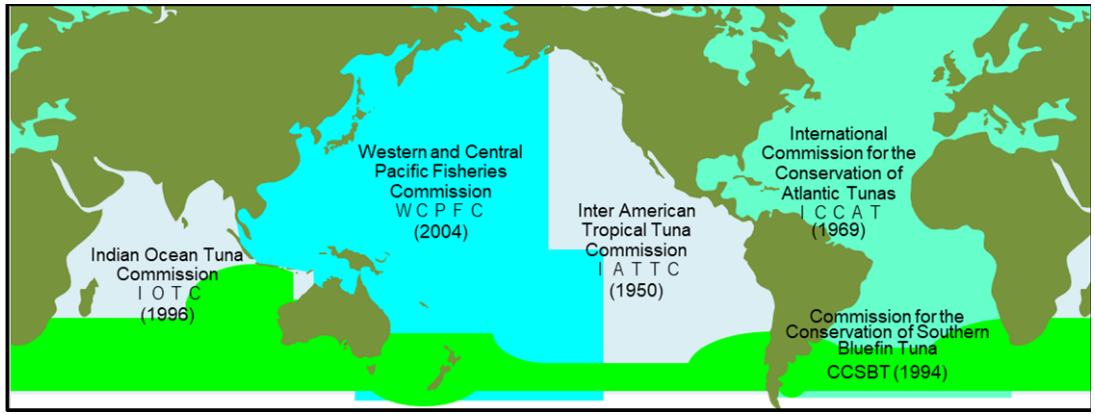
i. Trends in Tuna Regional Fisheries Management Organizations

- Global tuna and tuna-like species resources are managed by five regional fisheries management organizations (RFMOs), and Japan is a member of all of them.
- As a result of the effort of the Western and Central Pacific Fisheries Commission (WCPFC)in Pacific bluefin tuna resource management since 2015 have led its spawning stock biomass has been on a recovery path.
- In the 2021 annual meeting, a 15% increase in the catch limit of Pacific bluefin tuna (large fish), which had been proposed by Japan, was adopted and has been applied since 2022.

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

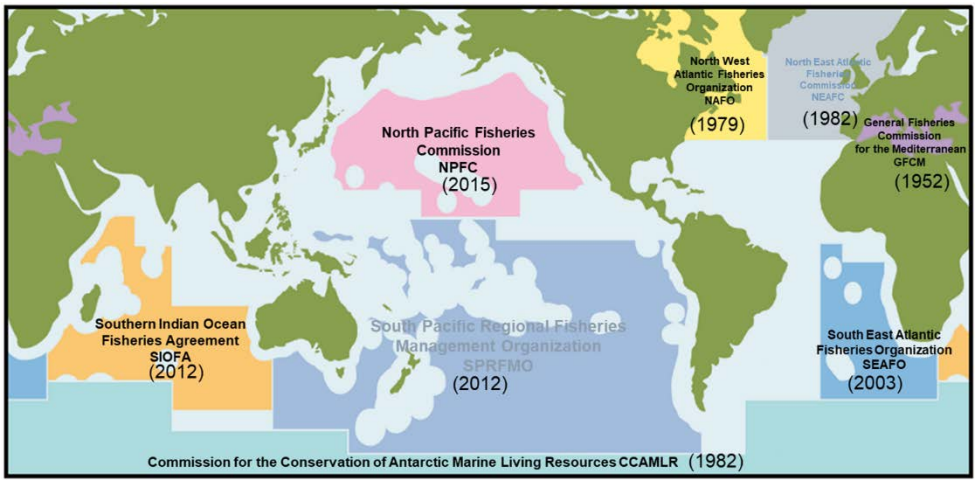
- The North Pacific Fisheries Commission (NPFC) manages fisheries resources on the high seas of the North Pacific, such as Pacific saury, chub mackerel, and North Pacific armorhead.
- The annual meeting held in March 2023 agreed to set a TAC of saury on the high seas at 150,000 tons for 2023 and 2024 (25% reduction from 2022).

Tuna Regional Fisheries Management Organizations (tRFMOs) and Waters Covered



Note: The years in parentheses are the years in which the relevant treaties took effect.

