

FY2018 Trends in Fisheries

FY2019 Fisheries Policy

White Paper on Fisheries: Summary

This document is a report on fisheries trends and the policy implemented during FY2018 in accordance with the provisions of Article 10, paragraph (1) of the Fisheries Basic Act (Act No. 89 of 2001) as well as the fisheries policy to be implemented in FY2019 in accordance with the provisions of paragraph (2) of said Article.

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# Chapter 1 Reform of Fisheries Policies

- The Basic Plan for Fisheries formulated in 2017 clearly indicated that the government would continue to study necessary measures for vigorous enhancement of resource management through quantity control, etc. and transformation of the fisheries industry into a growth industry, including reviews of related laws.
- In June 2018, the agriculture, forestry and fisheries industry and regional vitality creation headquarters compiled a document entitled "Reform of Fisheries Policy," specifying the concrete content of reform of fisheries policies. Of the indicated reform items, necessary legislation was developed with regard to basic systems relating to fishery production, including resource management measures and fishery rights, as well as systems relating to fisheries cooperatives, etc., and was promulgated in December 2018.

## Outline of the Act Partially Amending the Fishery Act, etc.

### Purpose

Fisheries have a mission to supply fish and fishery products to the people, but due to a decrease in fisheries resources and other factors, the production volume and the number of fishers have been declining in the long term. On the other hand, the world's vastest fishing grounds extend around Japan, so fisheries have a large potential. In order to achieve both appropriate resource management and transformation of the fisheries industry into a growth industry at the same time, the basic fishery production system concerning resource management measures and fishing permit and license systems, etc. will be reviewed in an integrated manner.

### Outline of the Amendment

#### I. Amendment of the Fishery Act (\* Integration of the Act on Preservation and Control of Living Marine Resources (the TAC Act) into the Fishery Act)

##### (1) Establishment of a new resource management system

###### Setting targets and maintaining or recovering resources based on scientific grounds

###### [Basic principles of resource management]

- Resources are basically to be managed on the basis of the total allowable catch (TAC) and to be maintained at or recovered to the sustainable level, based on stock assessment (Article 8).
- The TAC is basically to be managed on the basis of individual quota (IQ) (if a management category is not ready to introduce the IQ system, the TAC for the category is to be managed on the basis of the total catch quantities in that category) (Article 8).

###### [Determination of the TAC]

- The Minister of Agriculture, Forestry and Fisheries decides on the resource management target, and determines the TAC so as to recover the resources to that target level (Article 11).

###### [IQ]

- The Minister of Agriculture, Forestry and Fisheries or a prefectural governor sets an IQ for each vessel, etc., taking into account the past catch results and other factors (Article 17).
- Transfer of IQ is only allowed in certain cases, such as upon transfer of a vessel (Article 22).

##### (2) Review of the fishing permit system for enhancing productivity

###### Increasing competitiveness and realizing fisheries by fishing vessels that appeal to young people

- Regulations on vessel size are reviewed for enhancing the safety, comfortableness, etc. of fishing vessels (Article 43).
- The permit system is reviewed, and issuance of new permits on an as-needed basis is promoted (Article 42).
- A person who has been granted a permit is imposed the responsibility to appropriately manage resources and enhance productivity, and is obliged to report on information about fishery production (Article 52).

##### (3) Review of the system for use of the sea for developing aquaculture and coastal fisheries

###### Carrying out review for making appropriate and effective use of the waters

###### [Increased transparency in the formulation process of the sea-area fishing ground plan]

- A prefectural governor hears and examines the opinions of fishers and persons who intend to operate fisheries about the draft plan, and publishes the results.
- The governor stipulates the content of fishery rights and other matters in the sea-area fishing ground plan in order to achieve maximum use of the sea (Articles 62 through 64).

###### [Determination of persons to whom fishery rights will be granted]

- If a holder of an expiring fishery right is found to have appropriately and effectively used the relevant fishing ground, the fishing right is granted to that person, but in other cases, such as if no person had been previously granted a fishery right, the fishery right is granted to the person who contributes to the development of the local fisheries industry the most (the statutory priority order was abolished) (Article 73).

