# FY2023 White Paper on Fisheries Summary

June 2024 Fisheries Agency

- The figures stated in this document are, in principle, rounded. For that reason, the totals of these figures may not match the stated totals, etc.
- The maps shown in this document do not necessarily represent the territory of Japan in a comprehensive manner.
- 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. Please note that not all related icons are attached.

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 $Special\ Issue:\ Revitalization\ of\ Fishing\ Communities\ Through\ "UMIGYO"$ 

# Special Issue: Revitalization of Fishing Communities Through "UMIGYO"







- o "UMIGYO": projects that utilize the value and attractiveness of the local resources of the sea and fishing communities
- Significance of UMIGYO: amid the declining dynamism of local communities, as exemplified by the decreasing population
  and aging of fishing communities, UMIGYO seeks to secure income and employment opportunities in such
  communities by firmly establishing UMIGYO that makes the utmost use of local resources.



Eating place at a fishing port (Hota Fishing Port, Chiba Prefecture)



Factory-direct store selling fish and fishery products (Kanezaki Fishing Port, Fukuoka Prefecture)









Fishery experience (Tajiri Fishing Port, Osaka Prefecture)

**UMIGYO** poster

#### Section 1 Current Status and Roles of Fishing Communities

# (1) Situation Surrounding the Fisheries Industry, Including Fishery Production and Consumption of Fish and Fishery Products

- The production volume of Japan's fisheries and aquaculture industry continues to fall gradually due to factors such as the decreasing number of fishery workers, changes in marine environments, and a decline in fishery resources.
- The annual per capita consumption of fish and shellfish as food in Japan (net food base) has been on a decreasing trend from the peak of 40.2 kg in FY2001.
- o The shortage of successors to fishery management bodies is also an issue, together with the decreasing number and aging of fishery workers.

#### Changes in the Fisheries and Aquaculture Production Volume, the Number of Fishery Workers, etc.

Production volume of fisheries and aquaculture	1993	2022
(1,000 tons)	8,707	3,917
Annual per-capita consumption of fish and shellfish as food	1993	2,022
(net food: kg)	37.5	22.0
Number of fishery workers	2008	2022
(1,000 persons)	221.9	123.1
Number of fishery management bodies	1993	2022
(1,000 management bodies)	172	61
Fishing revenue of private management bodies (maritime fisheries) whose core fishery workers are aged under 65 years	2006	2,022
(1,000 yen)	23,380	22,893
Number of fishing vessels (1,000 vessels)	1993	2,022
(1,000 vessels)	267.6	108.7

[Sources] "Fisheries and aquaculture production volume": Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries)

"Annual per capita consumption of fish and shellfish as food": Food Balance Sheet (the Ministry of Agriculture, Forestry and Fisheries)

"Number of fishery workers" and "Number of fishery management bodies": Census of Fisheries (1993 and 2008) and Survey on Movement of Fishery Structure (2022) (the Ministry of Agriculture, Forestry and Fisheries)

"Fishing revenue of private management bodies (maritime fisheries) whose core fishery workers are aged under 65 years": prepared by the Fisheries Agency, based on the Statistical Survey on Fishery Management (counted based on reclassified items) and the Census of Fisheries (the Ministry of Agriculture, Forestry and Fisheries)

"Number of fishing vessels": Census of Fisheries (1993) and Survey on Movement of Fishery Structure (2022) (the Ministry of Agriculture, Forestry and Fisheries)

- Notes: 1) "Number of fishery workers": persons aged 15 or older who has been engaged in offshore fishery operations for at least 30 days in the past year. The surveys for 2008 and beyond were conducted on the fishery management body (employer) side and accordingly included those residing in non-coastal municipalities. Since those surveys are not in line with the 2007 survey and before, the number in 2022 is compared with that in 2008.
  - 2) "Fishing revenue of private management bodies (maritime fisheries) whose core fishery workers are aged under 65 years": the figures are weighted-averaged using the number of private management bodies according to age groups in the Census of Fisheries (the number in 2006 covered only male individuals), based on the results of fishery by fishing vessels in the survey on private management bodies under the Statistical Survey on Fishery Management (counted based on reclassified items). The Statistical Survey on Fishery Management was significantly reviewed from the 2005 survey and surveys before that, and accordingly the 2005 survey and surveys before that are not in line with the 2006 survey and beyond. For that reason, the figure in 2022 is compared with that in 2006.

# (2) Current Status of Fishing Communities

- Many fishing communities are situated in locations suitable for fisheries, such as along ria coasts, on peninsulas, or on remote islands. Among communities located behind fishing ports, those located in remote island areas account for approx. 18%, and those in peninsula areas account for approx. 31%. Most fishing communities form dense settlements in narrow locations with few flat areas and cliffs behind them. The locational conditions of fishing communities are not favorable for anything other than fisheries since, for example, their locations are disadvantaged in terms of accessibility, etc., and vulnerable to natural disasters.
- The percentage of the elderly in fishing communities is approx. 11 percentage points higher than the national average.

#### Population and Percentage of the Elderly in Communities Located behind Fishing Ports



Sources: Prepared by the Fisheries Agency (population and percentage of the elderly in communities located behind fishing ports), and the Population Estimates (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 over 65 years or 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 for 2011-2020 do not include data on three prefectures (lwate, Miyaqi, and Fukushima).

#### **Situation of Communities Located Behind Fishing Ports**

	Total number of communities located behind fishing ports	Areas designated as remote island areas, peninsula areas, or depopulated areas			
			Among them, remote island areas	Among them, peninsula areas	Among them, depopulated areas
	4,384 (100%)	3,645 (83.1%)	778 (17.7%)	1,353 (30. 9 %)	3,113 (71.0%)

Source: Prepared by the Fisheries Agency (2023)

Note: Remote island areas, peninsula areas, and depopulated areas may be designated as such in an overlapping manner under the Remote Islands Development Act, the Peninsular Areas Development Act, and the Act on Special Measures Concerning Support for the Sustainable Development of Depopulated Areas.



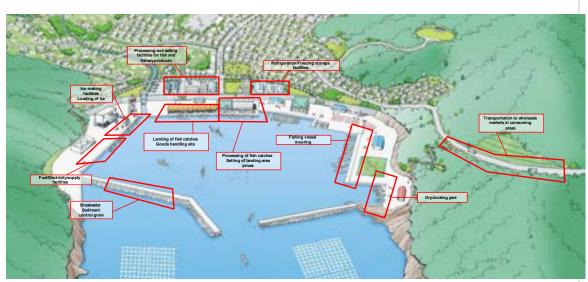
Locational characteristics of fishing communities

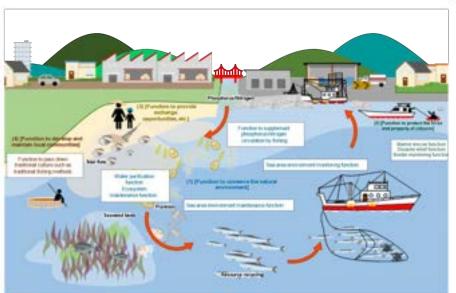
# (3) Roles That Fishing Communities Fulfill

- A fishing community plays a critical role as a base for the fisheries industry, in addition to being the place of living for its residents such as fishery workers.
- A fishing port plays the role of stably supplying fresh and safe fish and fishery products to consumers, which involves processes such as supplying of goods necessary for fishing operations, landing of fish catches, and distributing, selling, and processing fish and fishery products, as well as the role of being a mooring for fishing vessels and serving as an evacuation shelter.
- 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.

#### **Roles of Fishing Ports**

**Multifaceted Functions of Fisheries and Fishing Communities** 





Source: Prepared by the Ministry of Agriculture, Forestry and Fisheries, based on a report of the Science Council of Japan (only excerpts related to the fisheries industry and fishing communities)

# (4) Local Resources of Fishing Communities

- Fishing communities have features that are not observed in other areas, including fresh fish and fishery products, the scene of landing catches and taking them to the market, and out-of-the-ordinary fishery experiences, and can attract people from other areas to those communities with their unique scenery as fishing settlements and their provision of water-based recreational opportunities such as fishing. In order to revitalize fishing communities, it is important to fully understand and make the most of their local resources.
- The number of non-residents visiting fishing communities from urban areas has increased in recent years to approx. 20 million, due to an increase in the number of facilities intended to facilitate exchange in fishing communities, such as factory-direct stores selling fish and fishery products.
- The needs of the public for travel are high, especially in relation to food and nature/scenery as the purposes of travel to farming/mountainous/fishing communities.
- The population of people who fish, which is a typical water-based recreational activity, amounts to approx. 8.7 million.
- Although the number of foreign visitors to Japan declined sharply due to the impact of COVID-19 infections, it has been on the increase in recent years, and the fulfillment of increasing inbound demand is expected to lead to the revitalization of communities.

#### **Example Local Resources Available in Fishing Communities**

Classification	Main local resources
Related to fisheries	Fresh fish and shellfish, processed fishery products, fish markets, various types of fisheries/aquaculture, traditional styles of fishing, and fishery processing industry
Related to nature/scenery	Fishing community scenery, boathouses, temples and shrines, sea, rivers, lakes, coasts, sand beaches, tidal flats, and living organisms
Related to recreational activities	Swimming beaches, marinas, "Fisharena," fishing ponds, marine sports in general, fishing, and shellfish gathering
Related to fishing communities' cultures, traditions, etc.	Traditional events, festivals, morning and periodic markets, lifestyle, local cuisines, fishers' cuisines, shipbuilding techniques, folk knowledge about the sea and weather, and folk tales and anecdotes
Related to renewable energy	Wind, waves, sunlight, biomass, algae, and rivers (hydropower)
Others	Warm seawater bath facilities, bathing with alga salt, thalassotherapy, and deep ocean water

Facilities Intended to Facilitate Exchange Such as Factory-Direct Stores Selling Fish and Fishery Products in Fishing Ports and Communities Behind Those Ports Across Japan, and the Non-Resident Population in Fishing Communities

	2017	2018	2019	2020	2021	2022
Facilities intended to facilitate exchange such as factory-direct stores selling fish and fishery products (sites)	1,371	1,390	1,451	1,490	1,458	1,473
Non-resident population in fishing communities (1,000 persons)	19,854	20,024	20,222	18,558	20,108	23,420

Source: Prepared by the Fisheries Agency

#### **Examples of traditional regional cuisine**



Ikameshi (Hokkaido Prefecture)



Ikanago no Kugini (Hyogo Prefecture)

<sup>\*</sup> Images: "Our Regional Cuisines," a website managed by the Ministry of Agriculture, Forestry and Fisheries

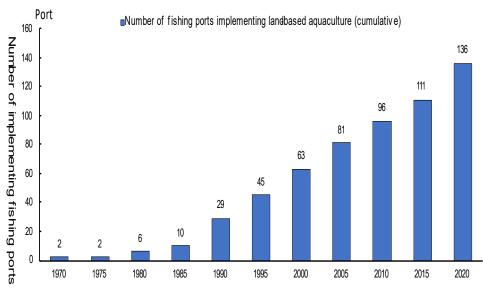
#### (1) UMIGYO Aiming for Revitalization of Regional Economy and the Current Situation of Initiatives Taken for UMIGYO

- Incorporating the concept of "UMIGYO" as "projects that utilize the value and attractiveness of the local resources of the sea and fishing communities", the Basic Plan for Fisheries and the Long-term Plan for the Development of Fishing Ports and Fishing Grounds seek to secure income and employment opportunities in those communities by making the utmost use of local resources while maintaining harmony with fishing operations and by nurturing and firmly establishing "UMIGYO" as an industry with which the fisheries industry mutually complements each other, amid the declining dynamism of local communities, as exemplified by the deceasing population and aging of fishing communities.
- Fishing ports are situated in environments where it is easy to conduct land-based aquaculture using the port site and propagation and aquaculture using port water areas, and accordingly, initiatives taken to implement land-based aquaculture using fishing port sites are on the increase.
- Amid the situation where consumer needs are considered to be shifting from "Mono (thing) consumption" toward "Koto (experience/event) consumption" and "Toki (time) consumption," fishing ports have a great potential for meeting the needs for "Koto consumption" and "Toki consumption" and are expected to contribute to the sustainable development of the fisheries industry through UMIGYO initiatives that utilize the value and attractiveness of the sea and fishing communities.

#### Image of Promoting UMIGYO at Fishing Ports

#### [Future] [Current state] - The water area and the land area are utilized in an integrated manner to aggregate UMIGYO-related facilities Anchorage Fishery experience Goods Goods handling site handling Optimizes Consolidates the Refrigerating functions nec business operators restructuri for fisheries, facilities to utilize this area to g fishing including goods handling function, promote the setup of direct sales facilities, port usage refrigerating according restaurants, function, and fishin interaction to the scale gear storage Fishing Fishing gear of fisheries vessel repair w arehouse in the area Direct sales facilities facilities A space to be utilized as a place for UMIGYO is created by restructuring and organizing fishing port facilities and orderly arranging the fishing port site according to the actual condition of regional fisheries Restaurant located in fron

#### Initiatives for Land-Based Aquaculture Utilizing Fishing Port Sites



Source: Prepared by the Fisheries Agency

Note: The initiative-implementing fishing ports in 2020 (136 fishing ports) include 35 fishing ports farming fish, 36 fishing ports growing algae, and 65 other fishing ports (growing sea urchins, abalones, etc.).