Regional Fisheries Management Organizations Managing Resources Other than Tuna and tuna-like species, and Waters Covered



Notes: 1) Currently, Japan is not a member of the SPRFMO or NEAFC. Japan withdrew from the GFCM in 2020.
2) The years in parentheses are the years in which the relevant treaties took effect.

iii. Developments Toward Eliminating IUU Fishing

- Regional fishery management organizations have been promoting initiatives toward preventing, deterring, and eliminating IUU fishing internationally, such as listing fishing vessels and carriers that engaged in IUU fishing and establishing a catch documentation scheme.
- Under the Act on Ensuring the Proper Domestic Distribution and Importation of Specified Aquatic Animals and Plants enforced in December 2022, the attachment of certificates, etc., issued by foreign government agencies has become mandatory when specified aquatic animals or plants are imported, for the sake of prevention of IUU fishing on an international scale.

iv. Bilateral Relations in Fisheries

- Mutual fishing access between Japan and Korea has been suspended at present. Approaches are continuously taken to resolve the problem of Korean fishing vessels occupying certain fishing grounds in the provisional zone.
- Mutual fishing access between Japan and China has been suspended at present. Approaches are continuously taken to resolve, among other problems, the problem of illegal fishing by Chinese fishing vessels in waters around the Yamato Bank in the Sea of Japan. Furthermore, in order to prevent illegal fishing in those waters, the Fisheries Agency deploys fisheries inspection vessels intensively in the waters and responds in cooperation with the Japan Coast Guard.
- For the 2023 fishing season, Japan and Taiwan have provisionally applied the operation rule whose application has continued since the 2019 fishing season, and have agreed to consult with each other early on reviewing the rule.
- In the EEZs of the Pacific Island countries, the severity of fishing conditions has increased due to fishing fee hikes, the local landing of catches, and the like. Efforts are being made to secure stable operations on overseas fishing grounds through overseas fishery cooperation, etc.

(5) Developments Concerning Whaling

- Japan withdrew from the International Convention for the Regulation of Whaling (ICRW) at the end of June 2019 and resumed commercial whaling of large whales in July of the same year.
- Necessary measures are being taken based on the “Basic Policy of Measures for Ensuring the Sustainable Use of Whales” formulated in October 2020.
- Japan conducts scientific research on whales in cooperation with international organizations such as the International Whaling Commission (IWC), thereby contributing to the management of whale stocks based on scientific knowledge.

Species Subject to Whaling, Catch Quotas, and Number Caught (2022)

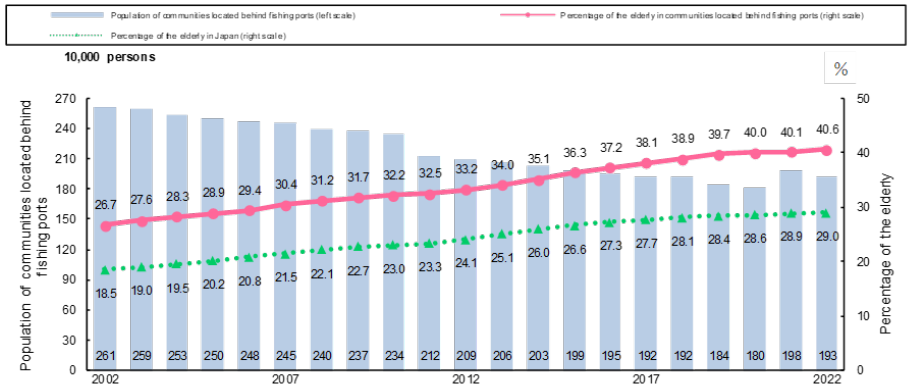
	Mother-ship whaling		Shore-based whaling	
	Bryde's whale	Sei whale	Minke whale	Baird's beaked whale
Catch quota	187	25	107	76
Number of whales caught	187	25	58	24
Reserved by the Fisheries Agency	0	0	26	0

Chapter 5 Development of Safe and Dynamic Fishing Communities

(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. The population is rapidly aging and decreasing, with the percentage of the elderly at 40.6%.
- The fisheries industry and fishing communities appropriately fulfill multifaceted functions such as conserving the natural environment, safeguarding the lives and property of the public, providing exchange opportunities, etc., and developing and maintaining local communities, which widely benefit the general public.
- The Fisheries Agency supports the conservation of seaweed beds and tidal flats, the maintenance, conservation, and improvement of inland water ecosystems, and efforts contributing to the appropriate fulfillment of multifaceted functions by fishers and others, such as marine rescue and border and water monitoring.

