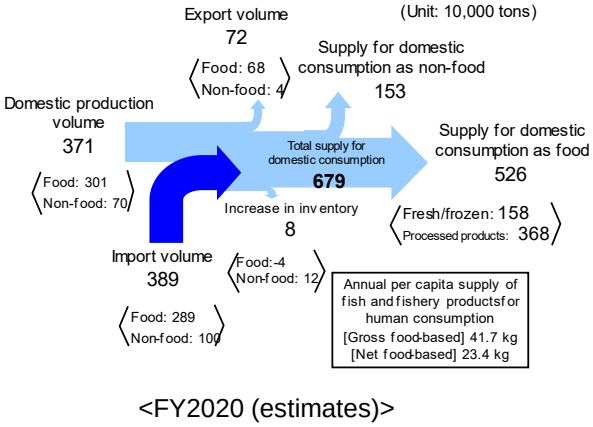
(1) Supply-and-Demand Situation in Fish and Fishery Products

○ The supply of domestic consumption of fish and fishery products was estimated at 6.79 million tons for FY2020 (converted on a fresh-fish basis, estimates), of which 5.26 million tons (77%) were for human consumption (food) and 1.53 million tons (23%) for feed and fertilizer (non-food).

○ The self-sufficiency rate of fish and fishery products for FY2020 was 57% (estimate).

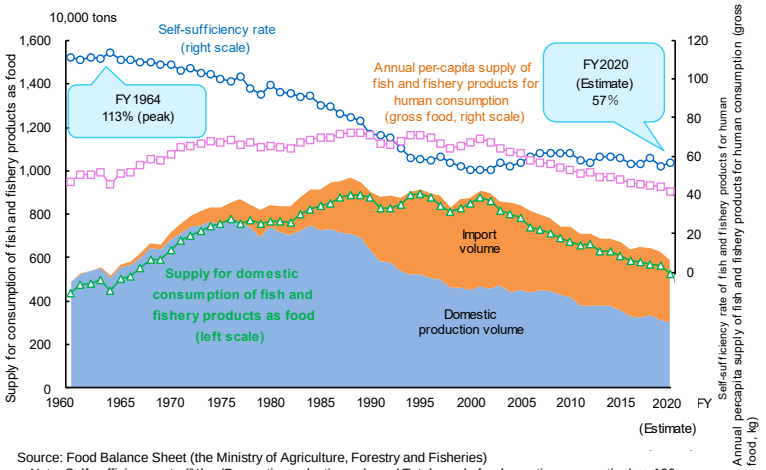
Japan's Production and Consumption Structure of Fish and Fishery Products



<FY2020 (estimates)>

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

Trends in the Self-Sufficiency Rate of Fish and Shellfish



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

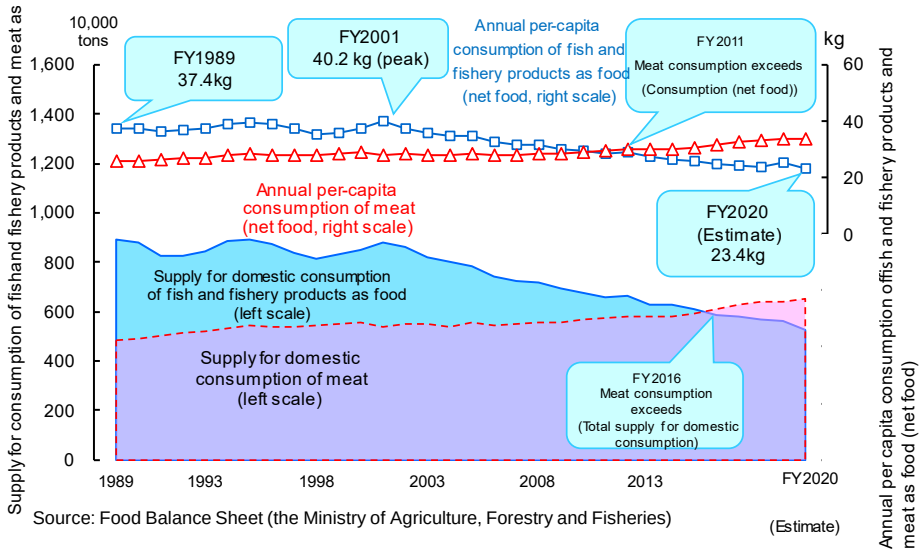
(2) Status of the Consumption of Fish and Fishery Products

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 23.4 kg (estimate) in FY2020.

