

## Fishery Employment Support Systems and Status of Fishery Job Training in Japan

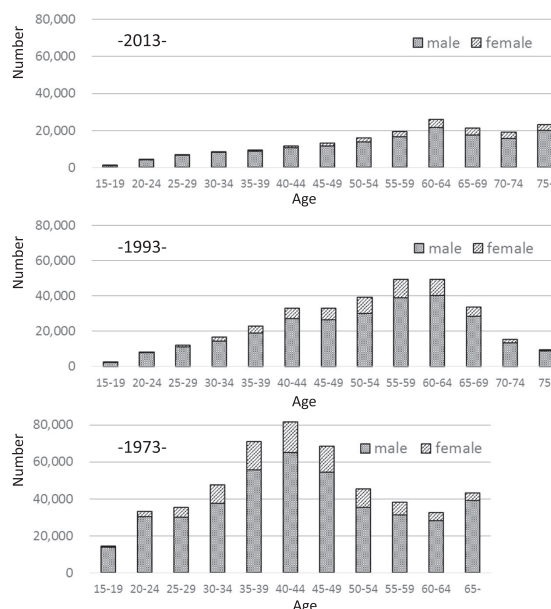
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**Abstract :** Attracting fishermen has become one of the critical challenges to maintain a basic fisheries production system. Therefore, institutions in Japan have been introducing courses, such as fisheries techniques, to attract students to this industry. The aim of the present study is to identify effective methods of developing job training systems to attract more fishery workers to the industry. The current job training courses for becoming a fishery worker are analyzed, and the results indicate that methods of teaching fishery techniques have made progress. Three job-training patterns were identified in the analysis. Pattern 1 was to continue to work in the industry, Pattern 2 to abandon work in the industry, and Pattern 3 to quit the job training prematurely (Pattern 1 (60%), Pattern 2 (17%), and Pattern 3 (23%). The analysis results suggested that providing trainees with sufficient explanations concerning work content included in the training is crucial to enhancing training efficiency. In addition, providing opportunities to learn about other types of fisheries is an effective approach to broaden knowledge on the main type of fishery being studied.

**Key words :** fisherman, trainee, fisheries techniques, on-the-job training

### Introduction

The most recent fishery census, conducted every five years in Japan, indicated that 180,985 fishery workers worked at sea for more than thirty days from November 1, 2012 to October 31, 2013 and that 35.2% of them were aged 65 or older. In contrast, in 1993, there were 266,515 fishery workers, of whom 18.0% were aged 65 or older. Furthermore, in 1973, there were 467,696 fishery workers, of whom 8.4% were aged 65 or older. From this data, we can see that the number of fishery workers has been cut in half over the past 40 years and that this population has aged rapidly. The changes in the total fishery workforce from 1973 to 1993 to 2013 are shown in Fig.1, organized by age. Fig.1 also shows that the average age of primary female fishery workers had shifted from around 50 years to over 65 years.



**Fig. 1.** Number of fishery worker by age, the year 1973, 1993 and 2013(Source: Census of fisheries in Japan)

Attracting fishery workers has become one of the critical challenges in maintaining a basic fishery production system in Japan. Therefore, Japanese institutions have been introducing training courses, such as fishery techniques, to attract students to the industry.

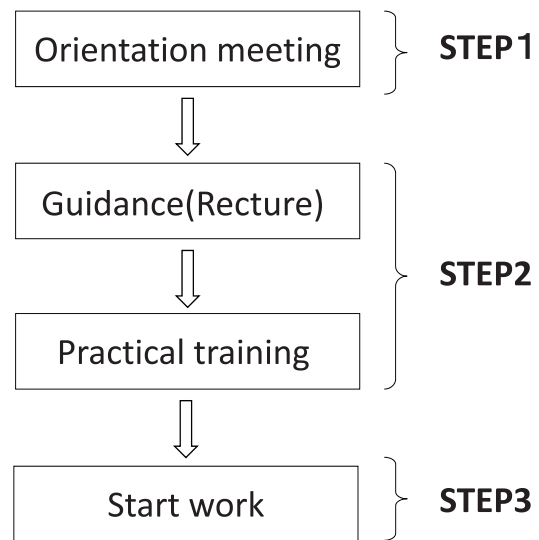
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**Employment support system**