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



Source: Prepared by the Fisheries Agency (population and percentage of the elderly in communities located behind fishing ports), and the Population Estimates (percentage of the elderly in Japan; the figures for each of the years in which a census was taken are based on census population) (the Ministry of Internal Affairs and Communications)

Notes: 1) The percentage of the elderly refers to the population aged 65 years and older in proportion to the total population in each category.
2) The population of communities located behind fishing ports and their percentages of the elderly in 2011-2020 do not include data on three prefectures

Multifaceted Functions of Fisheries and Fishing Communities

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

- To prepare for great damage potentially caused by large-scale earthquakes/tsunamis and increasingly severe and frequent natural disasters, it is necessary to promote advance disaster prevention/mitigation measures in fishing ports and fishing communities. The government has promoted, for example, multiple protective measures for fishing communities with breakwaters and seawalls and the construction of breakwaters with a highly durable structure and of evacuation routes.
- Since infrastructures such as fishing port facilities are aging, the government promotes measures to address those aging infrastructures based on plans that incorporate measures for preventive maintenance.

(3) Revitalization of Fishing Communities

- In order to revitalize fishing communities, it is important to fully understand and make the most of their local resources.
- The Basic Plan for Fisheries and the Long-term Plan for the Development of Fishing Ports and Fishing Grounds determined in March 2022 incorporate the concept of “UMIGYO,” which aims to revitalize regional economies with fisheries and fishing ports as the core of such revitalization. They seek to achieve their objective of securing income and employment opportunities in communities by making the utmost use of local resources and existing fishing port facilities to nurture and firmly establish “UMIGYO” such that it and the fisheries industry can mutually complement each other.
- Vacant water areas and land in fishing ports resulted from the reorganization and consolidation of fishing port functions are utilized for “UMIGYO” activities such as aquaculture and factory-direct stores selling fishery products, thereby contributing to the revitalization of fishing communities.
- In order to increase the number of visitors such as tourists and facilitate interactions with them, the initiative of “Nagisahaku (Seaside Stay),” in which tourists can enjoy the traditional life experience of the fishing community and interactions with people in the community, is supported.

Example of “UMIGYO” at Misaki Fishing Port

Misaki Fishing Port, Miura City, Kanagawa Prefecture (Left: Urari Producer-Direct Market Center Right: Miura Misaki Sea Station)

Column **Traditional Fisheries and Dietary Culture of Lake Biwa Area of Shiga Prefecture, a Global Agricultural Heritage**

In the Lake Biwa area of Shiga Prefecture, people have since ancient times made use of the blessings of Lake Biwa through fisheries and paddy field farming. In *eri* (trap) fishing practiced in Lake Biwa, the restriction of the mesh size of fishing nets and the number of nets installed has been handed down from before the Edo era as a method of resource conservation. Lake fish caught through *eri* fishing, etc., form part of the culture of Lake Biwa, as, for example, they are used for traditional dishes such as *funazushi,* which are offered as ritual offerings.

In order to protect the spawning and breeding beds of round crucian carp, which is a basic ingredient of *funazushi*, and other species, fishers and farmers have made various efforts with consideration given to the water quality and ecosystem around Lake Biwa, such as the “Fish Cradle Paddy Field Project” under which efforts such as the installation of fish passages are carried out to conserve the *yoshi* reed zones and protect the paddy field environment that serves as the site of growth; the “Environment-Conscious Agricultural Practice” to reduce the usage of agrichemicals and chemical fertilizers to at least half of their ordinary usage; and activities to conserve the water source forest that has continued to exist since the Meiji era.