○ The factors that keep consumers away from purchasing many fish and fishery products include high prices and time and effort required for cooking. While the economic orientation remains flat, consumers' orientation is changing with growing orientation toward simplification and convenience.

Changes in Supply for Domestic Consumption and Annual per Capita Consumption of Fish and Fishery Products as Food



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

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 fish fat, have effects such as promoting brain development, maintaining brain functions, and reducing LDL cholesterol and neutral fats, etc.

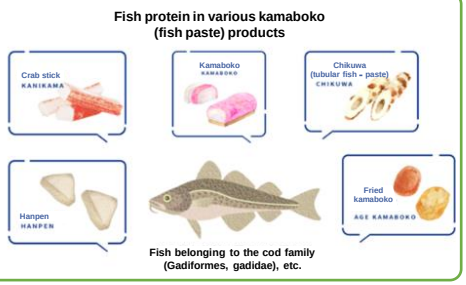
○ Fish protein is not only a high-quality protein containing a good balance of nine essential amino acids, which are essential for human life, but it is also easily digested and taken in the body compared to soy protein and milk protein.

Case Example 1 **First Whale Meat With Function Claims (Kyodo Senpaku Co., Ltd.)**

In September 2021, Kyodo Senpaku gave notice of two products, namely “freezing-temperature aging red whale meat” and “whale skin,” as the first whale meat with function claims.
Imidazole dipeptide (balenine, carnosine, and anserine) contained in whale meat is reported to have a function of temporarily reducing fatigue and stress in daily life. In addition, DHA contained in whale skin is reported to have a function that helps maintain memory (ability to remember and recall language, shapes, etc.), which is a cognitive function that declines with age.

Case Example 2 **The 24th of Every Month is “Fish Protein Day” (Japan Kamaboko Association)**

Japan Kamaboko Association has set the 24th of every month as “fish protein day” since August 24, 2021, and has been promoting the sales of fish paste products such as kamaboko and chikuwa. The health function and effectiveness of fish paste products has been promoted with the keyword of “fish protein characterized by high-quality protein and low fat.” The products that meet the criteria for fish protein content in products set by the Association are labeled with the “fish protein mark” and sold at mass retailers.



(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, food with a function claims system, and geographical indication (GI) protection system.

Main Marine Eco-Label Certificates Used in Japan

Certificates from abroad

Fisheries

MSC Certificate

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

313 enterprises (distributors and processors)

Aquaculture

ASC Certificate

<Netherlands>
[Number of certificates in Japan]
14 aquaculture organizations (81 fish farms)
- Oysters (Miyagi Pref.)
- Japanese yellowtail (Miyazaki, Oita, and Kagoshima Prefs.)
- Purplish amberjack (Kagoshima Pref.), etc.

164 enterprises (distributors and processors)

Certificate from Japan

MEL Certificate

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

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

100 enterprises (distributors and processors)

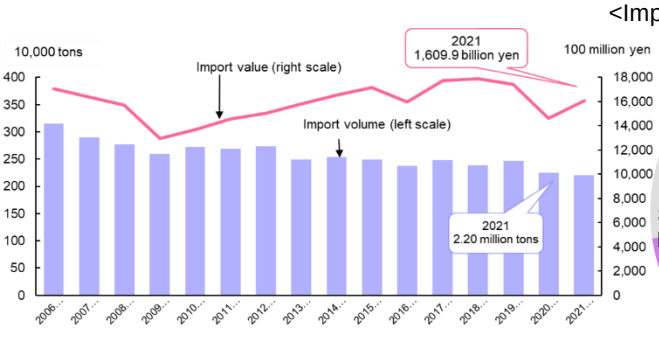
* The number of certificates is that as of March 31, 2022 (according to the Fisheries Agency).