###### [Promotion of appropriate and effective use of fishing grounds]

- A fishery right holder is imposed a responsibility to appropriately and effectively use the relevant fishing ground, and is obligated to report on information about the use of the fishing ground (Articles 74 and 90).

###### [Management of coastal fishing grounds]

- A system in which fishery cooperatives, etc. implement activities for conserving coastal fishing grounds on designation by the prefectural government is introduced (Articles 109 through 116).

##### (4) Revitalizing fishing communities and enabling them to demonstrate their multifunctional roles

The national and prefectural governments give sufficient consideration so that activities of fishers, etc. are carried out in a sound manner, and fishing villages are revitalized, given that fisheries and fishing communities have multifunctional roles (Article 174).

##### (5) Others

- The Sea-area Fisheries Adjustment Commissions continue to have a character as administrative commissions centered on representative fishers. The system for electing member fishers is reviewed into one in which the prefectural governor appoints the members by obtaining the consent of the prefectural assembly (Article 138).
- The penal provisions to combat poaching are strengthened (Articles 132 and 189).

#### II. Amendment of the Fishery Cooperative Act

##### Reviewing the fishery cooperative system in line with the fishery reform

The businesses and management bases of fishery cooperatives are strengthened through measures such as appointing sales professionals as officers and introducing audits by certified public accountants.

# Chapter II Special Feature: Development of Human Resources Related to the Fisheries Industry

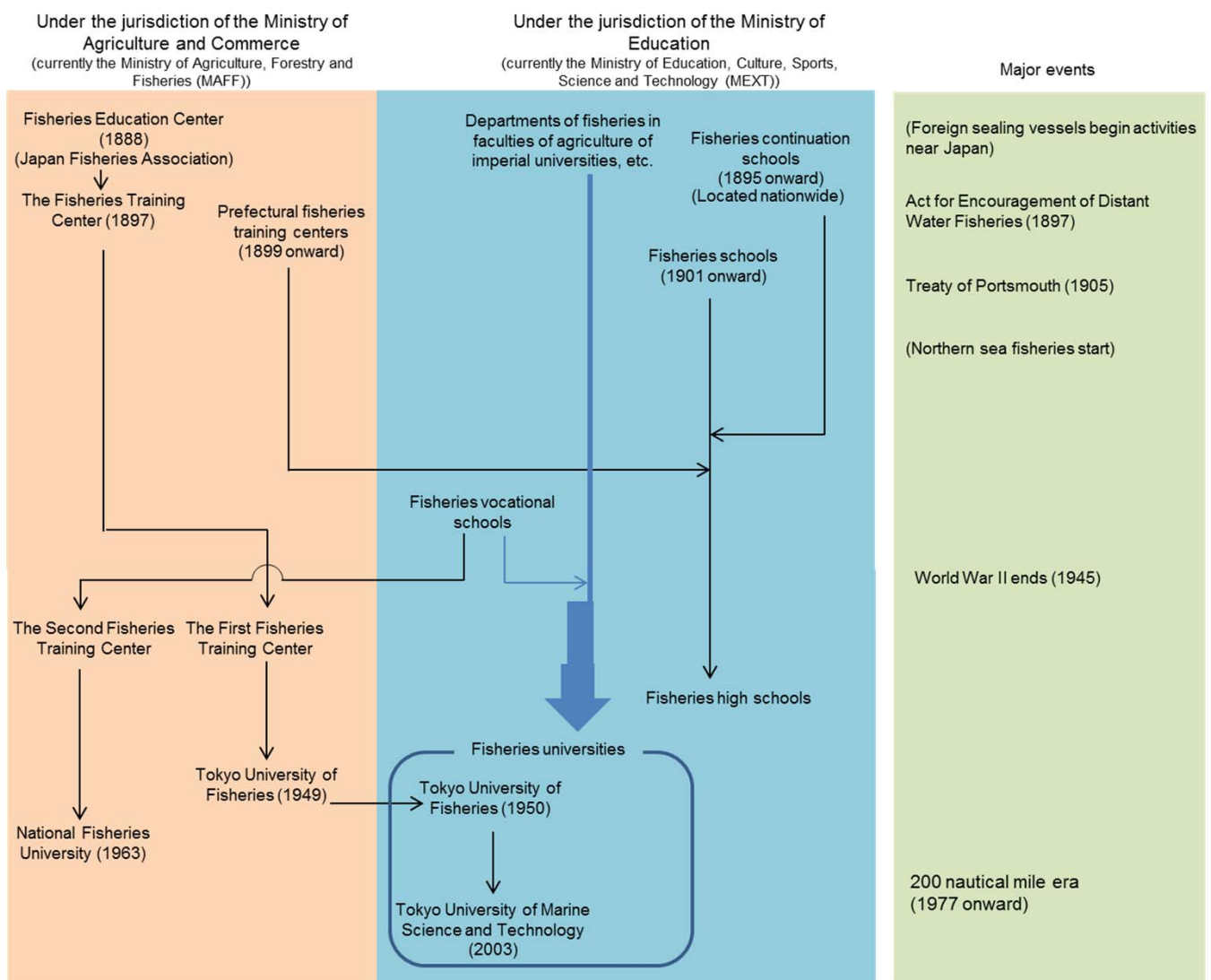
## —Toward Developing the Fisheries Industry through Human Resources Development—