The mutual effect of such “ecosystem including fish” and “culture based on agriculture” has led the circulation-type system handed down over 1,000 years to be valued. As a result, on July 18, 2022, it was designated officially as a new globally important agricultural heritage system, recognized as the “Biwa Lake to land integrated s”

Eri (trap) seen from the sky

Crucian carp moving through the fish passage developed through the Fish Cradle Paddy Field Project

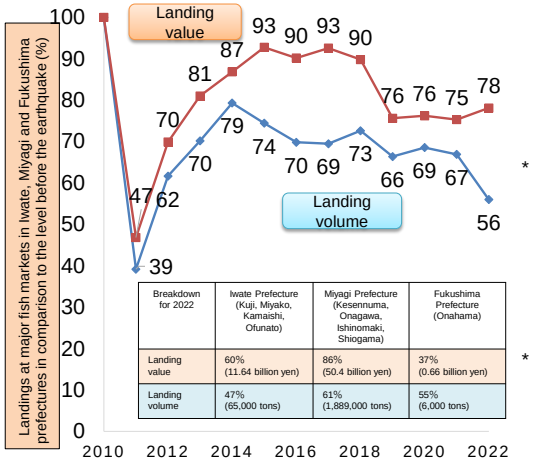
Chapter 6 Reconstruction from the Great East Japan Earthquake

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

- Since the Great East Japan Earthquake struck in March 2011, the restoration of fishing port facilities, fishing vessels, aquaculture facilities, fishing grounds and other facilities has been carried out in the affected areas. Fishery related infrastructures such as fishing port facilities and fishery processing facilities have mostly been restored in full.
- On the other hand, the recovery of the fishery processing industry's sales remains an issue. The government continues to support initiatives such as the recovery/development of markets for the fishery processing industry.

Summary of Restoration/Reconstruction of the Fisheries Industry Following Great East Japan Earthquake (as of March 2023)

1. Landings

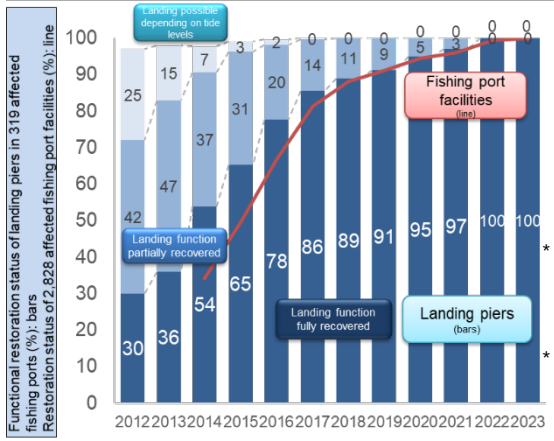


Breakdown for 2022	Iwate Prefecture (Kuji, Miyako, Kamaishi, Ofunato)	Miyagi Prefecture (Kesennuma, Onagawa, Ishinomaki, Shiogama)	Fukushima Prefecture (Onahama)
Landing value	60% (11.64 billion yen)	86% (50.4 billion yen)	37% (0.66 billion yen)
Landing volume	47% (65,000 tons)	61% (1,889,000 tons)	55% (6,000 tons)

* The 2010 values are those for March 2010 through February 2011, and the values for other years are those for February through January of the following year.
* The figures for Fukushima Prefecture for 2022 are preliminary.

2. Fishing Ports

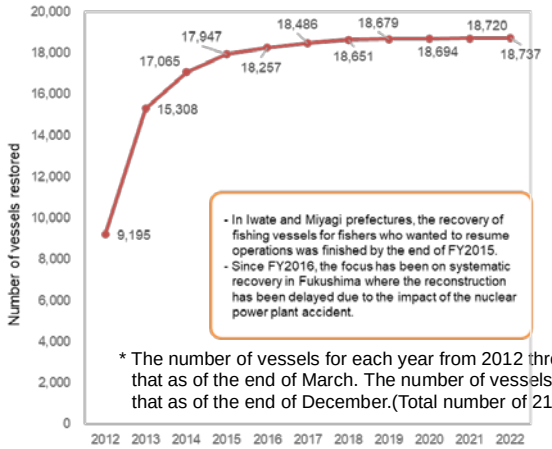
- The landing functions have been recovered in all affected fishing ports.