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

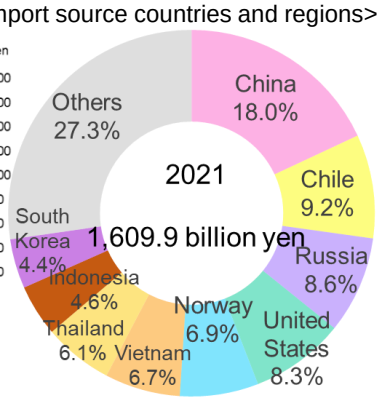
i. Trends in Importation of Fish and Fishery Products

- The import volume of fish and fishery products (on a product weight basis) decreased by 2.3% from the previous year to 2.20 million tons in 2021. The import value increased by 10.0% from the previous year to 1,609.9 billion yen.
- Major import items in terms of import value are salmon and trout, skipjack and tuna, and shrimp, etc.

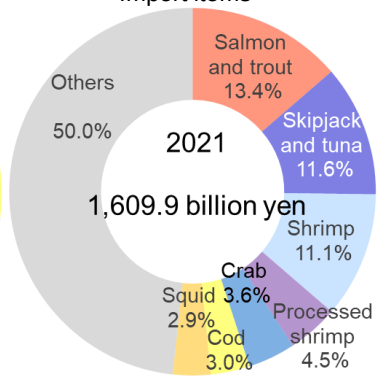
Trends in Import Volume and Import Value of Fish and Fishery Products



<Import source countries and regions>



<Import items>



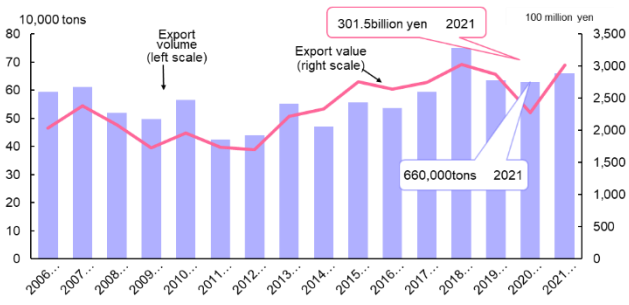
Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)

Share in the total import volume of agricultural, forestry and fishery products and food: 15.8%

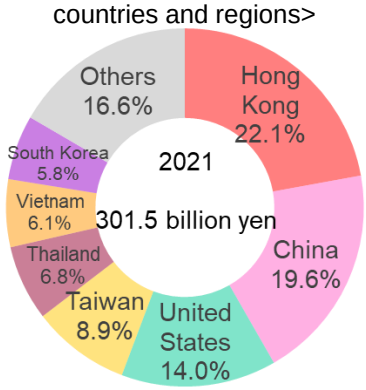
ii. Trends in Export of Fish and Fishery Products

- The export volume of fish and fishery products (on a product weight basis) increased by 4.7% from the previous year to 0.66 million tons in 2021. The export value increased by 32.5% from the previous year to 301.5 billion yen.
- Major export destinations are Hong Kong, China, and the United States, accounting for over 50% of total exports.
- Major export items are scallop and yellowtail in terms of export value.
- A target for export of agricultural, forestry and fishery products and foodstuff to reach 5 trillion yen (including fishery products of 1.2 trillion yen) by 2030 was established in March 2020. Priority items of fish and fishery products are yellowtail, sea bream, scallops, and pearls.

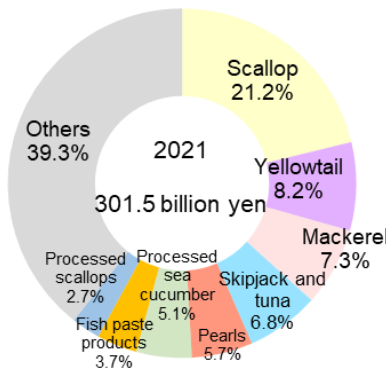
Trends in the Export Volume and Export Value of Fish and Fishery Products