### Section 1 Human Resources Development through Fisheries Education

#### (1) Changes in Fisheries Education since the Modern Times

- Japan's first full-fledged fisheries education started at the Fisheries Education Center established by the Japan Fisheries Association in 1888. Subsequently, fisheries education aimed at learning fishery, manufacturing, and aquaculture technologies that are necessary for improving regional fisheries industries began to be provided at locations nationwide. In addition, initiatives also began to train human resources with knowledge and skills of distant water fisheries.
- Since after World War II, fisheries education has been mainly conducted at fisheries high schools (upper secondary schools specializing in fisheries), and particular focus was placed on training mid-level technical specialists of distant water fisheries. However, the number of applicants for admission to fisheries high schools decreased in line with the contraction of distant water fishery as a result of the oil crises and various countries setting exclusive economic zones.
- From the beginning of the Heisei era (around 1990s), fisheries high schools started to provide not only conventional education on specialist skills, but also classes for enhancing the students' initiatives and inquisitive minds.

#### Changes in Schools, etc. Providing Fisheries Education



## (2) Study about the Fisheries Industry and Fish and Fishery Products at Elementary Schools

- The fisheries industry is mentioned in the social studies part of the Course of Study for Elementary School. In addition, there is a statement about the role of soup stock that serves as the basis of traditional Japanese daily meals in the home economics part (an opportunity to learn that soup stock can be taken from boiled-dried fish, etc. in the study).
- Opportunities to be exposed to fisheries are provided at various scenes; in actual classes, they are mainly provided in the period for integrated study and school events.
- In order to develop future leaders in the fisheries field, it is necessary to increase the opportunities for direct physical exposure to fisheries.

### Case Example Hamada City Nagahama Elementary School, Shimane Prefecture: Nagahama Marine Education

Hamada City Nagahama Elementary School in Shimane Prefecture carries out an initiative whereby pupils first familiarize themselves with the sea, then learn about the sea to increase their interest in the sea, and learn about the importance of protecting the sea while using the sea. The pupils have also tried making cut-open and dried Donchicchi-brand horse mackerel with the cooperation of Hamada Fisheries High School. Moreover, they have boarded the training vessel of the fisheries high school as a result of expressing their desire to learn more about the sea.



Boarding a fisheries high school's training vessel  
(Photo courtesy: Hamada City Nagahama Elementary School, Shimane Prefecture)

## (3) Study about the Fisheries Industry and Fish and Fishery Products at Lower Secondary Schools

- The social studies part of the Course of Study for Lower Secondary School includes a description on industries as an item to be mentioned when learning about Japan's regional characteristics, etc. The cultivation of aquatic organisms is mentioned in the industrial arts and home economics part.
- Opportunities to be exposed to fisheries are provided at various scenes also at lower secondary schools.

### Case Example Nachikatsuura Town Ukui Lower Secondary School, Wakayama Prefecture: Education through hands-on activities for learning about the local community

Nachikatsuura Town Ukui Lower Secondary School in Wakayama Prefecture introduced a period for learning about the sea in FY2015.