These courses consist mainly of the three steps, as shown in Fig. 2. In this figure, the orientation meeting (STEP 1) provides introductions for people who are interested in becoming professional fishery workers or managers of fishery organizations or fishery companies. The people interested in working in fisheries must choose a type of fishery in this step. Employment fairs for the purpose of job- and employee-hunting are held frequently by the government and local public agencies. In STEP 2, managers of fishery organizations and companies give guidance about working in a fishery, and practical training is then conducted, primarily through on the job training (OJT); trainees learn the knowledge and techniques involved in professional fishery work by engaging in the fishery work itself. The time necessary to complete practical training depends on the support system, but typically programs last two years at the longest. During STEP 1 and STEP 2, trainees are supported through cost of living subsidies. After completing the training course, trainees work continuously for fisheries (STEP 3). In the event that a trainee does not maintain continuous employment with a fishery, most support systems mandate that he or she must pay the subsidies back. Working environments in the fishing boats vary by type of fishery, scale of the fishery, and by regions in general. Most of trainees engaged in offshore fisheries work consistently in the same fishing boats, and trainees in coastal fisheries continue to work in the same districts.

**Status of the job training**

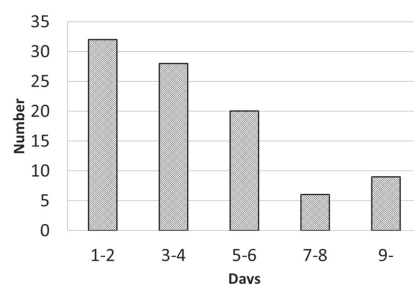
Fishery support system trainees keep and submit training diaries at the request of the government, and these diaries were



**Fig. 2.** Processes of employment support system to secure the fishery worker

subsequently analyzed to determine the status of, and processes involved in, job training. Trainees recorded the contents of job training each week, as well as their perspectives on the work done. Ninety-five diaries completed during 2008 were collected, and the records of the job training were analyzed.

Fig. 3-1 shows the periods of practical training, corresponding to STEP 2. In the 95 courses studied, the guidance portion lasted one week. Three job training patterns were identified in the analysis. Pattern 1 was continuing to work in the industry, Pattern 2 was abandoning work in the industry after completing training and Pattern 3 was quitting the job training prematurely (Pattern 1 [60%], Pattern 2 [17%] and Pattern 3 [23%]). All training courses were completed within 200 days, and in the case of Pattern 3, most individuals terminated the job training within 100 days.



**Fig. 3-1.** Periods of training - Guidance (include recture) -

Fig. 4 shows the number of trainees by age. Individuals aged 30-34 were the most numerous, followed by those aged 25-29. Employment rate for Pattern 1 is shown in Fig. 5. Despite the fact that individuals aged 30-34 were the most numerous, the percentage of employment in this age range was very low, less than 40%. Counterintuitively, it appears that the percentage of employment rises with age.

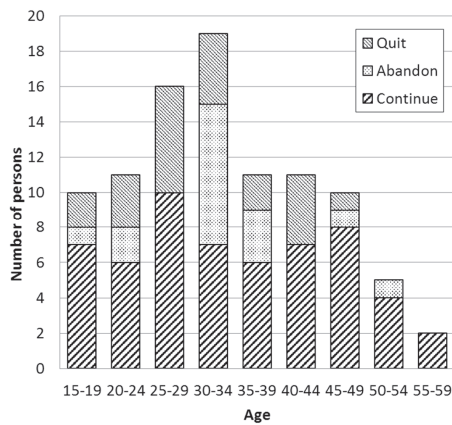


Fig. 4. Age of trainee and results of training

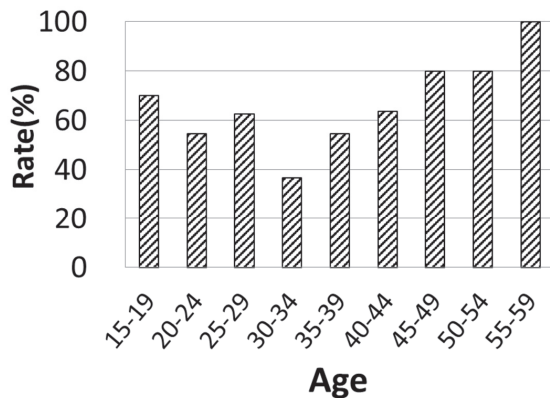


Fig. 5. Employment rate of "Continue to work"