<Export destination countries and regions>



<Export items>



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

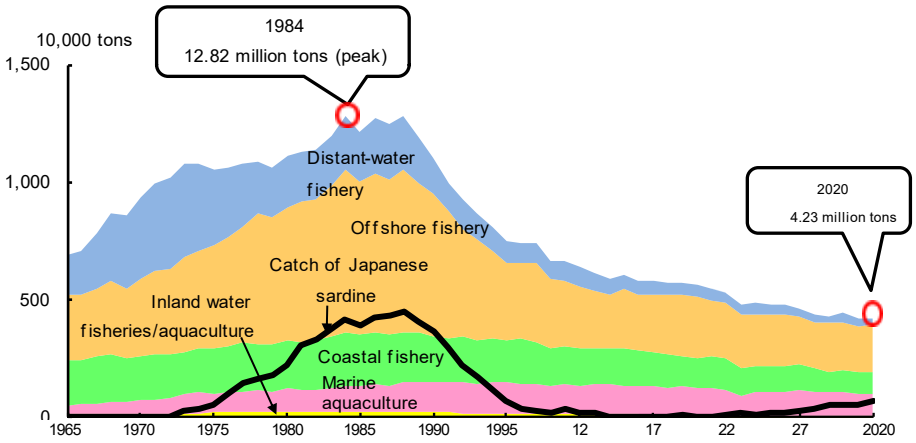
Share in the total export volume of agricultural, forestry and fishery products and food: 24.3%

(1) Trends in Domestic Fisheries and Aquaculture Production

○ The volume of domestic fisheries and aquaculture production increased by 40,000 tons from the previous year to 4.23 million tons in 2020, of which that of marine fisheries decreased by 20,000 tons to 3.21 million tons. The volume increased for Japanese sardine and albacore and decreased for mackerel and skipjack. The volume of marine aquaculture increased by 50,000 tons to 0.97 million tons. The volume of inland water fisheries and aquaculture decreased by 2,000 tons to 51,000 tons.

○ The production value of domestic fisheries and aquaculture decreased by 147.7 billion yen from the previous year to 1,344.2 billion yen in 2020, of which that of marine fisheries decreased by 93.7 billion yen to 775.5 billion yen. The production value of marine aquaculture decreased by 44.7 billion yen to 455.9 billion yen. The production value of inland water fisheries and aquaculture decreased by 9.3 billion yen to 112.8 billion yen.

Trends in the Production Volume of Fisheries and Aquaculture

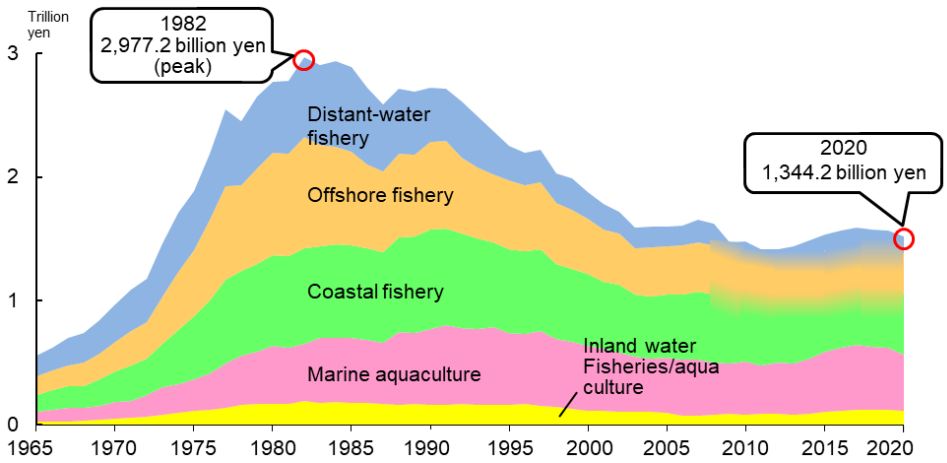


(1,000 tons)

		2020
Production volume	Total	4,234
	Marine	4,183
	Fisheries	3,213
	Distant-water fishery	298
	Offshore fishery	2,044
	Coastal fishery	871
	Aquaculture	970
	Inland water	51
	Fisheries	22
	Aquaculture	29

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 breakdowns of the production volume of fisheries and aquaculture, surveys of catch by tonnage group of fishing vessels were discontinued in 2007. Therefore, the figures for 2007 to 2010 are estimates. For surveys in 2011 and beyond, catches 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)

		2020
Production value	Total	13,442
	Marine	12,314
	Fisheries	7,755
	Aquaculture	4,559
	Inland water	1,128
	Fisheries	165
	Aquaculture	963

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 Fishery Management

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

○ The average fishing income of private management bodies engaged in coastal fisheries using vessels decreased by 57,000 yen from the previous year to 1.12 million yen in 2020. The business income including non-fishing income was 1.35 million yen.