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

3. Fishing Vessels

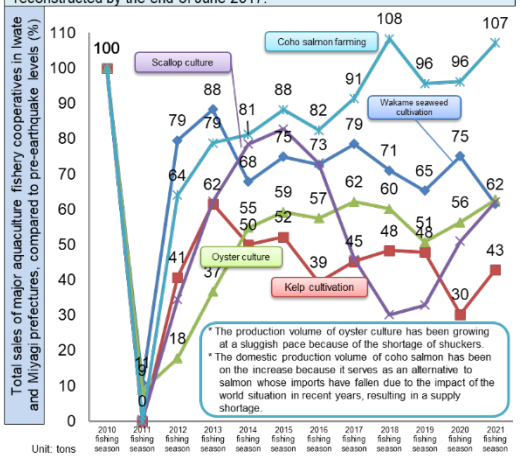
- Fishing vessels in Fukushima Prefecture that want to resume operations will be systematically recovered in the future.



* The number of vessels for each year from 2012 through 2021 is that as of the end of March. The number of vessels in 2022 is that as of the end of December.(Total number of 21 prefectures)

4. Aquaculture

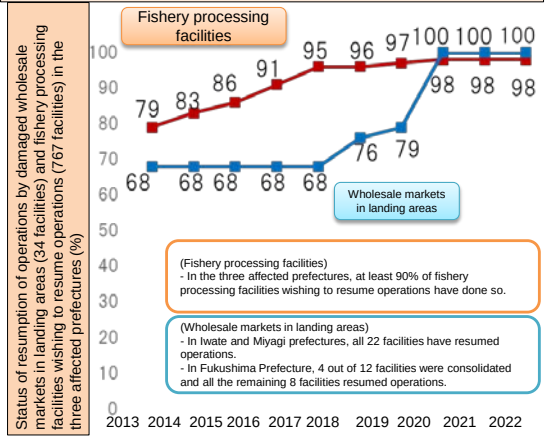
- All aquaculture facilities wishing to resume operations had been reconstructed by the end of June 2017.



* With respect to fishing seasons, the period between Feb.-May is for wakame seaweed cultivation; the period between Mar.-Aug. is for kelp cultivation; the period between Sep.-May of the following year is for oyster culture; the period between Apr.-Mar. of the following year is for scallop culture; and the period between Mar.-Aug. is for coho salmon farming.

5. Processing and Distribution Facilities

- At least 90% of fishery processing facilities wishing to resume operations have resumed them.



* With respect to fishery processing facilities, the figures for 2013 through 2017 are those as of the end of December; the figure for 2018 is that as of the end of September; and the figures for 2019 through 2022 are those as of the end of December.
* With respect to wholesale markets in landing areas, the figure for 2013 is that as of the end of December; the figures for 2014 through 2019 are those as of the end of February of the respective following years; and the figure for 2020 is that as of the end of January of the following year. Wholesale markets in Fukushima Prefecture were consolidated from 12 to 8 facilities in 2020, all of which resumed operation. Because the status of resumption of operation reached 100%, no survey has been conducted since 2021.

6. Debris

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

Set-net fishing grounds

Prefecture Name	Iwate Prefecture	Miyagi Prefecture	Fukushima Prefecture	Total
Number of locations where removal has been completed	138 (138)	850 (850)	No request	988 (988)

* The figures in parentheses are the numbers of fishing grounds with debris not affecting fishery operations.

Fish farms

Prefecture Name	Iwate Prefecture	Miyagi Prefecture	Fukushima Prefecture	Total
Number of locations where removal has been completed	167 (167)	956 (961)	11 (11)	1,134 (1,139)

* The figures in parentheses are the numbers of fishing grounds with debris not affecting fishery operations.

Fishing grounds with operations negatively affected by debris (locations)