Second-year students learn about local fishing methods and their history, the fish species that can be caught, and methods for cooking them. They also have a chance to learn hands-on about Japanese amberjack fishing using triangular set nets.



Hands-on fishery experience  
(Photo courtesy: Nachikatsuura Town Ukui Lower Secondary School, Wakayama Prefecture)

## (4) Fisheries Education at Fisheries High Schools

### a. Current Status of Fisheries High Schools

- As of the end of FY2018, there were 46 fisheries high schools. Among these, 22 high schools offer specialized courses. A total of 62 training vessels of 5 tons or more are used by 43 high schools in their study programs (including 29 training vessels of 100 gross tons or more used by 36 schools).
- The total number of fisheries high school students in 2018 was 9,831 (0.3% of all upper secondary school students nationwide).
- As for the post-graduation paths taken by FY2017 graduates, 35% entered educational institutions, and 38% became employed in fisheries or marine industries (compared to FY2007, the percentage for employment in these industries increased by 14%). Regarding the employment status of students who completed specialized courses, 8% were employed on fishing vessels, and 56% were employed on merchant vessels (compared to FY2007, the percentage for employment on fishing vessels increased by 2%, and on merchant vessels by 16%).
- The number of fisheries high school teachers in 2016 was 1,015 (0.4% of all upper secondary school teachers nationwide). There are concerns about a future shortage of teachers as teachers aged 40 or younger only constitute 35% of all teachers.

### Fisheries High Schools in Japan



\*HS: High School

## b. Initiatives by Fisheries High Schools

- Fisheries high schools have focused their efforts on not only conventional education on specialist skills, but also the subjects of project studies and the period for integrated study for enhancing students' initiatives and inquisitive minds.
- As coordination is often made with local governments or fisheries cooperatives in teaching these subjects, the activity also contributes to the local communities.

### Case Example

#### 1) Human resources development using the educational abilities of the local community (Toyama Prefectural Namerikawa High School)

Toyama Prefectural Namerikawa High School provides training to second-year students at fishery work sites in coordination with relevant local places of work. In the practice of fixed net Toyama squid fishing, a local representative fishing method, the students learn about the fishing method, the structure of the fixed net, and the workflow from fishing to shipping.



Fixed net Toyama squid fishing practice (Photo courtesy: Toyama Prefectural Namerikawa High School)

#### 2) Fish Girl activities (Ehime Prefectural Uwajima Fisheries High School)

Due to the low profile of Ehime Prefecture's farmed bluefin tuna, bluefin tuna producers in Uwajima, Ehime Prefectural Government (Fisheries Policy Division, Agriculture, Forestry and Fisheries Department), and Uwajima Fisheries High School have collaborated with each other since FY2012 to start activities of Fish Girl, a team of high-school girls who show bluefin tuna filleting demonstrations in and outside Japan.

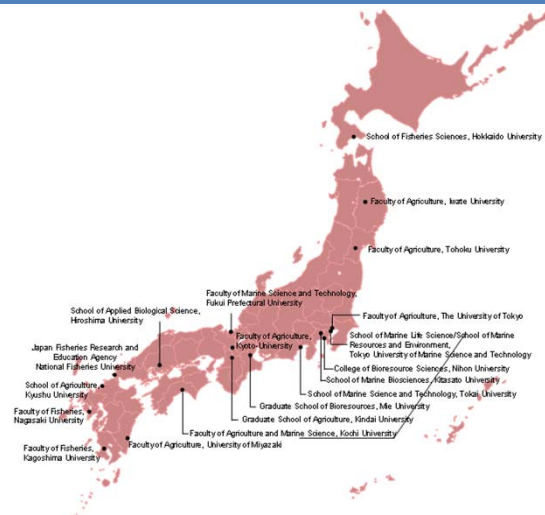


Fish Girl activity (Photo courtesy: Ehime Prefectural Uwajima Fisheries High School)

## (5) Fisheries Education at Universities

- Among 19 fisheries universities, six universities possess a total of 15 training vessels for on-board training, etc. (as of the end of 2018). Six of these vessels, which have been approved as joint research centers by MEXT, are also used by other universities.
- Fisheries universities particularly focus on developing human resources who can play a central role in research and development and the fisheries industry.
- In FY2017, 34% of to-be graduates found employment in fisheries-related fields, the highest proportion of which was accounted for by the processing and distribution field, at 54%.