○ Corporate management bodies engaged in fishing vessel fisheries have been experiencing deficits in fishery income. Operating losses, including non-fishery losses on income from fishery processing, posted were 9.58 million yen in FY2020.

○ The fishing income of private management bodies engaged in marine aquaculture decreased by 0.36 million yen from the previous year to 5.27 million yen in 2020.

○ The production volume of fisheries and aquaculture per fisher in Japan was 31 tons, the production value 9.91 million yen, and the fishery income produced 4.73 million yen.

○ Fuel oil prices have sharply increased since December 2020. To mitigate the impact of the price rise, a compensation money was provided to fishers from funds reserved in advance by the fishers and the national government.

Trends in Management of Private Management Bodies

<Coastal fishery by fishing vessels>

(Unit: 1,000 yen)

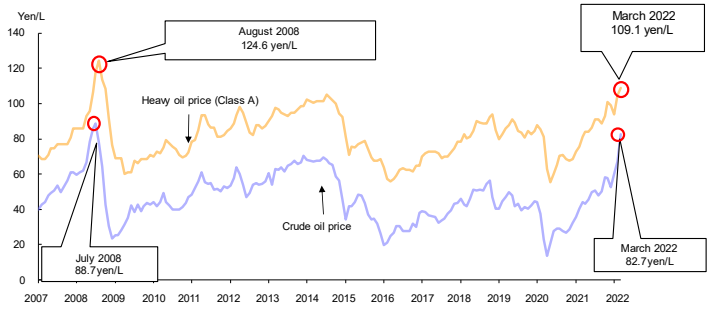
	2019		2020	
Business income	1,875		1,347	
Fishing income	1,689		1,124	
Fishing revenue	5,664		5,121	
Fishing expenditure	3,975	(100.0)	3,997	(100.0)
Employee wages	532	(13.4)	499	(12.5)
Fishing vessel and fishing gear expenses	311	(7.8)	345	(8.6)
Repair costs	326	(8.2)	355	(8.9)
Oil costs	693	(17.4)	575	(14.4)
Selling charges	382	(9.6)	365	(9.1)
Depreciation	570	(14.3)	645	(16.1)
Others	1,161	(29.2)	1,213	(30.3)
Non-fishing income	186		223	

<Marine aquaculture>

	2019		2020	
Business income	5,225		5,469	
Fishing income	4,907		5,269	
Fishing revenue	30,336		30,891	
Fishing expenditure	25,429	(100.0)	25,622	(100.0)
Employee wages	3,615	(14.2)	3,741	(14.6)
Fishing vessel and fishing gear expenses	1,032	(4.1)	1,055	(4.1)
Oil costs	1,278	(5.0)	1,253	(4.9)
Repair costs	1,396	(5.5)	1,620	(6.3)
Feed costs	5,823	(22.9)	5,448	(21.3)
Juveniles costs	1,286	(5.1)	1,237	(4.8)
Selling charges	987	(3.9)	1,079	(4.2)
Depreciation	3,324	(13.1)	3,395	(13.3)
Others	6,688	(26.3)	6,795	(26.5)
Non-fishing income	318		200	

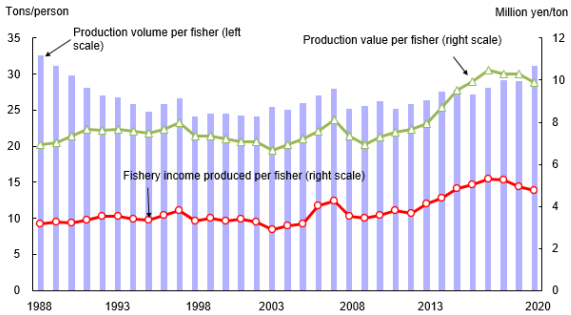
For source and notes, refer to (*) on the lower right.
The figures in parentheses indicate the percentage of fishing expenditure (%).

Trends in Fuel Oil Prices



Source: Prepared by the Fisheries Agency

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 for 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).

(*)

Source: Prepared by the Fisheries Agency, based on the Statistical Survey Report on Fishery Management and the Census of Fisheries (the Ministry of Agriculture, Forestry and Fisheries)

Notes: 1) The figures for coastal fishery by fishing vessels are weighted-averaged using the number of private management bodies using fishing vessels of less than 10 tons in the "Census of Fisheries," based on the results of fishery by fishing vessels of the survey on private management bodies in the "Statistical Survey Report on Fishery Management."