## (2) Examples of Proactive UMIGYO Initiatives

- In the situation where the consumption of fish and shellfish as food in Japan has been on a declining trend, it is important to implement initiatives to help expand
  the consumption of fish and fishery products by capitalizing on the appeal of seasonal fresh fish and fishery products offered by fishing communities.
- o Fresh and delicious fish and fishery products are valuable local resources that attract visitors to fishing communities.
- The sale of locally available fish and fishery products and the provision of meals using such products at eating places, etc., have contributed to increasing the number of visitors to fishing communities, and many different initiatives that take advantage of the unique features of the respective regions are being implemented.

Development of an Eating Place, etc., by a Fishery Cooperative Association, and Collaboration with a Michi no Eki (Roadside Station) (Hota Fishing Port, Chiba Prefecture)

In 1995, the Hota Fishery Cooperative Association in Kyonan Town, Chiba Prefecture opened "Banya," an eating place managed directly by the fishery cooperative association under an initiative to provide fish and fishery products directly to consumers, amidst a difficult business environment for the cooperative association due to low fish prices and other factors. The eating place attracted much attention and a growing number of visitors primarily from the Tokyo metropolitan area and its outskirts, and "Second Banya" and "Third Banya" were opened in 2000 and 2008, respectively. The offering of locally landed fish at those eating places has expanded the use of such fish as used for various kinds of fish and fishery products in small quantities and has thereby improved its added value.

In addition, the use of the fishery cooperative association's fixed shore nets as tourist fixed shore nets, and the active expansion of businesses such as the operation of spa and accommodation facilities and the installation of visitor berths for pleasure boats, have significantly contributed to the revitalization of the local fisheries industry, as exemplified by increased employment.

Furthermore, Kyonan Town revived a closed elementary school near the fishing port as a Michi no Eki (roadside station), developing accommodation facilities, a factory-direct store, an eating place, and other facilities by using the former elementary school's facilities. In addition, next to this elementary school, a kindergarten attached to Hota Elementary School was opened. Through collaboration among these facilities, the Hota Fishery Cooperative Association expects to see a further increase in visitors.



Interior of Banya



Michi no Eki "Hota Elementary School"



# Development of Complex Businesses from a Sunday Morning Market (Tajiri Fishing Port, Osaka Prefecture)

The Tajiri Fishing Port in Tajiri Town, Osaka Prefecture is engaged in fisheries, primarily coastal fishery such as gill net fishery. Its fishing grounds shrank due to the land reclamation work begun from 1987 for the opening of Kansai Airport, causing a significant drop in the volume of fish catches while accommodation facilities and visitors increased due to the opening of the airport. Under these circumstances, the Tajiri Fishery Cooperative Association decided to utilize the fishing port to conduct tourist-oriented businesses. In 1994, the cooperative association launched a series of businesses including the organizing of Sunday morning markets for fishers to directly sell their fish and fishery products at the port, a fishery experience business, a seafood barbecue business, a marina, and a jet ski boatyard.

Subsequently, as some of the initiatives taken by the cooperative association, it set up an offshore fishing pond as a business to substitute for the fishery experience business during winter and under heavy weather conditions, and converted the seafood barbeque site, which had been closed during winter, into an all-weather facility and opened an oyster hut.

These complex businesses have become important tourist resources for the town and play a key role in the development of the community, in addition to increasing the income of fishery cooperative association partners.



Scene from a Sunday morning market



Scene from fishery experience

- It is expected that visitors deepen their interest in and understanding of the production sites of fish and fishery products by experiencing fisheries
  together with fishers and also understand more profoundly the fact that our dietary life is based on the blessings of nature and supported by the
  various activities of people involved in food, among other facts.
- The activity of "Seaside Stay," through which tourists can, while staying in a fishing community, enjoy traditional life experience and interaction with local people, is promoted.
- Fishing and other water-based recreational activities can not only bring visitors to fishing communities but also provide opportunities for interaction between such visitors and those communities and contribute to increasing the consumption of local fish and fishery products.



# Diverse Initiatives for the Integration of Fisheries and Tourism (Kesennuma Fishing Port, Miyagi Prefecture)

In the face of the significantly falling number of tourists due to having been struck by the Great East Japan Earthquake, despite approx. 2.5 million visitors per year prior to the earthquake, Kesennuma City in Miyagi Prefecture decided to integrate fisheries and tourism in 2012 and, in the reconstruction of fisheries-related facilities such as fishing ports, developed facilities intended for tourism purposes in addition to fisheries-related purposes. The newly built fish market has a space for tours, a cooking studio to drive forward the promotion of eating fish, and a facility for dissemination of information on fisheries that exhibits an installation reproducing the cabin of a deep-sea fishing vessel. Additionally, Umino-ichi, which is a complex facility built before the earthquake and containing shopping places, an ice aquarium exhibiting approx. 450 fish species, and "Shark Museum," has been redeveloped. In addition, the program "Choi Nozoki Kesennuma" (meaning a "short glimpse of Kesennuma") provides visitors with opportunities to tour and experience the workplaces of businesses related to the fisheries industry, including an ice shop, a store selling packing materials such as fish boxes, and a fishing gear shop.

Furthermore, in anticipation of the relocation of the city hall building located in an area at the back of Kesennuma Bay, city development has been underway to create a lively atmosphere in the area. As part of this process, social experiments were conducted in 2022, involving activities using water bicycles and hand paddle boats in the waters of the fishing port, as well as the operation of an on-the-sea restaurant using a sightseeing boat, and initiatives have been undertaken for their commercialization.



Umino-ichi



Tour and experience at a fishing gear shop



Activity using hand paddle boats

# Case Example

# Collaboration with Tourism with Whales as Its Core (Taiji Fishing Port, Wakayama Prefecture)

Taiji Town in Wakayama Prefecture is the birthplace of Japan's traditional whaling industry, and fisheries including whaling play a central role in the town. For the purpose of developing the entire town into a natural park centered on whales, the Town Development Concept for Taiji Town with Whales and Natural Park was formulated in 2006, based on which the Moriura Bay Concept for the Sea of Whales is promoted in Moriura Bay, which is located at the gateway to the town. Under this concept, partition nets have been installed at the bay mouth, and small cetaceans are farm-raised or raised free-range within sea surface preserves or within the bay. This allows for close contact with whales through sea kayaking and other marine recreational activities operated by the Taiji Town Fishery Cooperative Association. In addition, "Michi no Eki Taiji" was established at the entrance of the town leading to the Moriura Bay area, and the fishery cooperative association operates it managing offerings of food menus featuring local fish and fishery products such as whale meat and the sale of such fish and fishery products, and organizes morning markets selling fresh fish and other relevant products.

The town's initiatives have effectively increased the consumption of local fish and fishery products and attracted tourists, creating employment and income in the area.



Sea kayaking

(Image source: Taiji Whale Museum)



Michi no Eki Taiji

- While it has become difficult to secure stable catches in fisheries due to changes in the marine environment among other reasons, aquaculture
  has the advantage of being able to produce in a planned and stable manner.
- Initiatives to combine aquaculture and other types of business, such as an initiative to treat fish and shellfish produced through aquaculture as new specialty products or to provide such fish and shellfish to factory-direct stores and eating places operated in the fishing community, are expected to be taken.
- Furthermore, there are other initiatives implemented with the aim of increasing fisheries resources by utilizing the sites, water areas, etc., of fishing ports for juvenile fish production, intermediate cultivation, seaweed bed creation, fish protection and growth, etc.



# Land-based Aquaculture of Suji-Aonori (Enteromorpha Prolifera) by Utilizing an Unused Fishing Port Site (Hashiri Fishing Port, Hiroshima Prefecture)

The Hashiri Fishing Port in Hashirijima, Fukuyama City, Hiroshima Prefecture used to boast the largest volume of catch in the prefecture and thrived on the processing of Japanese anchovy and nori seaweed in the past. However, the catch volume and the number of fishers have been declining, and the processing site continues to be underutilized.

Meanwhile, Mishima Foods Co., Ltd., a food manufacturer in the prefecture, was facing an issue concerning the procurement of raw materials due to a record low catch of suji-aonori for some years starting around 2017, which had caused the manufacturer to temporarily suspend its sale.

Under these circumstances, Hiroshima Prefecture publicly solicited a business operator to use the site. As a result, Mishima Foods installed land-based aquaculture facilities on the site and began land-based aquaculture of suji-aonori in June 2020.

This business has achieved the systematic production of suji-aonori, leading to an increase in its production volume, has created 18 new jobs despite the fact that employment is usually scarce in such a remote island area, and has increased the income of the fishing port from facility usage fees since the previously idle fishing port site has currently been utilized.



Land-based aquaculture facilities (indoor facilities)



Land-based aquaculture facilities (outdoor tanks)



# Creation of a Seaweed Bed in Fishing Port Waters Generated Through the Development of Breakwaters (Motoineppu Fishing Port, Hokkaido Prefecture)

The Motoineppu Fishing Port in Oumu Town, Hokkaido Prefecture is a production base for shellfish and alga harvesting for kelp, sea urchins, etc., with the small-scale trawl fishery of scallops being the main operation. The fishing port was facing an issue that the level of calmness in the port deteriorated, hindering fishery operations and making it difficult for outside vessels, etc., to evacuate. In addition, the fishing port also had a challenge related to shellfish and alga harvesting that the burden on fishers was great because they had to operate in distant fishing grounds. For that reason, the construction of breakwaters (double breakwaters) and the expansion of the port's waters were implemented as the measures to ensure calm waters in the port under the plan formulated in 2002.

In the construction of double breakwaters, crushed rocks generated through dredging in the port were used for the calm area in between the breakwater areas with the intention to effectively utilize the calm area as a seaweed bed for continuous gathering of kelp and sea urchins. The construction of double breakwaters has increased the catch volume of kelp and sea urchins, has led to improved meat content of sea urchins, and has enhanced the safety of fishing operations.



Condition after the construction of double breakwaters



State of kelp-related operations

## (3) Policies, etc., for UMIGYO Promotion

- In the promotion of UMIGYO, support has been provided, among other matters, for activities directly related to UMIGYO (e.g., the development of local human resources, research necessary for the development of UMIGYO, and initiatives to improve local resources as attractive points for tourism), for the restructuring and orderly organization of fishing port facilities and sites, and for the development of facilities for promotion of local fish and fishery products, etc..
- A "UMIGYO Support Package," which compiles policies relevant to the engagement in UMIGYO, has been prepared.
- "UMIGYO Promotion Main Consultation Service (UMIGYO Promotion Concierge)," which is the contact point to provide advice in relation to UMIGYO promotion in a comprehensive manner to people engaged in such promotion, has been set up.
- Among other materials, a "Collection of Initiatives Implemented for UMIGYO" and a "Guidebook for Effective Utilization of Fishing Port Facilities" have been prepared and published.

#### Main Support Programs of the MAFF for Promotion of UMIGYO

#### (1) Research, etc., necessary for the development of UMIGYO

- O Grant for Seashore Revitalization and Growth Promotion (Support Program for Fisheries Industry Enhancement) [out of 2 billion yen]
- Information dissemination, etc., to promote the effectiveness of UMIGYO support facilities, etc., and relevant
- Development, etc., of local human resources for community revitalization, and relevant research
- Planning and research for vitalization of interaction in fishing communities, inviting outside human resources
- O Fishing Port Function Enhancement Program [out of 450 million yen]
- Research on the restructuring and assignment of fishing port functions and on the effective use thereof, and formulation of a general development plan

#### (2) Support for activities related to UMIGYO

- O Grant for Farming/Mountainous/Fishing Community Promotion (Program for Promotion of Innovation Originating from Farming/Mountainous/Fishing Communities) [out of 8.39 billion yen]
- New product development, sales channel development, or other initiatives based on cooperation among farmers/forestry workers/fishers, traders/manufacturers, etc
- Initiatives [enhancement], etc. for the development of a seaside stay business implementation system or the strengthening of management thereof, or for brushing up local resources as attractive contents for tourism
- O Support Program to Strengthen Fishery Cooperative Association Management Base (out of 260 million
- Dispatch of consultants and provision of financial support to fishery cooperative associations engaged in UMIGYO
- O Grant for Supporting the Revitalization of Remote Island Fisheries [out of 1.352 billion yen]
- Initiatives to be jointly implemented by fishing communities in remote island areas for the revitalization of their
- Initiatives to promote employment opportunities through fisheries and UMIGYO in specified populated remote territorial island areas

(3) Development of an environment for fishing port utilization, and development of UMIGYO support facilities

- O Fisheries Infrastructure Improvement Program [out of 73 billion yen]
- Restructuring, orderly arrangement, etc., of fishing port facilities and sites
- O Grant for Seashore Revitalization and Growth Promotion (Support Program for Fisheries Industry Enhancement) [out of 2 billion yen]
- Development of facilities for promotion of local fish and fishery products, fishery experience facilities, etc.
- Development of simple mooring facilities for vessels other than fishing vessels overground storage facilities, etc.
- O Grant for Farming/Mountainous/Fishing Community Promotion (Program for Improvement of Innovation Originating from Farming/Mountainous/Fishing Communities) [out of 8.39 billion yen]
- Development of processing facilities, sales promotion facilities (for sale/storage). etc., for agricultural, forestry, and fishery products
- Development of facilities, rest areas, etc., for fishing, shellfish gathering, and playing on the seashore
- Development of mooring facilities, propagation facilities, etc., for recreational fishing, diving, etc.
- Development, etc., of facilities necessary for promotion of seaside stays, such as accommodation facilities utilizing old Japanese houses and facilities for experiencing agriculture/forestry/fisheries and farming/mountainous/fishing communities

#### **UMIGYO Support Package**

- In cooperation with relevant ministries and agencies, a "UMIGYO Support Package," which compiles policies relevant to the engagement in UMIGYO, has been prepared as a reference for private companies and fishery cooperative associations engaged in UMIGYO and for local governments, etc., promoting UMIGYO (prepared in December 2022 and updated in June 2023)
- The package is divided into the following categories according to the types of support required: "research necessary for UMIGYO development," "introduction, creation, and continuation of business," "management improvement and human resource development," and "digitalization."
- A contact point for general consultation has been set up in the Fisheries Agency to confirm with relevant government ministries and agencies depending on the subject matter of consultation and thereby provide a centralized response.