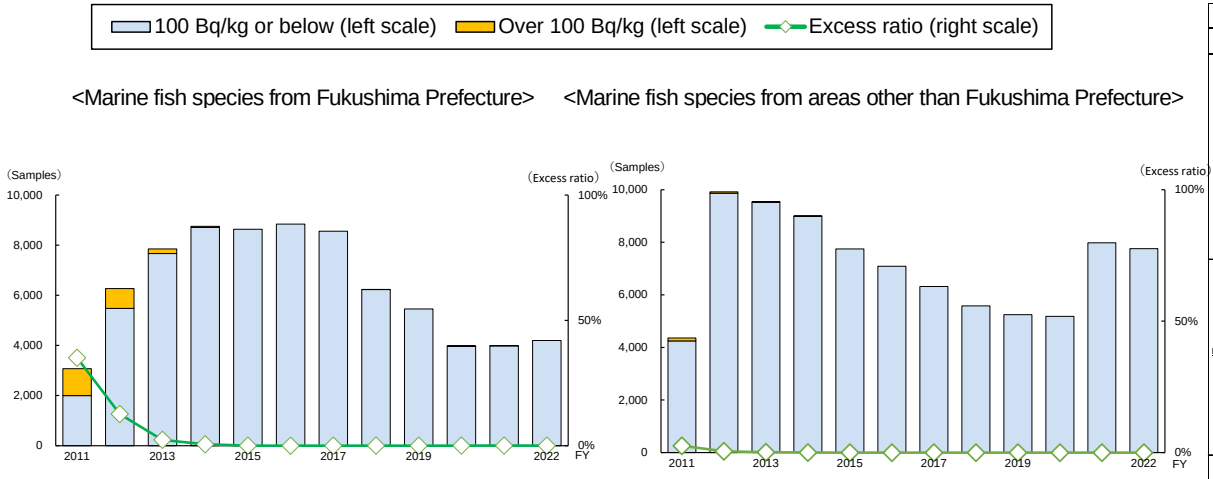
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Set-net fishing grounds	958	1,003	1,004	987	992	990	988	988	988	988	988	988
Debris removed (included in the above)	958	975	976	980	988	988	988	988	988	988	988	988
Fish farms	804	1,071	1,101	1,100	1,129	1,131	1,135	1,135	1,136	1,139	1,139	1,139
Debris removed (included in the above)	801	973	1,045	1,077	1,103	1,116	1,124	1,128	1,130	1,134	1,134	1,134

* The number of locations where operations are negatively affected changes as a result of inflow or outflow of debris to or from the fishing grounds due to meteorological or oceanographic phenomena.
* The figures for each year are those as of the end of March (as of the end of January 2023 for 2023 only).

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

- The national government, in cooperation with relevant prefectural governments and fishery-related organizations, monitors radioactive materials in fish and fishery products in order to ensure the safety of such products.
- The results of radioactive material monitoring are published, and the distribution of those fish and fishery products whose monitoring results exceed the Japanese maximum levels in food (JMLs) is prevented through the cooperation of the national government and the relevant prefectural governments and organizations. In FY2022, the number of samples exceeding the JMLs was two in Fukushima Prefecture. Other than Fukushima Prefecture, there have been no marine species sample exceeding the JMLs since September 2014, and no freshwater species sample has exceeded the JMLs since FY2021.
- Since FY2022, new monitoring analysis has been conducted on fish and fishery products to inspect them for tritium. The results of this analysis have been lower than the detection limit, as was the case for past tritium concentration levels in seawater. Furthermore, in cooperation with the International Atomic Energy Agency (IAEA), efforts have been made to improve the reliability and transparency of data.
- With respect to the handling of water purified by multi-nuclides removal equipment (ALPS: Advanced Liquid Processing System) (hereinafter, "ALPS-treated water"), etc., the government formulated the Basic Policy on handling of ALPS treated water at TEPCO's Fukushima Daiichi Nuclear Power Station, the Report on the Interim Measures for the Handling of ALPS Treated Water at TEPCO's Fukushima Daiichi Nuclear Power Station, and an action plan in 2021. On the basis thereof, the government aims for full-scale reconstruction of the fisheries industry in the affected areas and makes unified efforts to develop an environment in which fishers across the country can engage in fisheries with a sense of security. This is to be done by making sure to take thorough measures at each stage of production, distribution, processing, and consumption.
- While concerns about food products produced in Fukushima Prefecture are fading, reputational damage has been caused from time to time. For that reason, the Fisheries Agency strives to provide correct and easy-to-understand information, for example, by publishing the latest monitoring results, Q & A on fish and fishery products and radioactive materials, etc., on its website.
- Monitoring results are published in English, Chinese, and Korean as information available to people abroad. As a result of encouraging the governments of various countries to lift import restrictions, 43 out of the 54 countries and regions that had imposed restrictions on fish and fishery product imports abolished their restrictions by the end of March 2023. The implementation of efforts for early elimination of restrictions will continue into the future.