2) The figures for coastal fishery by fishing vessels are the results excluding management bodies in Fukushima Prefecture, as they were unable to carry out fisheries due to the Great East Japan Earthquake.

3) 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 in the "Statistical Survey Report on Fishery Management."

4) Revenue of fishing households includes, in addition to the business income, non-business income such as non-business employment income and pensions of fishery household members.

5) Fishing revenue does not include the amounts received from subsides.

ii. Seashore Revitalization Plan to boost incomes

○ Under the "Seashore Revitalization Plan," each district considers and implements measures to increase fishery income by at least 10% in five years. As of the end of FY2021, it is implemented in 585 districts.

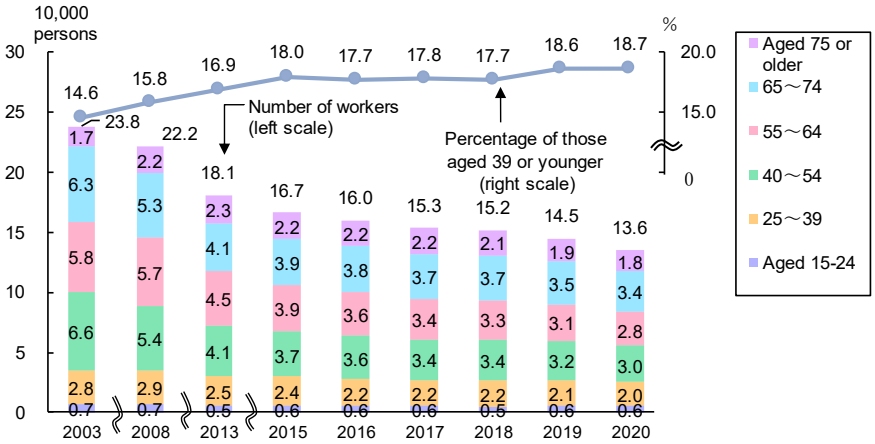
○ As of the end of FY2021, the "Wide-Area Seashore Revitalization Plan" in which efforts are made to enhance wide-ranging competitiveness, is implemented in 150 districts.

(3) Trends in Fishers

○ The number of fishery workers has been consistently declining, reaching 135,660 in 2020.

○ The number of new fishery workers was 1,707 in 2020. The government, etc. provides support for the initiatives 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 survey was conducted on the fishery management body (employer) side and included those residing in coastal municipalities who were previously not included. Therefore, those surveys are not in line with the 2003 survey.

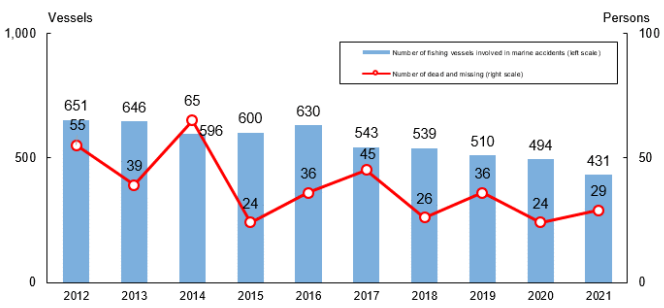
(4) Trends in Fishery Working Environments

○ In 2021, the number of fishing vessels involved in marine accidents was 431, and the number of dead and missing reported in those accidents was 29.

○ Excluding those related to marine accidents, 65 fishers fell overboard in 2021, 38 of whom were dead or missing.