# Section 3 Future Developments in UMIGYO

# (1) Points of UMIGYO Promotion

- o In order to make sure that wide-ranging economic ripple effects can be produced under agreement among stakeholders, it is important for each initiative to involve many people of concern, such as by establishing a council consisting of those concerned with fisheries, government officials, and, if necessary, private companies in and outside of the community.
- For the purposes of improving the income of fishers and other relevant parties and creating local employment, it is necessary to create a practical and sustainable UMIGYO plan based on the future vision of the community with the roles of people of concern appropriately assigned among them.
- It is important to ensure that each initiative seeks to make the best use of the fishing port and local resources with the understanding and cooperation of the local community by optimizing the scale of facilities in accordance with the actual condition of fisheries in the community and improving the environment for utilization of the fishing port through the restructuring and orderly arrangement of fishing port facilities and site.
- o For attracting people to fishing communities, it is necessary to ensure sufficient safety for visitors to those communities.

# (2) Upcoming Initiatives to Promote UMIGYO

- o In order to ensure that parties concerned with fisheries can launch UMIGYO-related initiatives in their areas so as to move forward toward achieving the goal of reaching 500 initiatives newly implemented for UMIGYO, etc. in fishing ports, initiatives to disseminate and raise awareness about UMIGYO will be promoted, including the creation of a framework for cooperation with local governments and private companies, etc., the creation of opportunities for children to come into contact with the sea, the dissemination of the concept and appeal of UMIGYO to people in and outside of Japan, and the fulfillment of diversified consumer needs.
- The Fisheries Agency solicited districts to take part in "Districts to Engage in Promoting UMIGYO" and determined 54 districts in March 2024. From this time onward, the Fisheries Agency will individually advise those districts, provide them with information on the promotion of UMIGYO, and promote, on a demonstrative basis, the formulation of a new UMIGYO initiative plan through the establishment and operation of a council consisting of people of concern.
- o Information will be shared with a wide range of people of concern interested in UMIGYO, such as local governments, persons related to fishery cooperative associations or fisheries, and private companies and organizations, and excellent examples of initiatives for UMIGYO will be disseminated and horizontally deployed by, for example, holding meetings of the "National Council for UMIGYO Promotion" attended by such people of concern.
- o In accordance with the Act on Development of Fishing Ports and Grounds, which was amended in 2023 to allow, among other matters, the long-term rental of fishing port facilities and the long-term exclusive use of fishing port waters, etc., on the premise that no obstruction would be caused to the use of fishing operations, initiatives for UMIGYO that sufficiently utilize fishing ports, such as the diffusion of projects utilizing fishing port facilities, will be promoted.
- In order to ensure that visitors to fishing communities can use fishing ports with reassuring, the earthquake-proofing and tsunami-proofing of fishing port facilities and the development of evacuation routes will be promoted among other matters to facilitate the implementation of measures, etc., for the disaster prevention and disaster mitigation of fishing ports and fishing communities, in preparation for massive damage caused by natural disasters that are becoming more devastating and more frequent, such as large-scale earthquakes and tsunamis. In addition, since infrastructures such as fishing port facilities are aging, measures oriented toward preventive maintenance will be promoted to address this issue of aging.

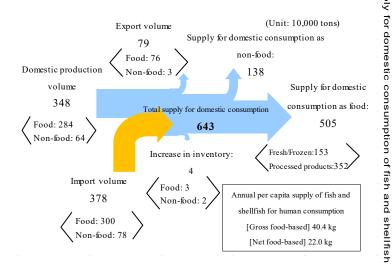
# Chapter 1 Trends in the Supply-and-Demand and Consumption of Fish and Fishery Products in Japan

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

- The total supply of domestic consumption of fish and shellfish was estimated at 6.43 million tons for FY2022 (converted on a fresh-fish basis, estimate), of which 5.05 million tons (79%) were for human consumption (food) and 1.38 million tons (21%) for feed and fertilizer (non-food).
- The self-sufficiency rate of fish and shellfish in FY2022 was 56% (estimate).

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

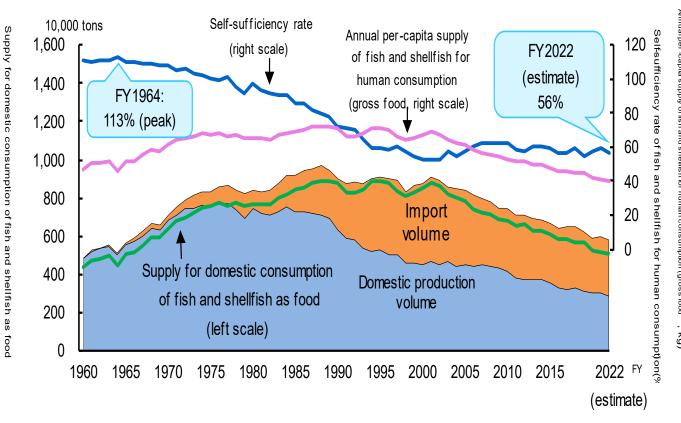
#### FY2022 (Estimates)



#### 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 the conversion of a volume involving different product forms according to items, such as import volume and export volume, 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 shellfish 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).

#### 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







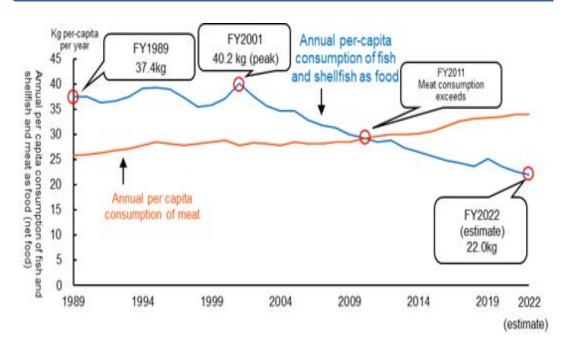


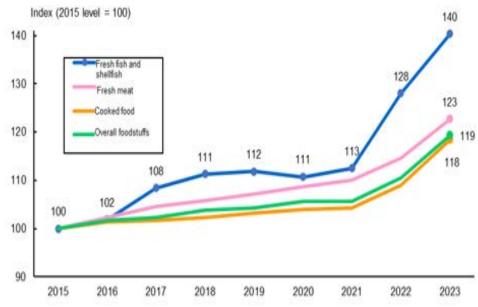
#### i. Trends in the Consumption of Fish and Fishery Products

- Annual per-capita consumption of fish and shellfish (net food base) has been on a decreasing trend from the peak of 40.2 kg in FY2001 and lower than annual per-capita meat consumption since FY2011. It was 22.0 kg (estimate) in FY2022.
- In 2023, the annual per-capita purchase volume of fresh fish and shellfish declined by 4% from the previous year. Partly due to the impact of the increased prices of fish and fishery product imports, the Consumer Price Index for fresh fish and shellfish in the same year increased by 9% from the previous year.
- 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



#### **Trends in the Consumer Price Index for Foodstuffs**





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

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

#### ii. Initiatives for Expansion of Consumption of Fish and Fishery Products / Health Benefits 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)," for the promotion of public and private initiatives for expansion of consumption of fish and shellfish. More than 800 fish day supporting members implemented various initiatives to expand the consumption of fish and fishery products, such as the sale of little-used/unused fish by mass retailers and the organizing of domestic natural fish fairs by restaurants, etc.
- o In addition to Sakana-kun, the ambassador of the fish day, six fish-loving personalities from among those belonging to "Hello! Project" have been appointed as members of the fish day supporting team to disseminate information on the promotion of fish-eating.
- The Fisheries Agency has supported initiatives for the development/demonstration of highly convenient products, provision methods, etc., as well as initiatives for the establishment of value chains based on cooperation among parties involved in production, processing, distribution, and sale, such as initiatives to improve distribution, reduce costs, or achieve high added value.
- In order to establish the habit of fish-eating from an early age, it is important to create opportunities to develop familiarity with fish and fishery products through school lunches, etc. Furthermore, initiatives to realize local production for local consumption have been promoted in school lunches.
- Docosahexaenoic acid (DHA) and icosapentaenoic acid (IPA), which are omega-3 polyunsaturated fatty acids, abundant in the fat of fish meat and that of whale meat, have effects such as reducing LDL cholesterol and neutral fats. In addition, DHA is important for the development and function maintenance of the brain, etc.
- Fish protein is characterized not only as being a high-quality protein containing a good balance of the nine amino acids essential for human life, but also as being easily digestible and taken into the body compared to soy protein and milk protein.

domestic production volume.

Production volume and import volume are estimated based on statistics an



Appointment of the fish day supporting team

# - Antioxidant action - Intestinal regulation action - Reduction of LDL cholesterol - Enhancement of the functions of the functions of the heart and liver - Recovery in vision - Recovery in vision - Prevention, improvement, etc., of limprovement. - Immune function improvement - Intestinal regulation action - Intestinal regulation action - Immune function improvement - Prevention, improvement, etc., of limprovement - Stimulation of insulin secretion etc.

Source: Prepared by the Fisheries Agency, based on references such as "Fisheries Handbook, Completely Revised" (2012; edited by Kazuo Shima, Furnitake Seki, Masachika Maeda, Shingo Kimura, Hiroki Saeki, Kazumi Sakuramoto, Yoshimi Suenaga, Nagano Akira, Tsutomu Morinaga, Nobuyuki Yagi, and Hideaki Yamanaka) and "Nutritional Science of Aquatic Food - Basics to Humans-" (2004; edited by Hiramitsu Suzuki, Shun Wada, and Masayo Miura)

#### (3) Initiatives to Ensure Information Provision to Consumers and to Protect Intellectual Property







- There are various marine eco-labels around the world that certify resource management and environmental initiatives. 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 disclosure of notified information under the system for food with function claims, and geographical indication (GI) protection system.

#### Main Marine Eco-Label Certificates Used in Japan

Aquaculture

# MSC Certificate <UK> [Number of certificates in Japan] 26 fisher organizations 26 fisher organizations - Scallops (Hokkaido Pref.) - Skipjack (Miyagi and Shizuoka prefs.) - Albacore (Miyagi and Shizuoka prefs.) - Oysters (Okayama Pref.), etc. 370 enterprises (distributors and processors) ASC Certificate <Netherlands> [Number of certificates in Japan] 18 aquaculture organizations (48 fish

- Oysters (Miyagi Pref.)

Kagoshimaprefs)

\* Since April 1, 2023, the definition of the certificate unit has been changed. (Page 12 of ASC Newsletter, March Issue: https://jp.aseaqua.org/newsletter/

farms)

<Japan>
[Number of certificates in Japan]
24 fisher organizations

- Salmon (Hokkaido Pref.)
- Chub mackerel, spotted mackerel (Fukushima Pref.)
- Shijimi freshwater clams (Aomori Pref.)
- Red queen crab (Tottori Pref.), etc.

#### 64 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.

156 enterprises (distributors and processors)

#### MEL Certificate



#### **Examples of GI-registered products**





Nagasaki Karasumi

Hamanaka Youshoku Uni



Awajishima 3nen Torahugu

- Japanese yellowtail (Miyazaki, Oita, and

- Purplish amberjack (Kagoshima Pref.),

194 enterprises (distributors and processors)

<sup>\*</sup> The number of certificates is that as of March 31, 2024 (according to the Fisheries Agency).