Monitoring Results of Radioactive Materials in Fish and Fishery Products (Radioactive Cesium)



Trends in the Relaxation/Abolition of Import Restrictions Imposed by Foreign Countries and Regions in Connection with the Nuclear Power Station Accident (Fish and Fishery Products)

As of May 2011

Details on restrictions		Number of countries/regions
Including import suspension	Applicable to all prefectures	11 countries/regions (The United Arab Emirates, Iraq, Egypt, Guinea, Kuwait, the Democratic Republic of the Congo, French New Caledonia, French Polynesia, Mauritius, Morocco, and Lebanon)
	Applicable to some prefectures	7 countries/regions (Macau, China, Russia, Brunei, Taiwan, Saudi Arabia, and Singapore)
	Applicable to items subject to shipment restrictions in Japan	2 countries/regions (The United States and the Republic of Korea)
Despite no import suspension, a radioactive material inspection certificate is required	Applicable to all prefectures	8 countries/regions (Argentina, Indonesia, Oman, Qatar, Chile, Bahrain, Brazil, and Bolivia)
	Applicable to some prefectures	13 countries/regions (Hong Kong, Mexico, the EU, the EFTA (Iceland, Norway, Switzerland, and Liechtenstein), Serbia, Thailand, Canada, Malaysia, Colombia, and Peru)
Enhanced inspection by the importing country (excluding the above countries and regions)		12 countries/regions (Israel, Iran, India, Ukraine, Turkey, Nepal, Pakistan, Philippines, Myanmar, New Zealand, Vietnam, and Australia)
Total		**53 countries/regions**

* As of April 2011 for Lebanon and Brazil; as of June of the same year for the United States, the Republic of Korea, Mexico, and Chile; and as of August of the same year for Bolivia and Columbia
* Since the EU and the UK were counted as one region as of May 2011, this number of countries and regions is not consistent with that stated in the body text.

As of March 2023

Details on restrictions		Number of countries/regions
Including import suspension	Applicable to all prefectures	0 countries/region
	Applicable to some prefectures	3 countries/regions (Macau, China, and the Republic of Korea)
	Applicable to items subject to shipment restrictions in Japan	1 country/region (Taiwan)
Despite no import suspension, a radioactive material inspection certificate is required	Applicable to all prefectures	0 country/region
	Applicable to some prefectures	7 countries/regions (French Polynesia, Hong Kong, the EU, and the EFTA (Iceland, Norway, Switzerland, and Liechtenstein))
Enhanced inspection by the importing country (excluding the above countries/regions)		0 country/region
Total		**11 countries/regions**

* The 27 EU countries and the UK were counted as one region since they imposed import restrictions as one entity after the accident. However, as the EU announced the relaxation of its restrictions, the EU and the UK came to adopt different regulatory measures between them from September 20, 2021. Accordingly, the UK was counted separately.