### Fisheries Universities in Japan



### Case Example

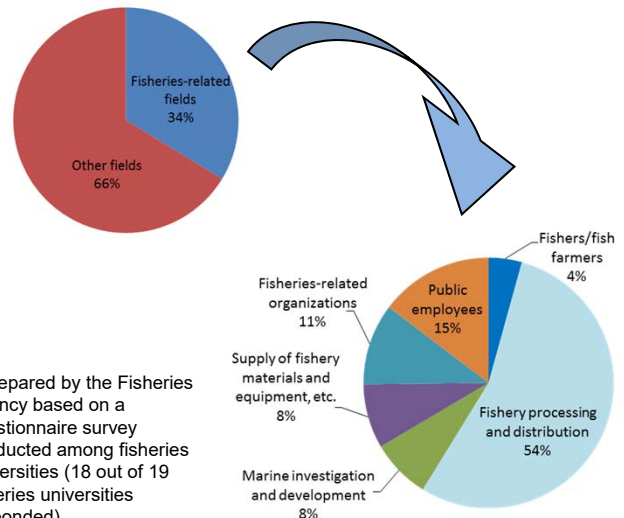
#### 1) Enjoying the sea and learning from the sea! (National Fisheries University)

The university engages in a broad range of education and research concerning fisheries from the marine environment, etc. to distribution and business management. It also conducts resource studies and other practices as well as providing education for marine technicians, etc. using large training vessels. Most of the graduates find jobs in fisheries-related industries and become active leaders.

#### 2) Comprehensive marine education and research (Tokyo University of Marine Science and Technology)

The university aims to realize outstanding education for developing industrial, government, and academic leaders who play an international role in the marine field, by conducting comprehensive marine education and research with development of highly skilled professionals including researchers at the core. In addition, by concluding agreements on coordination with fisheries high schools, etc., the university stimulates high school students' motivation and enhances their awareness of their future paths through providing university lectures, etc. to them.

### Employment Found by To-Be-Graduates of Fisheries Universities



Source: Prepared by the Fisheries Agency based on a questionnaire survey conducted among fisheries universities (18 out of 19 fisheries universities responded).



## Section 2 Development of Young Fishers, etc.

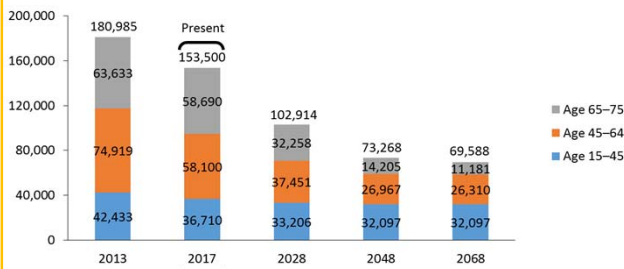
### (1) Trends in the Number of Fishers

#### a. Trends in Fishers

- The number of fishers follows downward trends and totaled 153,490 in 2017.
- The annual number of new entrants into fisheries has remained at the same level, at around 2,000 persons, since 2009, about 70% of which are 39 years old or younger. The ratio of fishers aged 39 or younger among all the fishers has remained at the same level.

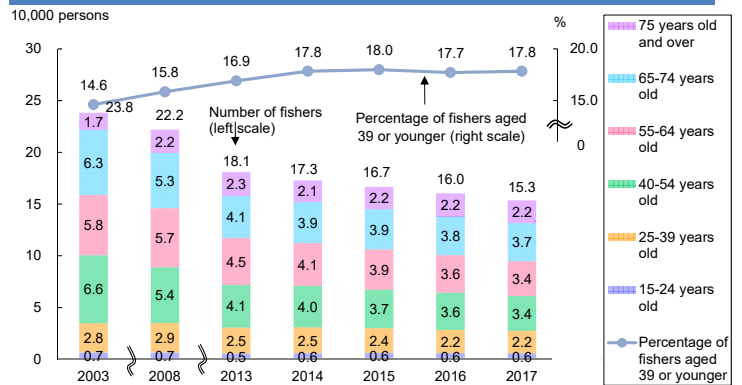
#### Column Future Prospect of the Number of Fishers

The Fisheries Agency estimated the future prospect of the number of fishers by fixing some variables. The number is estimated to be about 103,000 persons in 2028, about 73,000 persons in 2048, and about 70,000 persons in 2068.