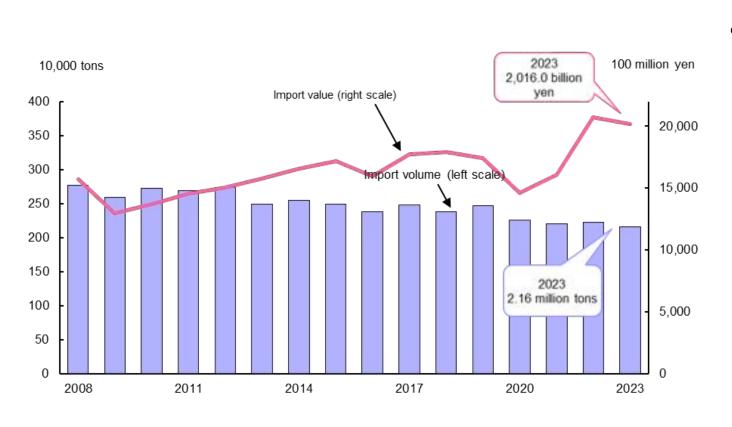
# (4) Trends in the Trade of Fish and Fishery Products

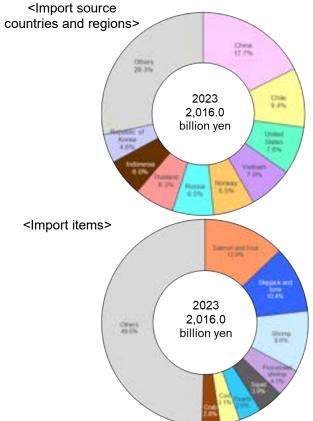


#### i. Trends in Importation of Fish and Fishery Products

- The import volume of fish and fishery products (on a product weight basis) decreased by 3% from the previous year to 2.16 million tons in 2023.
   The import value decreased by 3% from the previous year to 2,016.0 billion yen.
- Major import source countries/regions are China, Chile, and the United States. 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





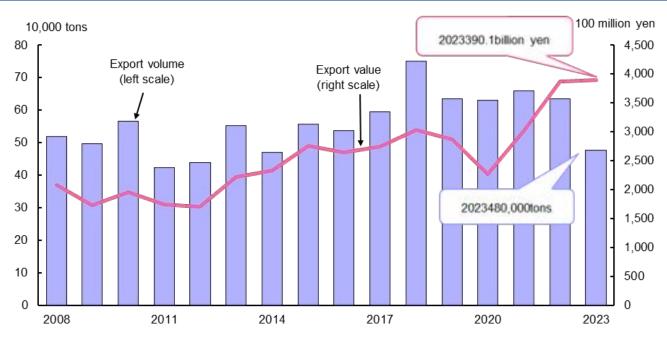
Source: Prepared by the Fisheries Agency, based on the Foreign Trade Statistics (the Ministry of Finance)

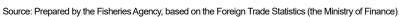
Share in the total import value of agricultural, forestry, and fishery products and food: 16%

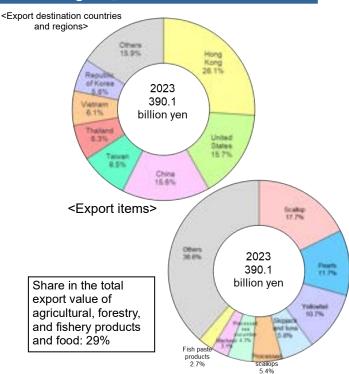
#### ii. Trends in Export of Fish and Fishery Products

- The export volume of fish and fishery products (on a product weight basis) decreased by 25% from the previous year to 0.48 million tons in 2023.
   The export value increased by 1% from the previous year to 390.1 billion yen.
- Major export destinations are Hong Kong, the United States, and China. Although the value of export to China had accounted for 22% of the total
  export value in 2022, this percentage decreased to 16% in 2023 due to China's suspension of import of fish and fishery products from all of the
  prefectures of Japan after the commencement of discharge of ALPS treated water into the sea on August 24, 2023.
- Major export items are scallops, pearls, and yellowtail in terms of export value. Although the export ratio of scallops to China had previously exceeded 50%, its ratio to the total export value declined.
- The target for export of agricultural, forestry, and fishery products and food 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 Nishikigoi.
- o In light of the tightening of import restrictions by China, Hong Kong, etc., the diversification of export destination countries and regions has been supported.

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





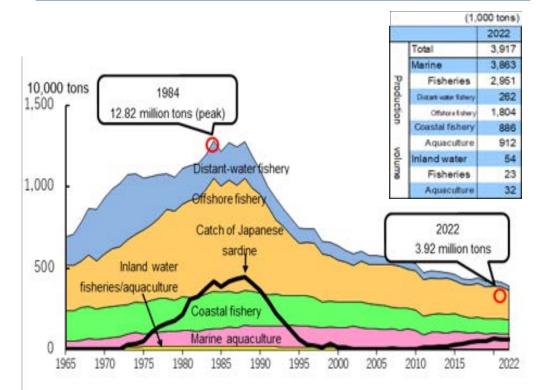


# **Chapter 2 Trends in Japan's Fisheries**

# (1) Trends in Domestic Fisheries and Aquaculture Production

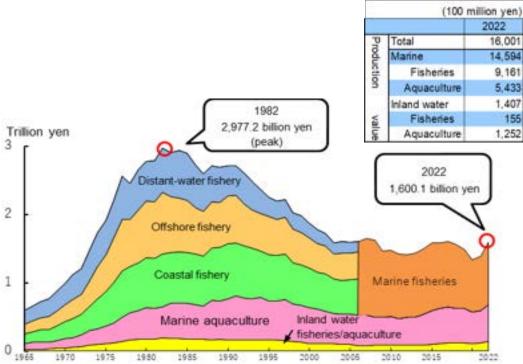
- The volume of domestic fisheries and aquaculture production decreased by 240,000 tons from the previous year to 3.92 million tons in 2022, of which that of marine fisheries decreased by 230,000 tons from the previous year to 2.95 million tons. In particular, the volume of mackerel, skipjack, etc. decreased. The volume of marine aquaculture decreased by 10,000 tons to 0.91 million tons. The volume of inland water fisheries and aquaculture increased by 2,000 tons to 50,000 tons.
- The production value of domestic fisheries and aquaculture increased by 205.8 billion yen from the previous year to 1,600.1 billion yen in 2022, of which that of marine fisheries increased by 114.1 billion yen to 916.1 billion yen, that of marine aquaculture increased by 74.9 billion yen to 543.3 billion yen, and that of inland water fisheries and aquaculture increased by 16.8 billion yen to 140.7 billion yen.

#### Trends in the Production Volume of Fisheries and Aquaculture



# 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," or "coastal fishery" is added up.

#### Trends in the Production Value of Fisheries and Aquaculture



Source: Prepared by the Fisheries Agency, based on the Fishery 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 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

- The average fishing income of private management bodies engaged in coastal fisheries using vessels increased by 560,000 yen from the previous year to 2.52 million yen in 2022. The business income including non-fishing income in the same year was 2.78 million yen. In the same year, the average fishing income of private management bodies (maritime fisheries) whose core fishery workers were aged under 65 years was 5.43 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 2.73 million yen in FY2022.
- Fuel oil prices remain at high levels with unstable fluctuations due to the impact of the Russia-Ukraine situation, rapid yen depreciation, etc., in addition to a drastic increase in fuel oil prices following, among other factors, 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 supporting the Fishery Management Safety Net Construction Project and fishers' introduction of energy-saving devices.

#### **Trends in Management of Private Trends in Fuel Oil Prices** (Unit: 1,000 yen) <Aged under 65 years> <Coastal fishery by fishing vessels> August 2008 2021 2022 2021 2022 Yen/L 124.6 yen/L March 2024 102.3 yen/L 140 Business income 2,168 2,778 4,308 6,005 July 2008 Fishing income 1,964 2,522 3,861 5,428 120 88.7yen/L Fishing revenue 6,235 7,138 22,302 22,893 Heaw oil price 1,166 2,560 2,345 100 823 (Class A) Fishing expenditure 4,271 (100.0)4,616 (100.0)18,442 (100.0) 17,466 (100.0) 80 (28.8)531 (12.4)608 (13.2)4,792 (26.0)5,038 Employee wages 339 (7.9)373 (8.1)1,462 (7.9)1,002 (5.7)60 397 (9.3)434 (9.4)1,404 (7.6)1,200 (6.9)Repair costs February 2024 40 (15.6)748 (16.2)3,139 (17.0) 2,882 (16.5)Oil costs 668 76.1 yen/L Crude oil price Selling charges 375 (8.8)442 (9.6)1,176 (6.4)1,232 (7.1)20 1,907 Depreciation 678 (15.9)676 (14.6)(10.3)1,858 (10.6)1,335 Others 1,282 (30.0)(28.9)4,562 (24.7) 4,253 (24.4)2024 2007 2009 2011 2013 2015 2017 2019 2021 Non-fishing income 204 256 447 577

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 with outboard motors or powered fishing vessels of less than 10 lons 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 Report on Fishery Management

2) The category "Aged under 65 years" refers to those private management bodies (maritime fisheries) whose core fishery workers were aged under 65 years, and the figures for this category are weighted-averaged using the number of private management bodies according to age groups 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 (counted based on reclassified items).

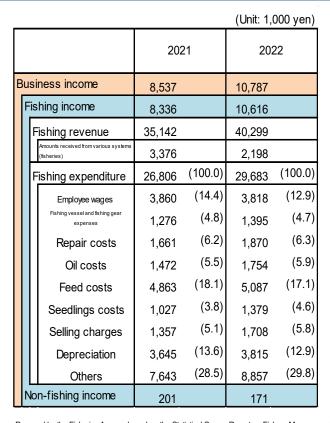
Source: Prepared by the Fisheries Agency

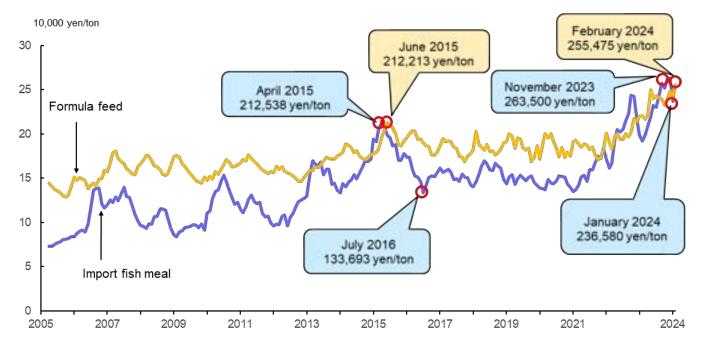
#### ii. Trends in Management of Aquaculture

- The average fishing income of private management bodies engaged in marine aquaculture increased by 2.28 million yen from the previous year to 10.62 million yen in 2022.
- While the import price of fish meal had been on the increase with its demand growing in developing countries, it has further increased since December 2020 owing to, among other factors, the recovery of economic activities from their global-scale stagnation attributable to COVID-19 infections. In 2023, an additional rise in the price was also caused by the El Nino phenomenon, etc.
- 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 Management of Private Management Bodies Engaged in Aquaculture

#### Trends in the Prices of Formula Feed and Fish Meal



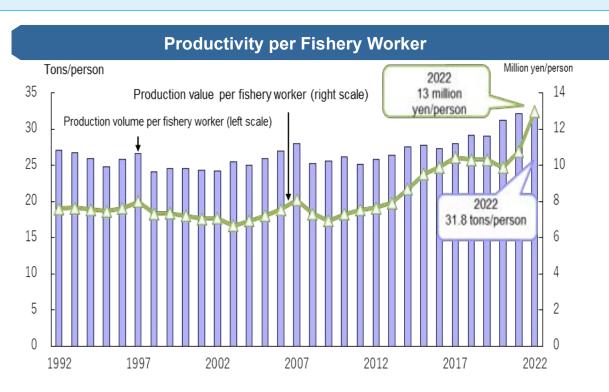


Source: Prepared by the Fisheries Agency, based on the Statistical Survey Report on Fishery Management and the Census of Fisheries (the Ministry of Agriculture, Forestry and Fisheries)

Note: The figures 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 Report on Fishery Management. 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. Improvement in the Productivity and Income of Fisheries and Aquaculture

- The production value of fisheries and aquaculture per fishery worker in Japan was 13.00 million yen.
- The "Seashore Revitalization Plan," under which each district considers and implements measures aimed at revitalizing its fishing communities
  by increasing the income of fishers by at least 10% in five years, has been implemented in 588 districts as of the end of FY2023.
- As of the end of FY2023, the "Wide-Area Seashore Revitalization Plan," in which efforts are made to enhance wide-ranging competitiveness, has been implemented in 147 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.
- The "Comprehensive Strategy for the Transformation of Aquaculture Into a Growth Industry" was formulated in July 2020 to fully engage in the promotion of aquaculture with strategic aquaculture items set out and comprehensive strategies developed to cover processes from production to sale and export, and thereby switching to market-in type aquaculture has been promoted.