(Appendix) Main KPIs for Fisheries Policy

Sector	KPI	Status of progress (as of the end of 2022)	Plan, etc., in which the KPI is stated
Fisheries	Aims to recover the production to the same level as 2010 (4.44 million tons) by 2030 (Reference: Production in 2018 was 3.31 million tons)	The production (excluding marine algae and marine mammals) in 2021 was 3.19 million tons, which was 72% of the goal.	Strategy for Sustainable Food Systems: MIDORI (formulated in May 2021), and Roadmap for Promoting the New Resource Management (decided in September 2020)
Aquaculture	Aims to achieve an artificial production of juvenile fish rate of 100% for aquaculture of Japanese eel, bluefin tuna, etc., and to establish a sustainable aquaculture system without any burden on natural resources by switching all fish feed to formula feed by 2050.	The artificial production of juvenile fish rate (for Japanese eel, bluefin tuna, great amberjack, and yellowtail) in 2021 was 2.9%. The rate of formula feed in 2021 was 45%.	Strategy for Sustainable Food Systems: MIDORI
Aquaculture	Aims to achieve the following production volumes for the strategic aquaculture items by 2030. - Yellowtail: 240,000 tons - Red seabream: 110,000 tons - Bluefin tuna: 20,000 tons - Salmon and trout: 30,000-40,000 tons - New fisheries species (groupers, etc.): 10,000-20,000 tons - Scallop: 210,000 tons (- Pearls (2027 goal): 20 billion yen)	The production volumes in 2021 were as follows (% indicates comparison with the goal). - Yellowtail: 130,000 tons (54%) - Red seabream: 70,000 tons (64%) - Bluefin tuna: 20,000 tons (100%) - Salmon and trout (coho salmon only): 20,000 tons (50%) - Scallops: 160,000 tons (76%) (- Pearls: 12.9 billion yen (64%))	Comprehensive Strategy for the Transformation of Aquaculture Into a Growth Industry (formulated in July 2020, revised in July 2021)
Export	Aims to increase the export value of fish and fishery products to 0.6 trillion yen by 2025 and 1.2 trillion yen by 2030. (Of which the export value of the priority export items in 2030 would be: - Yellowtail: 160 billion yen - Red seabream: 60 billion yen - Scallops: 115 billion yen - Pearls: 47.2 billion yen)	The export value of fish and fishery products in 2022 was 387.3 billion yen, which was 32% of the 2030 goal.	The figures included in the goals for the export value of agricultural, forestry, and fishery products and food in the Basic Plan for Food, Agriculture and Rural Areas (decided by the Cabinet in March 2020) and the Basic Policy on Economic and Fiscal Management and Reform 2020/Follow-up on the Growth Strategy (decided by the Cabinet in July 2020); and the Comprehensive Strategy for the Transformation of Aquaculture into a Growth Industry
Overall fish and fishery products	FY2032 goals for the self-sufficiency rate of fish and fishery products: - Fish and shellfish for human consumption: 94% - Overall fish and shellfish: 76% - Marine algae: 72%	The self-sufficiency rate of fish and fishery products in FY2021 (estimates): - Fish and shellfish for human consumption: 59% - Overall fish and shellfish: 57% - Marine algae: 69%	Basic Plan for Fisheries (decided by the Cabinet in March 2022)
Overall fish and fishery products	Aims to establish technologies for the introduction of hydrogen fuel cells, etc., into fishing vessels by 2040.	Demonstration of fishing vessels using hydrogen fuel cells is planned in order to establish such technologies.	Strategy for Sustainable Food Systems: MIDORI

FY2023 Fisheries Policy

Structure of "FY2023 Fisheries Policy"

Overview

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

I. Steady implementation of fisheries resource management, taking into account changes in marine environments

- Enhancement of research on resources and stock assessment
- Steady promotion of new resource management
- Enhancing fisheries enforcement and surveillance capability/poaching monitoring system
- Adaptation to changes in marine environments

II. Realization of transformation of fisheries into a growth industry, taking increasing risks into account

- Structural reform, etc., of maritime fisheries
- Transformation of aquaculture into a growth industry
- Business management stabilization measures
- Export expansion and development of fishing ports and fishing grounds to support transformation of fisheries into a growth industry
- Inland water fisheries/aquaculture
- Human resource development
- Work safety measures

III. Promotion of activation of fishing communities that support the region

- Seashore revitalization/activation
- Restoration/Strengthening of management foundation of fishery cooperative organizations
- Development of measures for processing, distribution, and consumption
- Fulfilment of multifaceted functions of fisheries and fishing communities
- Conservation of fishing ground environments and maintenance of ecosystems
- Measures for disaster prevention/mitigation and building national resilience

IV. Measures to be promoted in a cross-sectoral manner for sustainable development of fisheries

- Strategy for Sustainable Food Systems: MIDORI and fisheries policy
- Utilization of smart fishery technologies
- Carbon neutrality

V. Restoration/Reconstruction after the Great East Japan Earthquake and overcoming the impact of the nuclear power station accident

- Steady restoration/reconstruction in the earthquake/tsunami-affected areas
- Overcoming the impact of the nuclear power station accident in the nuclear disaster-affected areas

VI. Requirements for the comprehensive and systematic promotion of fisheries policies

- Efficiently promoting measures through collaboration among 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