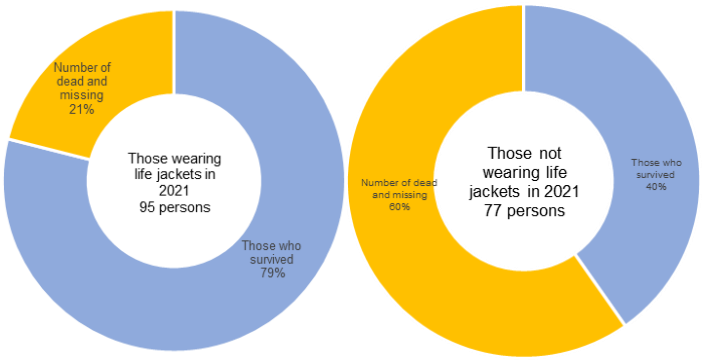
○ Life jackets are vital to saving the lives of those who fall overboard (approximately doubling the survival rate). All persons on board, in principle, outside the cabin are required to wear life jackets. Starting in February 2022, captains are given violation points for violating the requirements to wear 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 and without Life Jackets



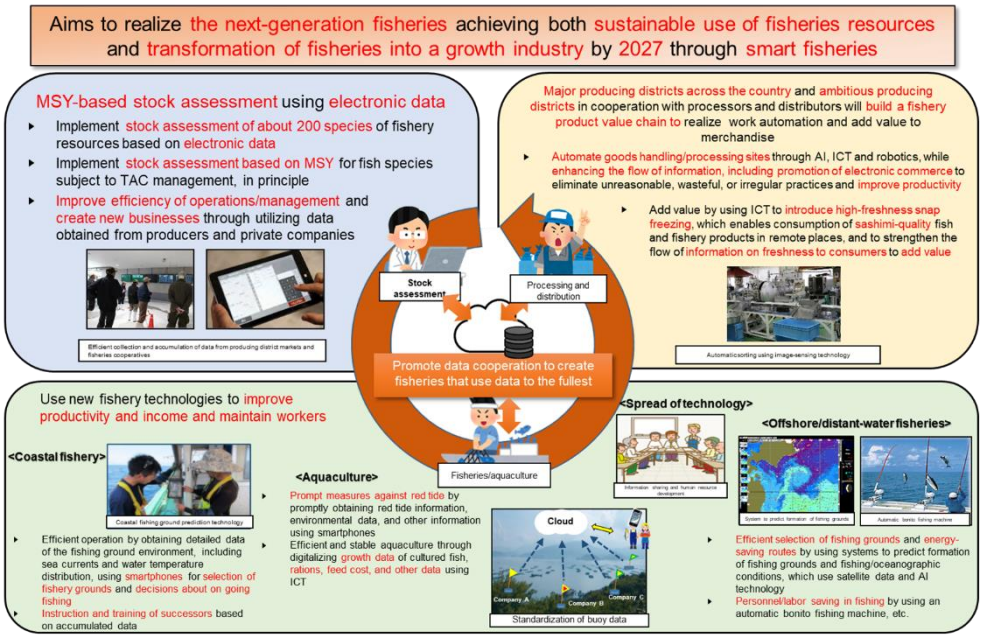
Source: Prepared by the Japan Coast Guard

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

○ Development, introduction, and advancement of technologies related to efficient initiatives utilizing ICT, IoT, AI, and drones in each of the stock assessment, fisheries/aquaculture and processing/distribution sectors are promoted.

○ To promote the utilization of data, “Guidelines for Data Utilization in the Fisheries Sector” was formulated in March 2022.

Vision of Smart Fisheries in 2027



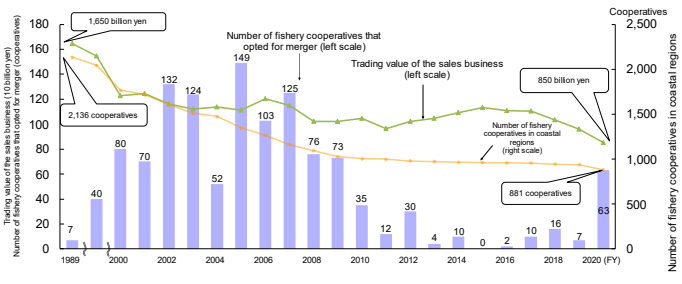
(6) Trends in Fisheries Cooperatives

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

○ The number of fisheries cooperatives (in coastal areas) as of the end of March 2021 was 881.