Example initiatives implemented under the Seashore Revitalization Plan by Konagai District, Isahaya City, Nagasaki Prefecture





**Oyster grilling hut** 

Commercialized oyster ekiben (train lunch)

Large circular sinking/floating preserve for a large-scale offshore aquaculture system



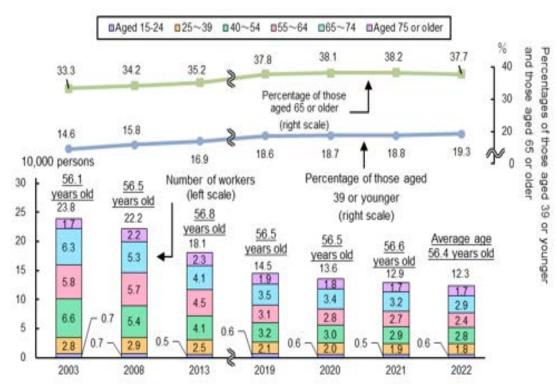
Source: Prepared by the Fisheries Agency, based on the Census of Fisheries (number of fishery workers for 1993, 1998, 2003, 2008, 2013, and 2018), the Survey on Movement of Fishery Structure (number of fishery workers in 2019 and beyond), the Survey of Persons Engaged in Fishery (number of fishery workers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

# (3) Trends in Workers in Fisheries



- o The number of fishery workers has been consistently declining, reaching 123,100 in 2022.
- The number of new fishery workers was 1,691 in FY2022. The government, etc., provides support for initiatives that seek to secure new fishery workers, such as employment counseling sessions, internship, and long-term training on fishery operation sites.

#### **Trends in the Number of Fishery Workers**



Sources: Census of Fisheries (2003, 2008, and 2013) and Survey on Movement of Fishery Structure (2019 and beyond) (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.
- 3) The figures for "Average age" are estimates based on the median of each of the age groups (for the age group "Aged 75 or older," "80" is used) according to the Survey on Movement of Fishery Structure and the Census of Fisheries.

#### **Trends in the Number of New Fishery Workers**



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





Sessions to encourage high school students to work in fisheries (guidance on fisheries)

# (4) Trends in Fishery Working Environments

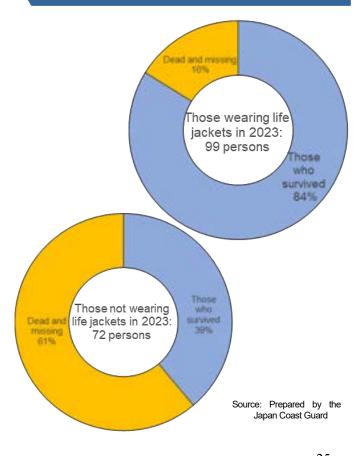
- In 2023, the number of fishing vessels involved in marine accidents was 408, and the number of dead and missing reported in those accidents was 23.
- Excluding those related to marine accidents, 62 fishers fell overboard in 2023,\* 38 of whom were dead or missing.
   (\*: The number of persons who fell overboard here 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 for the survival of those who fall overboard (an approximately 2.2 times better survival rate). In principle, all persons on board outside the cabin are required to wear life jackets.



#### Persons Vessels 1.000 100 Number of fishing vessels involved in marine accidents (left scale) Number of dead and missing (right scale) 500 50 23 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

Source: Prepared by the Japan Coast Guard

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



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





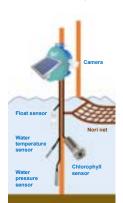


- Development, introduction, and advancement of technologies related to efficiency-related initiatives utilizing ICT, IoT, AI, and drones in each of the stock assessment, fisheries/aquaculture, and processing/distribution sectors are promoted in order to conduct highly precise stock assessment and improve profitability through personnel/labor saving, with the aim of developing the fisheries industry into a growing industry in the face of its current condition involving issues such as the falling production volumes of fisheries and aquaculture and the decreasing number of fishery workers.
- The "Guidelines for Data Utilization in the Fisheries Sector" was formulated to promote the utilization of data.
- With the aim of creating "digital fisheries strategy bases" to utilize digital technologies in each of the stages from fish catching to distribution, processing, sale, and consumption in the entire region as one, 3 districts were selected as models in 2023.

### Case Example

# Development of an Oceanic Observation System for Aquaculture ("Umilog®") and Preparation of a Manual

In Mie Prefecture, the Mie Prefecture Fisheries Research Institute, Toba College of the National Institute of Technology, and a company in the prefecture jointly developed a monitoring system for IoT-based oceanic observation (named "UmiLog®"), which enables real-time monitoring of elements related to fishing grounds. This system enables information collected by oceanic observation devices installed in kuro-nori (black laver) farms, such as the water temperature and the chlorophyll concentration, to be viewed with a smartphone application. With such information, for example, the nori farmer determines a farming start date and predicts the decoloring of cultured nori seaweed on the basis of plankton growth information. In this project, a "Manual for Utilization of IoT Observation Devices in Kuro-Nori Cultivation" was formulated for the purpose of enabling farmers to more effectively utilize the system.



Since marine observation devices are lightweight and easy to maintain, these devices are installed and maintained by farmers themselves.

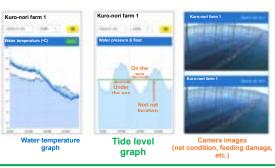


Image of Umilog®

# Case Example

# Model District for Digital Fisheries Strategy Bases (Senshu Region, Osaka Prefecture)

In Senshu Region of Osaka Prefecture, the boat seine fishery of whitebait is conducted with Osaka Bay as its main fishing ground. In the region, the introduction of ICT into the post-landing bidding system has been promoted as an initiative for the digitalization of the fisheries industry. Digitalized bidding information is transmitted to fishers in operation through SNSs.

With real-time bidding information made available for open access, individual fishers have changed their fishing operations such that the volume of their catches is maintained at an appropriate level according to market prices. This has enabled them to reduce operating costs, etc. and to reform their operations such that they are more conscious, in their operations, of improving fish prices by maintaining quality including freshness, leading to the realization of an operational system of a four-day workweek. Such improved operational efficiency and fishing income, among other relevant factors, have helped secure new fishery workers of younger generations.



Digitalized bidding system



Input screen for digitalized bidding information

# (6) Trends in Land-Based Aquaculture

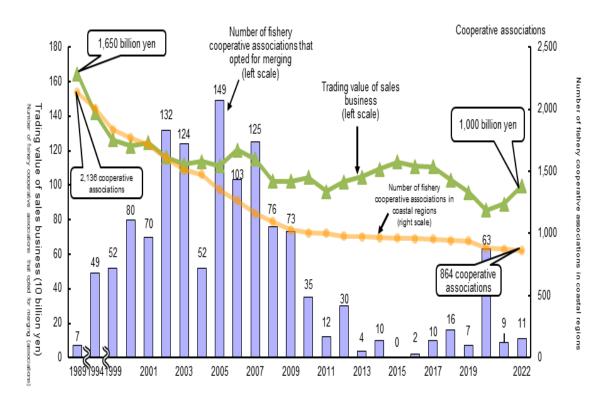
Since April 2023, land-based aquaculture is classified as aquaculture requiring notification, and the number of businesses notified as such is 662 as of January 1, 2024.

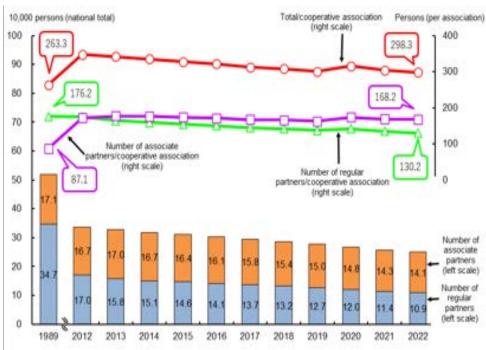
# (7) Trends in Fishery Cooperative Associations

- 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 fishery resources appropriately.
- The number of fishery cooperative associations (in coastal areas) as of the end of March 2023 was 864.
- 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 cooperative associations' business and management foundation through mergers and to further reinforce their sales business.



#### **Trends in the Number of Fishery Cooperative Association Partners**





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 Fishery Cooperative Associations (number of fishery cooperative associations that opted for mergers).

Source: Statistical Table of Fishery Cooperative Associations (the Fishery Agency)

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





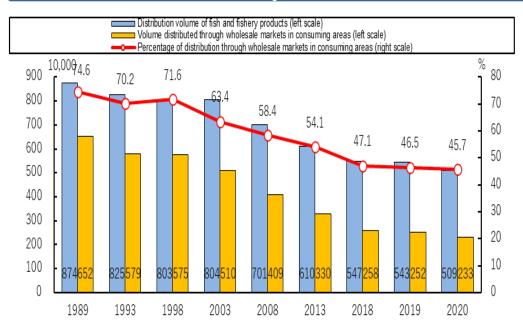




#### i. Trends in the Distribution of Fish and Fishery Products

- o 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)

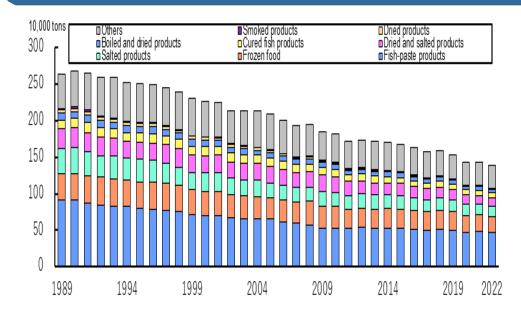
Notes: 1) Data for central wholesale markets are the data at the end of every fiscal year, whereas data for local wholesale markets are the data at the beginning of each fiscal year (up to FY2011) and at the end of each fiscal year (FY2012 and later).

2) The amended Wholesale Markét Act has been in force since June 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 m² for a market in a landing area or 200 m² 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 and HACCP Compliance

- Approx. 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.
- The lack of management vitality, shortage of employees, and difficulty in procuring raw materials are challenges for fishery processors, and support has been provided for initiatives such as the establishment of value chains that meet market needs through coordination of production, processing, distribution, and sale.
- When exporting fish and fishery products to the EU, the United States, etc., fishery processing facilities, etc., need to implement the HACCP (Hazard Analysis Critical Control Point) system and to conform to related facilities criteria, as required by the export destination countries and regions. 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 FY2023, in the fishery processing industry, etc., the number of facilities certified to export to the EU was 119, and the number of facilities certified to export to the United States was 589.

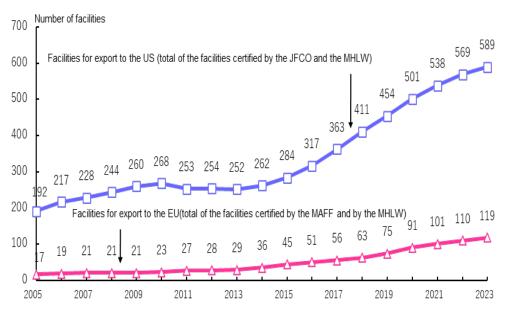
#### Trends in Production Volume of Processed Fishery Products for Human Consumption



Sources: 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.

#### 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

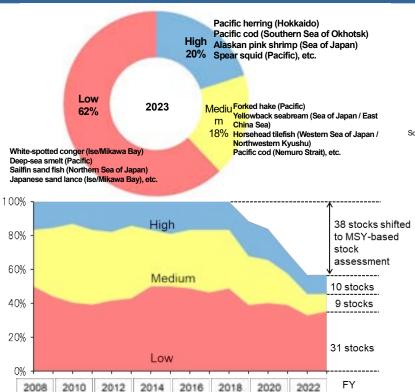
# Chapter 3 Trends in Fisheries Resources and the Fishing Ground Environment

# (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 amended Fishery Act enforced in 2020, the number of species subject to stock assessment was expanded from 50 in FY2018 to 192 in FY2021.
- Among the species subject to stock assessment, the abundance and fishing intensity of 38 stocks of 22 species were estimated by FY 2023 for the purpose of achieving the MSY (Maximum Sustainable Yield).
- o For 50 stocks of 36 species, stock assessment was conducted with three levels of stock condition applied: high, medium, and low.

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



Source: Prepared by the Fisheries Agency, based on the Assessment of Fisheries Resources in the Waters Around Japan (the Fisheries Agency and Japan Fisheries Research and Education Agency)

Note: The number of species and stocks whose stock levels and trends were assessed was as follows.