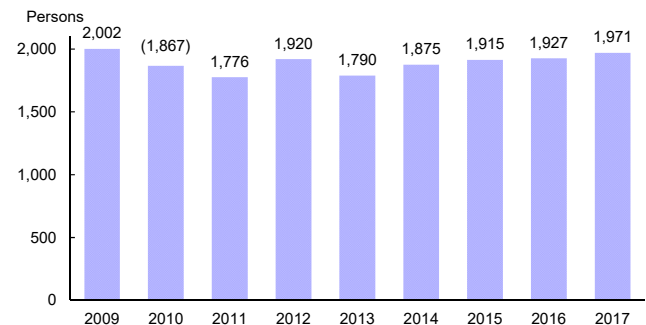
Source: Prepared by the Fisheries Agency, based on the Census of Fisheries and the Report on the Trends in Fishery Employees (the Ministry of Agriculture, Forestry and Fisheries)

#### Trends in the Number of Fishers



Source: The Census of Fisheries and the Report on the Trends in Fishery Employees (the Ministry of Agriculture, Forestry and Fisheries)

#### Trends in the Number of New Entrants into Fisheries

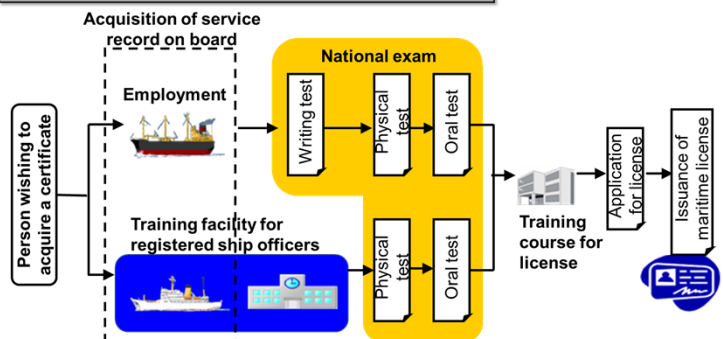


Source: Estimates based on prefectural governments' surveys on new entrants  
Note: The value for 2010 is an estimate obtained based on the trends in prefectures other than Iwate, Miyagi and Fukushima.

#### b. Problem of Shortage of Marine Technicians in Fisheries

- Maritime certificates (national exams) are required in order to board a vessel of 20 tons or more as the captain, chief engineer, etc.
- Since each fishing trip spans a long period of time in distant water fisheries, it is difficult to have opportunities to acquire a higher-grade maritime license. In addition, graduates of fisheries high schools do not necessarily take a job in fisheries. Due to this situation, the aging and shortage of marine technicians has become a serious problem.
- Because of this, fishery-related organizations recruit new entrants through their fishery job consultation meetings, etc. and make efforts to offer systematic training programs, etc. aimed at acquisition of maritime licenses.
- Meanwhile, National Fisheries University introduced a new course including six-month on-board training, starting in FY2019. As this will shorten the one year and nine month service record that is required for graduates of fisheries high schools to take the 4th grade marine technician examination, graduates of fisheries high schools are expected to be able to acquire marine technician certification earlier than before.

#### Maritime License Acquisition Process



Source: Website of the Ministry of Land, Infrastructure, Transport and Tourism.