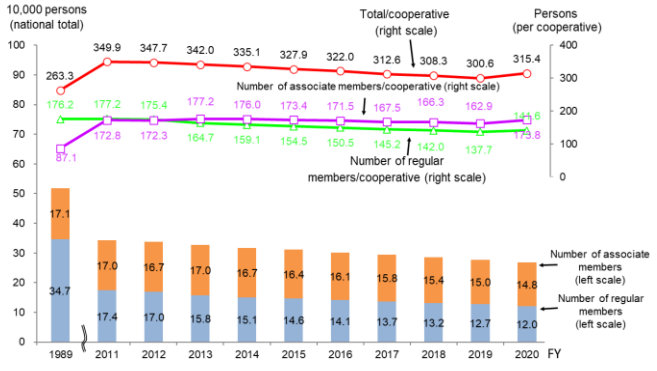
○ The number of fisheries cooperative members has been decreasing in line with a decline in the number of fishers. There is a need to strengthen the cooperatives' business and management foundation through mergers and to further reinforce their sales business.

Trends in the Number of Fisheries Cooperatives in Coastal Areas, Number of Fisheries Cooperatives That Opted for Mergers, and Trading Value of the Sales Business



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

Trends in the Number of Fisheries Cooperative Members



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

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

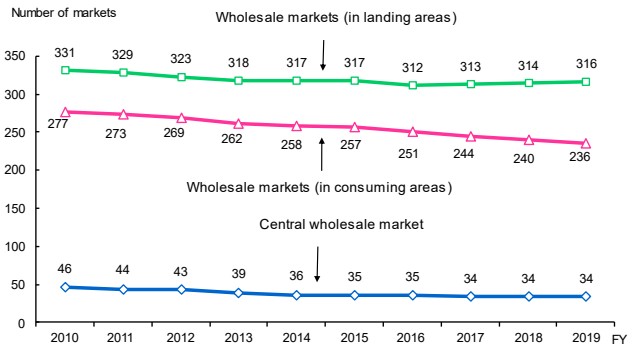
i. Trends in the Distribution of Fish and Fishery Products

○ 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 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 Number of Wholesale Fishery Markets



Source: Wholesale Market Database (the Ministry of Agriculture, Forestry and Fisheries)
Note: Data for central wholesale markets are the data at the end of every fiscal year, 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 or later).

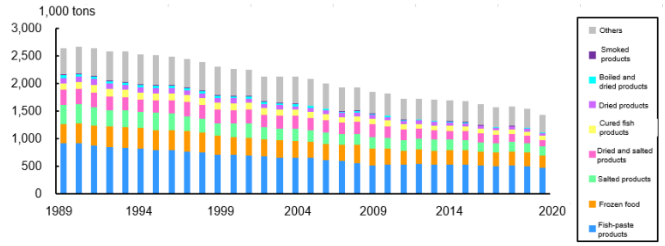
ii. Trends in Fishery Processing

○ 70% of the total supply of fish and fishery products for domestic human consumption in Japan is supplied as processed 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 had been flat.

○ It is necessary to develop products that meet diversifying consumer needs and build a production system that enables change of raw materials in the midst of a shortage of raw materials for processing.

Trends in 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: Excluding toasted/flavored seaweed, canned or bottled products, agar, and oils and fats.

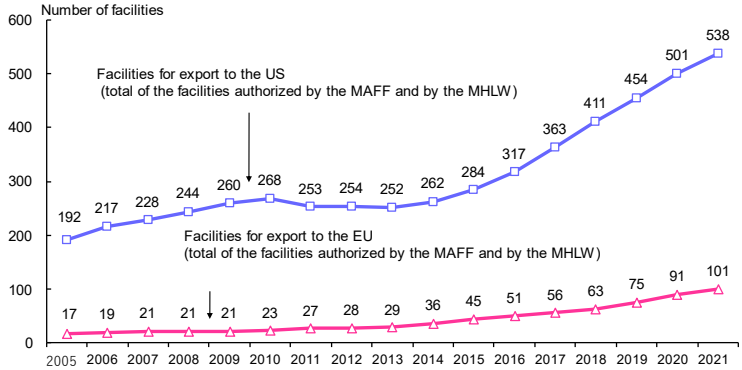
iii. HACCP Compliance

○ All food business operators including fishery processors, in principle, are required to carry out HACCP-based sanitary control starting in June 2021.

○ 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, when exporting fish and fishery products to the EU, the United States. The government supports the renovation of facilities to obtain the facility authorization required for export to the EU and the United States.

○ As of the end of March 2022, in the fishery processing industry, etc., the number of facilities authorized to export to the EU is 101, and the number of facilities authorized to export to the United States is 538.

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



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