FY2019: 80 stocks of 48 species excluding the 7 stocks of 4 species which were shifted to MSY-based stock assessment, such as mackerel

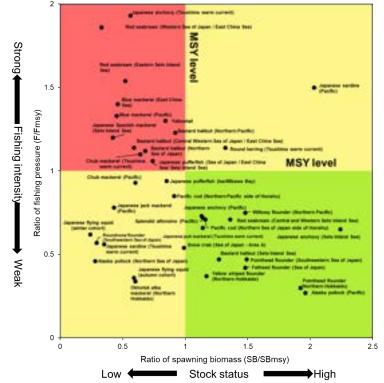
FY2020: 73 stocks of 45 species excluding the 14 stocks of 8 species which were shifted to MSY-based stock assessment, such as Japanese jack mackerel and Japanese sardine

FY2021: 61 stocks of 42 species excluding the 26 stocks of 17 species which were shifted to MSY-based stock assessment, such as Japanese anchovy and round herring

FY2022 and FY2023: 50 stocks of 36 species excluding the 38 stocks of 22 species which were shifted to MSY-based stock assessment, such as Japanese pufferfish and splendid alfonsino

From FY2020 onward, for 6 stocks of 2 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 Assessment of Fisheries Resources in the Waters Around Japan (the Fisheries Agency and Japan Fisheries Research and Education Agency)

# (2) Japan's Fisheries Resource Management

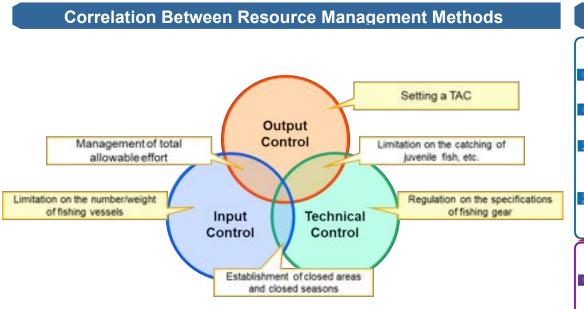


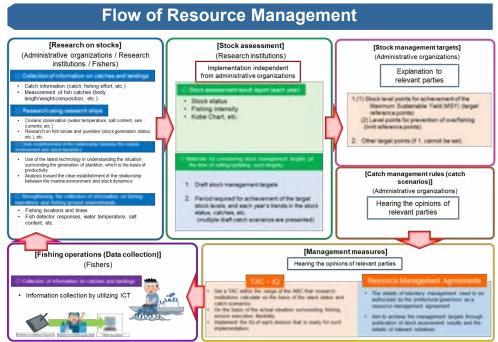




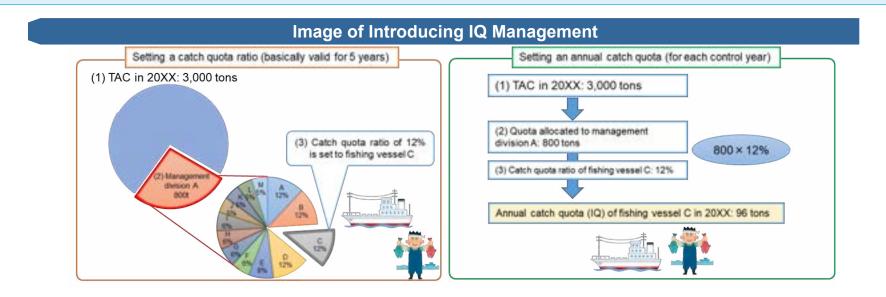
#### i. Promotion of the New Resource Management Based on the Amended Fishery Act

- Techniques for resource management are primarily classified into 1) input control, 2) technical control, and 3) output control. Under the amended Fishery Act, the objective of resource management is to achieve the level at/to which the stock status should be maintained or recovered in order to achieve the MSY, and TAC (Total Allowable Catch) should be used as a basic management method. In addition to the application of TACs, methods such as employing an operation period and restrictions on fishing gear are combined to appropriately implement resource management.
- Shellfish and algae harvesting, set-net fishing, aquaculture, and inland water fisheries are managed under fishery rights systems.
   Offshore and distant fisheries are managed on the basis of fishing permit systems.
- To establish a new resource management system, a "Roadmap for Promoting New Resource Management" was developed in 2020. With the aim of recovering catches to 4.44 million tons by FY2030, initiatives such as the following were set to be implemented by the end of FY2023: 1) expanding the fisheries species subject to stock assessment to about 200 species; 2) putting 80% of catches under TAC management; 3) introducing management based on IQs (individual quotas) to minister-licensed fisheries that mainly target, in principle, TAC species; and 4) shifting the current voluntary resource management by fishers (Resource Management Plans) to "Resource Management Agreements" based on the amended Fishery Act.
- For the achievement of the roadmap aim, in March 2024, a "New Roadmap for Promoting Resource Management" was developed and published, which indicates the specific processes to be implemented in FY2024 onward.





- The ratio of stocks subject to TAC management had been expanded to 65% on a catch basis as of the end of March 2024 owing to initiatives taken for its expansion, and the aim of such expansion is to start TAC management of 80% by FY2025.
- IQ management had been introduced to 11 fishing methods and stocks by the 2023 control year.
- The shift from Resource Management Plans to Resource Management Agreements was completed by the end of FY2023.



## ii. Pacific Bluefin Tuna Resource Management

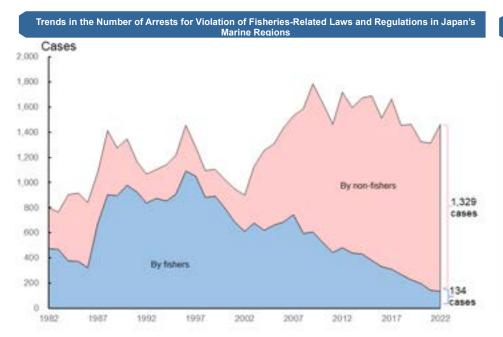
- For Pacific bluefin tuna, with agreement of the Western and Central Pacific Fisheries Commission (WCPFC), catch limits were set for large fish
  (30 kg or more) and small fish (less than 30 kg), and TACs were distributed among divisions controlled by the Minister and prefectures.
- For the 2022 control year onward, the distributed shares were reviewed in light of, among other matters, an increase in the catch limit for large fish determined in the 2021 annual meeting of the WCPFC.
- For appropriate volume control, the tightening of control of fishing and distribution, such as by individual management at the time of TAC reporting
  or by communicating/recording individual information at the time of transacting, is considered.
- Regarding recreational fishing, since June 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) Initiatives for Practical and Effective Resource Management

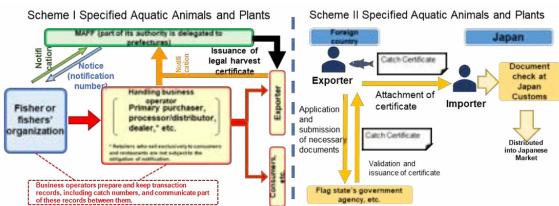


#### i. Prevention of Poaching and Fishery Control in Coastal Areas of Japan

- The nationwide number of arrests for poaching was 1,561 in 2022 (of which 1,527 were in coastal waters and 34 in inland waters). The number of poaching cases by non-fishers has significantly exceeded the number by fishers and has become more aggressive and cunning.
- Based on the amended Fishery Act, abalones, sea cucumbers, and juvenile eels, which have been subjected to malicious poaching, 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. Furthermore,
  the punishment under the Act has been made harsher.
- 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 relevant administrative organizations and communication of the catch numbers. For importation from abroad, among other procedures, the attachment of certificates, etc., issued by the flag state's 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,
   Pacific saury, Japanese sardine, and squid are designated as class II aquatic animals and plants, for which import control is in place.



#### Outline of the System for Proper Distribution of Fisheries Products



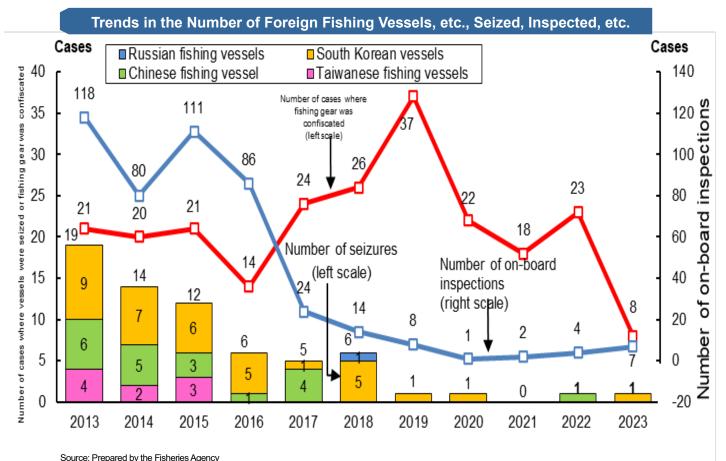
Note: There are penalties against violations of the obligations of notification, communication, recording of transactions, attachment of certificates for import/export, and others.

Source: Prepared by the Fisheries Agency

Note: The total in 2022 includes 64 unknown cases in addition to cases by fishers and those by non-fishers.

#### ii. Monitoring and Inspection of Foreign Fishing Vessels, etc.

- o In 2023, with respect to the results of the Fisheries Agency's inspections of foreign fishing vessels, etc., it conducted seven on-board inspections, seized one vessel, and had eight 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 2023, the Fisheries Agency warned 68 Chinese fishing vessels, etc., to leave from the Japanese EEZ.







Chinese fishing vessel (top) and North Korean fishing vessel (bottom) in waters around the Yamato Bank

## (4) Initiatives to Actively Enhance Fisheries Resources





- The release of juvenile fish has been implemented as part of resource management in accordance with the "8th Farming Fishery Basic Policy" formulated in July 2022.
- 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 so that these methods can respond to environmental changes.
- In order to protect and increase fisheries resources, the Fisheries Agency has developed protective and nursery reefs and mound reefs.

## (5) Trends in Fishing Ground Environments













- i. Preservation and Recovery of Seaweed Beds and Tidal Flats and Improvement of Fishing Ground Environments
- It is important to raise the productivity of the entire ecosystem by preserving and recovering functions of seaweed beds and tidal flats, and therefore the Fisheries Agency promotes comprehensive measures for the conservation and creation of seaweed beds and tidal flats by local governments.
- The growth of marine algae and the increase 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.
- o To rejuvenate the Ariake Sea, etc., measures are taken based on the Act on Special Measures Concerning Rejuvenation of the Ariake Sea, the Yatsushiro Sea, etc., to improve and conserve the marine environment and recover fisheries resources in these regions.
- o A red tide started appearing in the Yatsushiro Sea and Tachibana Bay in June to September 2023, causing damage to cultured fish, such as Japanese pufferfish, Japanese horse mackerel, red seabream, great amberjack, and yellowtail, in Kumamoto Prefecture, Nagasaki Prefecture, and Kagoshima Prefecture. Support was provided for the research, development, testing, etc., necessary in a radical reform of the aquaculture production structure.



Seaweed bed creation (installation condition of blocks on which marine algae can easily take root)



Preservation of seaweed beds (removal of se



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 changes to
  the distribution areas of Pacific saury and Japanese flying squid and a lower return rate of salmon, among other matters.
- As mitigation measures against climate change, initiatives toward carbon neutrality are also promoted in the fisheries sector, including the establishment of technologies related to the electrification of fishing vessels and the introduction of hydrogen fuel cells, etc., into fishing vessels, and exploring the potential of blue carbon as a carbon sink.
- As an adaptive measure for the aquaculture sector, the development of nori seaweed species with tolerance to high temperature for aquaculture is promoted.
- o In March to May 2023, "Study Sessions on Ideal Fisheries Adaptable to Changes in the Marine Environment" were held. On the basis of the outcome that the study sessions reached, measures to realize the following matters are to be promoted: 1) enhancement and sophistication of research on resources and stock assessment; 2) combination and switching of fishing methods and fishing target species; 3) concurrent engagement in aquaculture or switching thereto; and 4) processing, distribution, etc., that can accommodate changes and expansion of fisheries species.

#### Trends in Catches of Pacific Saury, Japanese Flying Squid, and Salmon

#### Pacific saury Japanese flying squid All the fisheries species (right scale) 10,000 tons 500 Total catch: Total catch: 450 3,713,000 tons 2.951.000 tons in 2014 in 2022 400 90 350 Total for the 3 fisheries 300 species: 548,000 tons 250 60 200 Total for the 3 fisheries species: 137,000 tons 150 in 2022 30 100 50. 2005 2022

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

Note: For Japanese flying squid, catches by distant water trawl fishery (southern waters) and squid jigging fishery from any region other than the waters of the Sea of Japan are not included.

# Outcome of Study Sessions on Ideal Fisheries Adaptable to Changes in the Marine Environment

#### **Direction of Actions (Summary)** (1) Promotion of information exchange with relevant countries such as the United States in connection with stock assessment, etc. (2) Enhancement of research methods such as the utilization of new equipment and the implementation of fishing vessel-based research to collect detailed. (3) Enhancement of research and assessment substance, such as by strengthening the collection of information on the distribution/migration and ecology of fisheries resources, and by promoting research on seaweed beds and tidal flats (4) Promotion of dialog through, for example, prompt communication of scientific information to fishers and carefully listening to information from fishers (1) Promotion of the addition and switching of fishing methods and fisheries species to accommodate resource fluctuations due to marine environment changes, the switching of set-net-fishing that relies on salmon, and the concurrent engagement in, or switching to, aqueculture (2) Consideration of institutional actions for such combination, etc., such as the method of operation of IQs in minister-icensed fisheries (3) Promotion of initiatives to encourage changes in management style, such as the demonstration of profitability by testing and research institutions and the facilitation of utilization of smart technology (1) Measures concerning feed, such as the domestic production of fish meal and the development of feed containing a low level of fish meal (2) Securing of juvenile fish, such as by promoting the diffusion of artificial juvenile fish (3) Determination of aquaculture business forms for concurrent engagement or switching, according to needs and costs (4) Improvement in productivity of existing equaculture (5) Measures concerning export and domestic distribution for aquaculture (1) Promotion of efficient distribution with smart technology and of the switching of raw materials for processing to fisheries species with good resource status, among other matters. (2) Strengthening of export measures which also cover new fisheries species, through promotion of initiatives such as the use of Marine Eco-Labels and construction of a supply chain that meets the needs of export destination countries. (3) Enhancement of the understanding of consumers about fisheries that give consideration to resource management, and the environment Development of systems and mechanisms to support fishers engaged in such combination, etc. (2) Securing and development of human resources, such as by promoting the acquisition of necessary knowledge and skills (3) Strengthening and enhancement of the system of fishery cooperative associations supporting such combination, etc.