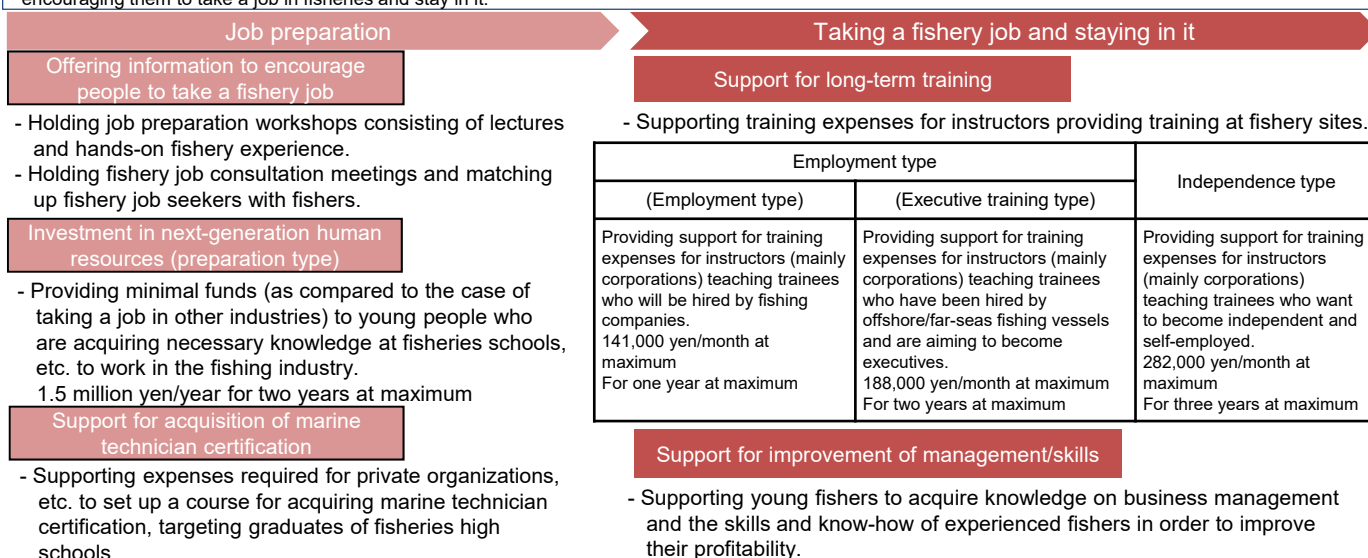
## (2) Development of New Entrants into Fisheries and Young Fishers, etc.

### a. Development of New Entrants into Fisheries

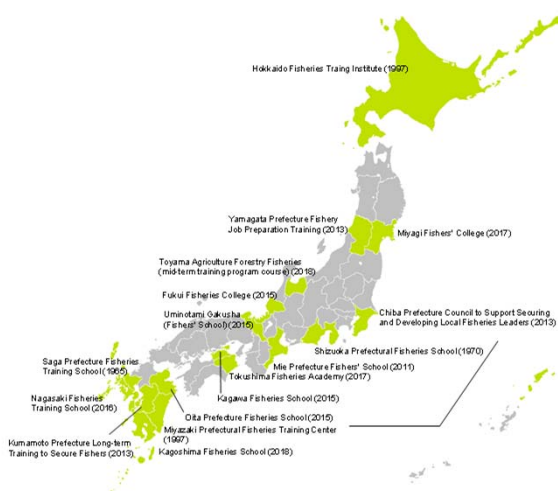
- It is important to secure motivated fishers and develop them as leaders, not only for ensuring a stable supply of fish and fishery products, but also for enabling fisheries and fishing communities to demonstrate their multifunctional roles and for revitalizing local communities.
- The national government has provided support that emphasizes the acquisition of fisheries skills and knowledge so that people having no experience of fisheries in advance can take a job in fisheries and stay in it.
- There are 17 fisheries schools (as of the end of FY2018; the number is planned to be increased in the future) set up nationwide to teach practical fishing techniques and skills and to develop work-ready fishers. The national and local governments have provided support so that students of fisheries schools can devote themselves to acquiring the skills.

### Comprehensive Support Project for Development of Fisheries Human Resources

In order to secure and develop fishers, etc. in a stable manner, funds are provided to young people before taking a job in fisheries, and support is provided for long-term training at fishery sites, acquisition of maritime license or other certifications, and enhancement of fishers' management skills, etc. aimed at encouraging them to take a job in fisheries and stay in it.



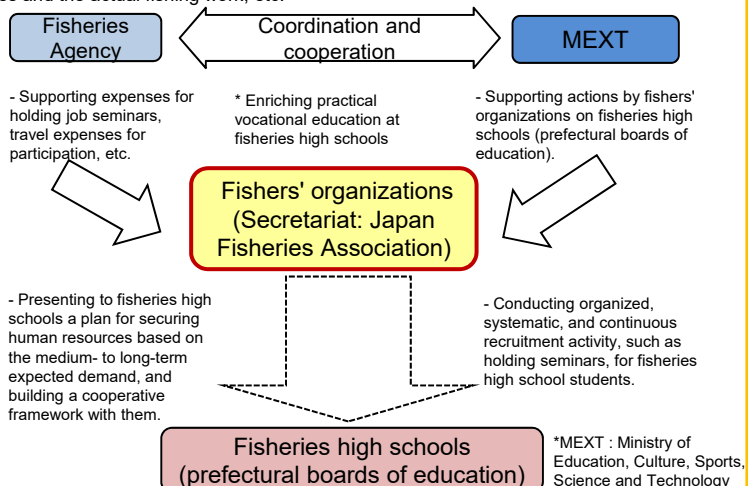
### Fisheries Schools in Japan



Note: Figures in parentheses are years of establishment.

### Column Recruitment of Fisheries High School Students to Take Fishery Jobs (Training Project to Secure Fishing Vessel Crew)

In order to deal with the shortage of crew on fishing vessels, the Training Project to Secure Fishing Vessel Crew was established in February 2017. One of its initiatives, Fisheries Guidance, is an activity in which representatives from fishing companies visit fisheries high schools nationwide and conduct recruitment activity or explain and help students understand the appeal of fisheries and the actual fishing work, etc.



- Local communities are also conducting initiatives for securing new entrants into fisheries. The national government provides support to hold fishery job consultation meetings and job preparation workshops. In particular, the Fishery Employment Support Fair, which has been held since FY2012, is a platform for connecting between fishery job seekers and fishing companies, etc., and the number of job seekers visiting the fair has been on an increase in recent years.

### Numbers of Organizations and Visitors Attending the Fair per Venue (Average)



Source: Prepared by the Fisheries Agency based on materials of the organization implementing the fair.

## b. Development of Young Fishers

- Various initiatives are conducted in order to develop young fishers that will lead the fisheries industry in the future.

### Case Example

#### 1) Owada School, a school for developing fishery leaders (Hyogo Prefecture)

Owada School is an organization for developing appropriate human resources for becoming leaders of fishing communities, targeting young fishers, etc. The trainees need to earn credits in order to complete the course just like a university, and those who have completed the course so far are already conducting activities as leaders.



Graduation thesis presentation meeting  
(Photo courtesy: Hyogo Prefecture Fisheries Foundation)

#### 2) Fishery Entrepreneur Training School (JF Zengyoren)

JF Zengyoren opened Fishery Entrepreneur Training School in January 2019. Young fishers come from all parts of Japan and take classes covering content ranging from practical matters that are useful for solving business management issues to matters that view the fisheries industry from a broad perspective. The school is planned to be opened again next year onward, and is expected to foster human resources that will become fishery entrepreneurs or leaders.



Class scene  
(Photo courtesy: JF Zengyoren)

## c. Development of Human Resources that Support the Management of Fishery Cooperatives

- JF Zengyoren established Japan Fisheries Cooperative School in 1941, and has trained leaders of fishery cooperatives and fishing communities (a total of about 2,600 persons by 2017).

## Section 3 Development of Human Resources That Will Be Demanded in the Future

### (1) Future Direction of Fisheries Education

- Fisheries high schools used to mainly develop technical specialists of distant water fisheries. Today, however, they provide a wide range of education including education on food safety and the environmental problems as well as education for acquiring a global mindset.
- There are concerns about a shortage of teachers specializing in fisheries at fisheries high schools. It is important to secure such teachers through coordination with fisheries universities.
- Fisheries universities need to provide opportunities for students to be exposed to a broad range of fisheries industries at an early stage after entering university, and make it easier for them to have a future vision. In addition, fisheries universities must strengthen their coordination with local communities, and promote research and development and human resources development with a view to contributing to the local fisheries industry. Moreover, they also need to coordinate with various other educational fields, including engineering, such as ICT, and commerce, such as marketing.