#### iii. Plastic Litter in the Ocean

- 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 fishing gear made of environmentally friendly materials such as biodegradable plastics, and supporting the promotion of recycling fishing nets such as purse seine nets; 3) promoting the bringing-back of marine litter by fishers in cooperation with the Ministry of the Environment, prefectural governments, etc.; and 4) verifying the impact of microplastics on marine organisms, etc.





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

#### Case Example Teaming-up Between Fishers and Businesses for Resource Recycling of Waste Fishing Nets

The recycling of waste fishing nets, which was once considered a difficult task, has progressed at an accelerating pace, and purse seine fishery operators, net manufacturers, and other relevant parties have formed "TEAM Re:ism" to work beyond the borders of their respective industries and recycle waste fish nets such as by recycling them into new fishing nets or into pallets used on fishery operation sites. In addition to initiatives primarily led by fishers in Hokkaido and elsewhere to recycle fishing nets into fishing raincoats, bags, and other items, attention has also been drawn to the technology to produce solid fuel from fishing nets as an alternative to petroleum oil for thermal usage (thermal recycling).

It is hoped that, in the future, more stakeholders such as fishers, local governments, businesses, and local residents will cooperate with each other in realizing, among other matters, efficient collection and sorting of waste fishing nets and expansion of demand for recycled products, thereby further expanding initiatives for resource recycling in fisheries-related fields.



## (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 investigates and provides
  information on the appearance of such wildlife and supports the development of technologies for damage mitigation and vermin control activities, among other matters.
- o The amount of damage to fisheries caused by Steller sea lions was reduced from about 2 billion yen in FY2013 to about 0.8 billion yen in FY2022.
- Also, support has been provided in relation to initiatives 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

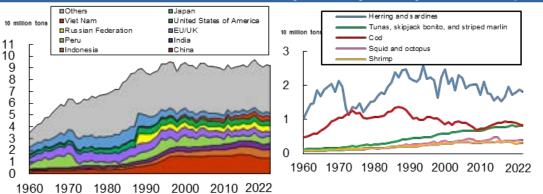
## (1) Production of World Fisheries and Aquaculture

- The production volume of world fisheries and aquaculture has been on the increase. While fishery catches have remained flat, aquaculture production has been significantly increasing.
- o In developed countries and regions including the EU/UK, 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 Indonesia and Vietnam.
- o 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 10 million tons 2022 223.22 million tons 21 59.18 million fland water aquaculture 15 71.75 million farine aquaculture 12 80.97 million Marine fisherie 1980 1990 2000 2010 1960 1970

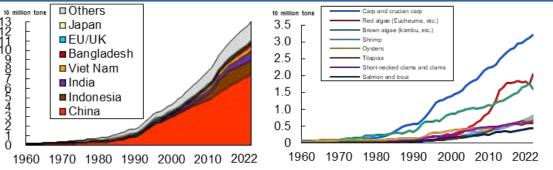
# Source: Prepared by the Fisheries Agency, based on the Fishstat (Global capture production, Global aquaculture production) (FAO) (other than Japan) and the Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries) (Japan)

#### 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 Yield by Country and by Fisheries Species



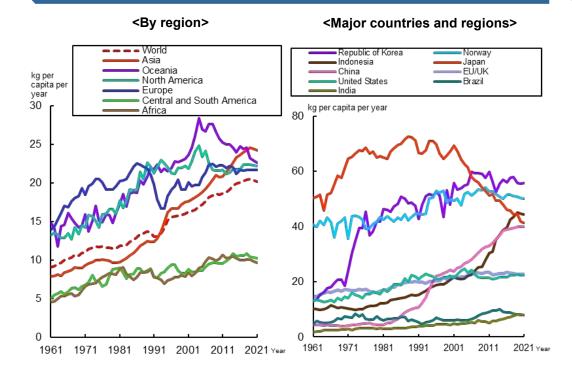
Source: Prepared by the Fisheries Agency, based on the Fishstat (Global aquaculture production) (FAO) (other than Japan) and the Fisheries and Aquaculture Production Statistics (the Ministry of Agriculture, Forestry and Fisheries) (Japan)

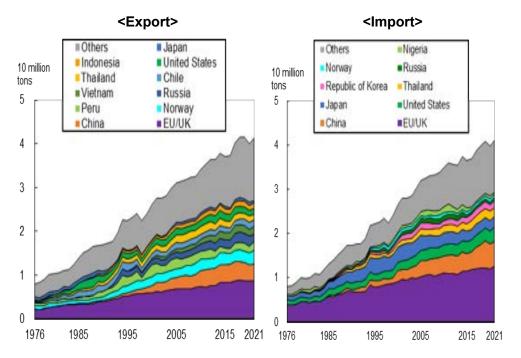
# (2) World Consumption of Fish and Fishery Products and International Situation Surrounding the World Trade of Fish and Fishery Products

- The world's annual per-capita consumption of fish and shellfish as food has increased, whereas Japan's annual per-capita consumption has been on a declining trend.
- 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 Conference 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's Annual Per-Capita Consumption of Fish and Fishery Products as Food

### **Trends in the Trade Volumes of Fish and Fishery Products**





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 shellfish for human consumption, including disposal volume

2) Central and South America includes the Caribbean

Source: Prepared by the Fisheries Agency, based on the Fishstat (Global fish trade) (2018 and before) and the Fishstat (Global aquatic trade) (2019 and beyond) (FAO)

Note: The volume of EU imports and exports includes the volume of trade within the EU.

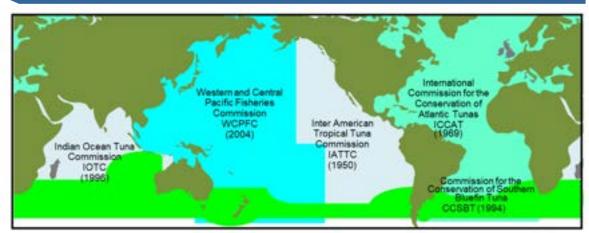
#### (3) International Resource Management

## - "= @

## i. Trends in Regional Fisheries Management Organizations and Developments Toward Eliminating IUU Fishing

- 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.
- The efforts of the Western and Central Pacific Fisheries Commission (WCPFC) in Pacific bluefin tuna resource management since 2015 have led its spawning stock biomass to be on a recovery path.
- o In the 2023 annual meeting, among other matters, the extension of the upper limit on the catch of Pacific bluefin tuna under a special measure to increase the catch limit by 1.47 times was adopted following the reclassification of Pacific bluefin tuna into the category of large fish from small fish.
- 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 Pacific saury on the high seas at 150,000 tons for 2023 and 2024 (25% reduction from 2022).
- 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.
- o 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.

#### Tuna Regional Fisheries Management Organizations (tRFMOs) and Waters Covered



NOTE: I ne years in parentneses are the years in which the relevant treaties took effect.





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.

#### ii. Bilateral Relations in Fisheries

- Due to the relationship between the Japanese and Russian governments, fishing vessels of both the countries are operating under conditions decided through negotiations based on the Japan-USSR Offshore Fishery Agreement, the Japan-USSR Fishery Cooperation Agreement, and the Kaigara Island Kelp Agreement.
- With regard to negotiations based on the Framework Agreement on Fishery Operations in the Waters Surrounding the Northern Islands, the Russian side has not taken part in talks since and including those concerning fishery operations during 2023.
- 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 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 2024 fishing season, Japan and Taiwan have agreed to continue applying the operation rule whose application has been continued since the 2019 fishing season.
- o 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.

## (4) Developments Concerning Whaling



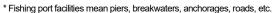
- Japan withdrew from the International Convention for the Regulation of Whaling (ICRW) at the end of June 2019 and resumed commercial whaling
  of large whales in July of the same year.
- Necessary measures are being taken based on the "Basic Policy of Measures for Ensuring the Sustainable Use of Whales" 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.

## (1) Status of Restoration/Reconstruction After the Great East Japan Earthquake in the Fisheries Industry

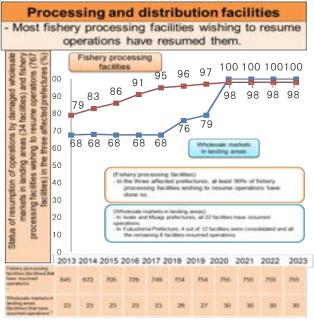
- Since the Great East Japan Earthquake struck in March 2011, the restoration of fishing port facilities, fishing vessels, aquaculture facilities, fishing grounds, and other facilities has been carried out in the affected areas. Fisheries-related infrastructures such as fishing port facilities and fishery 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 the Great East Japan Earthquake (as of March 2024)

#### 2. Fishing Ports The landing functions have recovered in all the affected fishing ports. ports (%): barn cilities (%): line Fishery processing 100 90 open iprefe 83 80 municular programmes by dama claim and of presents of 70 68 68 68 al restoration status of land Restoration status of 2,828 affected fishis 60 50 40 30 20 Landing piers 20 10 10

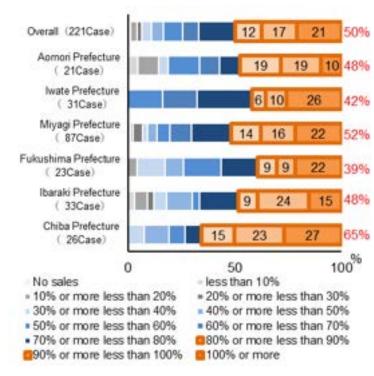


<sup>\*</sup> The number of affected fishing ports is the total number for seven prefectures.



<sup>\*</sup> 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 2023 are those as of the end of December.

#### **Status of Sales Recovery by Fishery Processors**



Source: Results of the 10th Questionnaire Survey on the Status of Fishery Processors' Reconstruction After the Great East Japan Earthquake" (the Fisheries Agency)

Note: The percentages in red color represent the percentages of fishery processors that recovered at least 80% of their pre-earthquake sales.

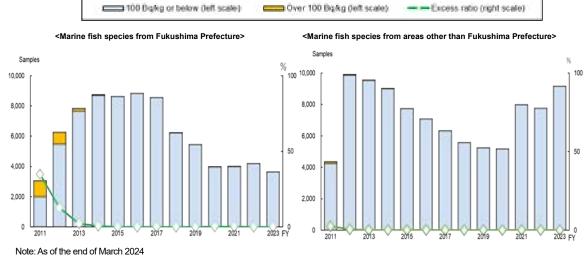
<sup>\*</sup> With respect to wholesale markets in landing areas, the figure for 2013 is that as of the end of December, the figures for 2014 through 2019 are those as of the end of February of the respective following years; and the figure for 2020 is that as of the end of January of the following year. Wholesale that is 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.

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

- The national government, in cooperation with relevant prefectural governments and fisheries-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 those fish and fishery products whose monitoring results exceed the Japanese maximum levels in food (JMLs) are subject to requested voluntary restraint on distribution or ordered restriction of distribution. During FY2023, there was no sample exceeding the JMLs in Fukushima Prefecture. Also in other prefectures, there have been no marine species samples exceeding the JMLs since September 2014 and no freshwater species samples exceeding the JMLs since FY2021.
- o In cooperation with the International Atomic Energy Agency (IAEA), efforts have been made to improve the reliability and transparency of data. In a report published by the IAEA in December 2023, the IAEA stated, "A continued high level of accuracy and competence on the part of the Japanese laboratories involved in the analyses of radionuclides in marine samples for the Sea Area Monitoring programme." In the joint ocean monitoring in FY2023, in addition to the IAEA Marine Environment Laboratories, analytical laboratories from Canada, China, and South Korea participated and confirmed the conditions of processes from sample collection to pretreatment and the analytical procedures. Currently, analysis is being conducted by each participating organization.
- Limited scale of fishing and sale on trial basis operations were conducted until the end of March 2021 in order to obtain basic information for the full-scale resumption
  of fishery operations. After the limited scale of fishing and sale on trial basis, voluntary suspension on fishery operations have been lifted in a stepwise manner, and
  the landing volume recovered to 6,530 tons (preliminary figure) in 2023.
- o Import restrictions on Japanese food products had been imposed in 55 countries and regions. As a result of efforts made to encourage the governments of those countries and regions to abolish the restrictions, some countries and regions such as the EU abolished their import restrictions in FY2023, and the number of countries and regions that still maintain their restrictions has been reduced to seven.

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

Outline of Import Restrictions on Food Products, etc., Imposed by Foreign Countries and Regions in Connection with the Nuclear Power Plant Accident (As of January 2024)





<sup>\*</sup> The countries and regions are classified according to the substance of their restrictions. Prefectures and items subject to restrictions differ depending on countries and regions.

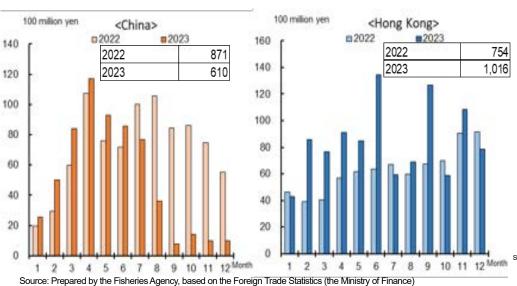
<sup>\*</sup> Following the discharge of ALPS treated water into the sea, China and Russia suspended the import of fish and fishery products from all prefectures; Hong Kong suspended the import of fish and fishery products, etc., from 10 prefectures; and Macao suspended the import of fresh food, etc., from 10 prefectures.

## (3) Developments Concerning Discharge of ALPS Treated Water into the Sea

- Since the commencement of discharge of ALPS treated water into the sea on August 24, 2023, China and Russia have suspended the import of fish and fishery products from all prefectures, and Hong Kong and Macao have suspended the import of fish and fishery products, etc., from 10 prefectures. The value of fish and fishery products exported to China has dropped sharply since August due to its import restrictions being tightened, and the value in 2023 declined approximately 30% from the previous year.
- o In addition to requesting immediate lift of scientifically unjustified import restrictions and providing support based on, among other matters, funds of 30 billion yen and 50 billion yen set aside prior to the commencement of sea discharge, a policy package "Protection of the Fisheries Industry" consisting of the following five pillars was formulated on September 4, 2023 on the basis of, for example, the establishment of an urgent support program with a fund of 20.7 billion yen to diversify the dependence on specific countries and regions: measures to expand domestic consumption and sustain production; addressing the impact of harmful rumors in and outside Japan; measures to switch export destinations; measures to strengthen domestic processing systems; and prompt and careful provision of compensation.
- Additionally, in November 2023, a supplementary budget was also allocated to support, for example, the development of HACCP-compliant facilities and equipment necessary for export expansion, the purchase and temporary storage of raw materials for processing, and the development of regional processing bases.
- o In addition to the monitoring analysis of fish and fishery products conducted to inspect them for tritium (precise tritium analysis), which has been conducted since before the commencement of sea discharge, the Fisheries Agency introduced a method enabling the short-time analysis of tritium (rapid tritium analysis) in August 2023, and publishes analysis results within two days after the sample collection day. The results of both precise tritium analysis and rapid tritium analysis have been lower than the detection limit and have shown no change between before and after sea discharge.

#### Trends in the Value of Fish and Fishery Products Exported to China and Hong Kong

#### Sampling Locations for Monitoring of Radioactive Materials in Fish and Fishery Products (Tritium)



# Precise tritium analysis> (Rapid tritium analysis) 44 45 46 37 8 fish species: bastard halibut, spiny red gurnard flathead, red seabream, Japanes putferfish, stone flounder, ridoed.

ounce repared by the Instense Agency

Notes 1) The sample collection locations for precise tritium analysis are Hokkaido Prefecture, Aomori Prefecture, Iwate Prefecture, Miyagi Prefecture, Fukushima Prefecture, Ibarak

Prefecture, and Chiba Prefecture.

2) The sample collection locations for rapid tritiumanalysis are two points (in red frames) located approximately 5 km north and south of the ALPS treated water discharge por (modification of a material for a meeting of the Heads of Cooperative Associations in Fukushima Prefecture).

eve flounder, slime flounder

## (4) Restoration/Reconstruction After the 2024 Noto Peninsula Earthquake

## i. Situation of Damage in the Fisheries Industry

- On January 1, 2024, an earthquake centered in the Noto region of Ishikawa Prefecture occurred.
- The earthquake caused strong shaking with a maximum intensity of 7 on the Japanese scale. The ground was reported to have been uplifted up to 4 m, and tsunamis were also generated, resulting in extensive damage to the fisheries industry, primarily in Ishikawa Prefecture.
- With respect to the number of cases of damage in the fisheries industry, at least 291 vessels were capsized, sunk, ran aground, or otherwise damaged, and 73 fishing ports suffered damage as their port facilities (breakwaters, piers, shallow draft wharves, etc.) were impacted. In addition, with respect to fishing gear, there were at least 90 cases of damage, such as damage to fixed shore nets. In the case of shared facilities, there were at least 96 damaged facilities such as fishery cooperative association offices, fuel supply facilities, and ice making facilities, and there were at least eight cases of devastated aquaculture facilities.

#### **Situation of Fisheries-Related Damage** Status of Damage Surveys of Fishing Ports in Noto Peninsula At least 291 Fishing vessels vessels Prefecture Fishing 73 fahing Fishing port facilities Port Location Map ports shikawa Prefecture (its research has been in progress, and the At least 96 extent of its damage is expected to significantly extend). Toyama refecture, and Nilgata Prefecture At least 6 Coast of Note Aquaculture facilities cases eninsula At least 90 Fishing gear Due to the earthquake, the ground was uplifted 2 to 4 m. All least 200 flating seasons were demanded Consequently, -80 ferring ports were demayed the foundation Water subspect and flooding occurred at 27 locations of the tabliques Frederican Floring Congressive Association, and their flooring and refrigeration building of breakwaters Ishikawa sandouses, and sorting machines were also demaps of is exposed Prefecture and the The Sanoy City Public Local Wholesale III area sustained danage such as a rater subage sid a proved depression. Part of the cating materials of the subdession anchorage has had and traviamperature storage facilities of the Karacana City Central Westerate Market Bill done dried up. Oyeler and fearl clain aquaculture facilities were damaged . I foling wases were duraged Due to the earthquake, piers tilted Peninsula and pier grounds collapsed. Use of -10 felling ports very demaged the fishing port by fishing vessels is Toyama The buildings and for terior office supply buildes lifed, and ne mating and storing touses and precise for production buildies were demaped limited to some of its facilities. Prefecture Some prevent purfaces appeared in the "Intel® Local Utholesals Millered of the Toyano City Flattery Cityperate Association, and the Streeningto Flattery Concerning Association Local Vitrolesses to arrest suffer set a valer outside 45 sets of fixed afters note were damaged or exect away. Roand fish cages and pill note were exect away (35 cases 3 fahing ports were demaged Niigata Uquefaction occurred at poods harding sites, wasset varioties were exposed to valier, and shulters at processing plants were damaged, among other forms of Prefecture 2nd class fighing CIT nets and other capes were sweet may or damaged. The profest region of family have were never and fathing with stored or land were weet asset. Source: Prepared by the Fisheries Agency, based Usable 60- class futing per Pukui on reports from Ishikawa Prefecture Partially usable 1 fishing vessel was damaged Note: As of March 28, 2024 Not usable Source: Prepared by the Fisheries Agency, based on reports from Ishikawa Prefecture. Toyama Prefecture. Niigata Prefecture, and Fukui Prefecture Note: A compilation of the details on damage reported by the prefectures by March 29, 2024

## ii. Details on Supporting Measures for Restoration/Reconstruction After the 2024 Noto Peninsula Earthquake

- On January 11, 2024, the government designated the 2024 Noto Peninsula Earthquake as a disaster of extreme severity. In relation to fisheries, the affected
  municipalities' and other relevant parties' burden of disaster recovery projects for fishing ports and fisheries industry shared facilities will be mitigated.
- on the 25th day of the same month, the government compiled a "Package to Support the Lives and Livelihoods of the Affected People." For fisheries-related support, the package seeks to support the early restoration of fishing ports, coasts, etc. by ensuring the early implementation of surveys on damage caused to fisheries infrastructures, and also incorporates support for fishers' and other relevant parties' initiatives to restore fishing grounds and for initiatives toward the restoration of fishing vessels, fishing gear, aquaculture facilities, and fisheries industry shared facilities (such as goods handling facilities and freezing and refrigeration facilities).

## Package to Support the Lives and Livelihoods of the Affected People (Decided on January 25, 2024)

## **Fisheries-Related Support**

- Support for **early restoration** of fishing ports, coasts, etc., through disaster recovery projects, etc., by examining restoration policies in light of the vision for the future of the region and by conducting damage surveys at an early stage, such as **urgent surveys on the actual damage condition of fisheries infrastructures**(the government subsidy ratio raised due to the designation as a disaster of extreme severity: from 70% to 83%\* for public
  - (the government subsidy ratio raised due to the designation as a disaster of extreme severity: from 70% to 83%\* for public civil engineering facilities such as fishing ports), (efficient assessment by utilizing the pre-assessment construction system and raising the maximum amount that can be granted through desk-based assessment)

    \*Average of the past 5 years' results
- Implementation of **measures to strengthen fishing port functions**, etc., such as UMIGYO promotion utilizing satoumi (community sea) resources in conjunction with disaster recovery (government subsidy ratio of 1/2, etc.)
- Support for initiatives implemented by fishers, etc., for the restoration of their fishing grounds (fixed amount)
- Support for initiatives to restore **fishing vessels**, **fishing gear**, or aquaculture facilities, for initiatives to **restore fisheries industry shared facilities** such as goods handling facilities and freezing and refrigeration facilities, and for initiatives to secure raw materials for processing, among other initiatives (government subsidy ratio of 1/2, etc.)
- Support for training programs for disaster-stricken fishers, etc., temporarily employed by other fishing vessels or fishers, etc., in other areas until those disaster-stricken fishers, etc., can resume their fisheries (a maximum of 188,000 yen/month for 2 years); and financial support for disaster-stricken fishers, etc. (such as substantively interest-free loans for the first 5 years of loaning and increased loan limits on safety-net loans, etc., for agriculture, forestry, and fisheries)



Damage to fishing ports (seabed uplift) and fishing vessel capsizing

# (Appendix) Main KPIs for Fisheries Policy

Sector	КРІ	Status of progress (as of the end of 2023)	Plan, etc., in which the KPI is stated
Fisheries	Aims to recover catch to the same level as 2010 (4.44 million tons) by 2030 (Reference: Production in 2018 was 3.31 million tons).	Catch (excluding marine algae and marine mammals) in 2022 was 2.92 million tons, which was 66% of the goal.	Strategy for Sustainable Food Systems: MIDORI (formulated in May 2021), and New Roadmap for Promoting Resource Management (decided in March 2024)
Aquaculture	Aims to achieve an artificial seedling rate of 100% in aquaculture of Japanese eel, bluefin tuna, etc., and to establish a sustainable aquaculture production system without any burden on natural resources by switching all fish feed to formula feed by 2050.	The artificial seedling rate (in aquaculture of Japanese eel, bluefin tuna, great amberjack, and yellowtail) in 2022 was 4.4%. The rate of formula feed in 2022 was 47%.	Strategy for Sustainable Food Systems: MIDORI
Aquaculture	Aims to achieve the following production volumes of 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  - Scallops: 210,000 tons  (- Pearls (2027 goal): 20 billion yen)	The production volumes in 2022 were as follows (% indicates comparison with the goal).  - Yellowtail: 110,000 tons (46%)  - Red seabream: 70,000 tons (64%)  - Bluefin tuna: 20,000 tons (100%)  - Salmon and trout (coho salmon only): 20,000 tons (50%)  - Scallops: 170,000 tons (81%) (- Pearls: 18.1 billion yen (90%))	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 each of the priority export items in 2030 is aimed to 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 2023 was 390.1 billion yen, which was 33% 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 shellfish products	FY2032 goals for the self-sufficiency rates of fish and fishery products: - Fish and shellfish for human consumption: 94% - Overall fish and shellfish: 76% - Marine algae: 72%	The self-sufficiency rates of fish and fishery products in FY2022 (estimates): - Fish and shellfish for human consumption: 56% - Overall fish and shellfish: 54% - Marine algae: 67%	Basic Plan for Fisheries (decided by the Cabinet in March 2022)
Overall fish and shellfish products	Aims to establish technologies for electrification and hydrogen battery use for 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

## **FY2024 Fisheries Policy**

## Structure of "FY2024 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 resource management based on the amended Fishery Act
  - Enhancement of fisheries enforcement and of the 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 revitalization of fishing communities that support the region
  - Seashore regeneration/revitalization
  - Restoration/Strengthening of the management foundation of fishery cooperative organizations
  - Development of measures for processing, distribution, and consumption
  - Fulfillment 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 support for the fisheries industry in connection with the discharge of ALPS treated water into the sea
- Steady restoration/reconstruction in the earthquake/tsunami-affected areas
- Impact of the discharge of ALPS treated water into the sea and support for the fisheries industry
- VI. Requirements for the comprehensive and systematic promotion of fisheries policies
- Efficient promotion of measures through collaboration among relevant ministries and agencies
  - Management and assessment of the progress of measures
  - Implementation of measures from a public point of view, taking into account the needs of consumers and the public
- Compilation of statistics in line with policy needs and promotion of the use of such statistics
- Helping business owners and producers become independent and demonstrate their originality and ingenuity
  - Efficient and focused operation of fiscal measures