Fig. 6 shows the type of fisheries conducting training. In this figure, Vertical Long Line, Long Line, Purse Seine and Angling are classified as offshore fisheries, and other fisheries, including Aquaculture, are classified as coastal fisheries. There were 53 trainees engaged in offshore fisheries and 42 engaged in coastal fisheries. As for the employment rate for Pattern 1, offshore fisheries employed 53% and coastal fisheries employed 69%. The rate of Pattern 3 attrition in offshore fisheries was high, about 30%. Fig. 7-1 and 7-2 show the training results by with/without subsidiary fishery as an object for training. When examining coastal fisheries in Fig. 7-1, fisheries with more than

two types showed high Pattern 1 percentages compared to the cases with one type of fishery. In contrast to the results of coastal fisheries, one type of fishery showed good results in the offshore fisheries in Fig. 7-2.

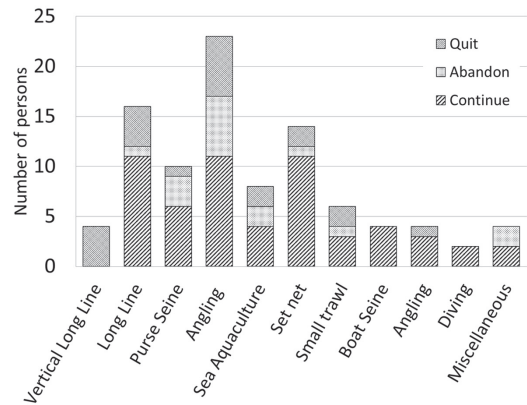


Fig. 6. Type of fisheries for training

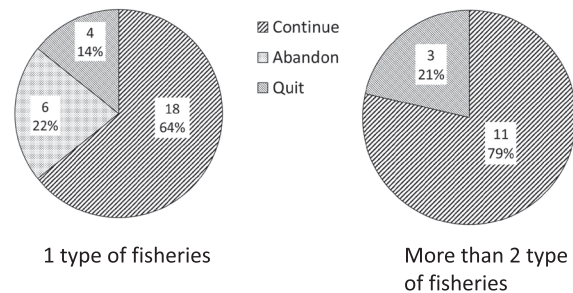


Fig. 7-1. Training results by with/without subsidiary fishery - Coastal fisheries -

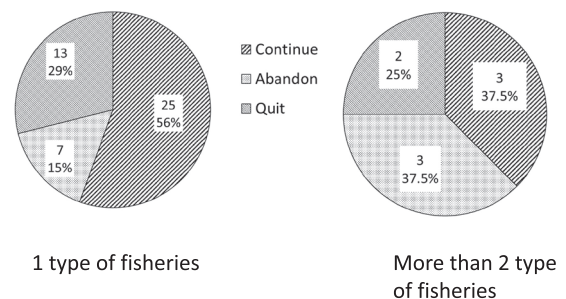


Fig. 7-2. Training results by with/without subsidiary fishery - Offshore fisheries -

### Conclusion

In fishery workers' current situation in Japan and the context of the employment support system for training and retaining fishery workers, the current situation, along with some proposals for improvement of the employment support system, can be summarized as follows. The rate of Pattern 1 for workers over age 45 tended to be high. This result indicates that trainees can effectively utilize OJT, but that fisheries might want to consider modifying the training to make it more effective for those under 45. Concerning the type of fishery, the rate of Pattern 1 in trainees experienced in a subsidiary fishery was tended to be high in the coastal fisheries, indicating that experiencing more than two types of fishery is important for the trainees in coastal fisheries; it is also important for trainees to be able to compare the type of fishery they are studying to other kinds of fisheries. In addition to the training mentioned above, fishery trainees mainly receive technical instruction by OJT. As a future issue of inquiry into the training system, it would be interesting to study whether in addition to OJT, introducing Off-JT during the practical training process would be effective. In general, fishery activities are carried out in a local community, and in order to promote knowledge exchange and raise trainee motivation, promoting communication between the trainees is could yield significant benefits.

An additional line of analysis would be examining in further detail the contents of job training through the ninety-five diaries, which were summarized in this report. The content described in the diaries was classified into several categories, such as "Preparing and repairing fishing gear," "Preparing for departure from port," "Operation of fishing gear/fishery facilities," and "Dealing with caught fish." Each diary, kept over the full duration of the training, was categorized according to these items and their variations and then analyzed. OJT, such as "Operation of fishing gear," and "Dealing with caught fish," was frequently performed in both coastal and offshore fisheries training. "Repairing fishing gear" training was also regularly conducted, but the frequency varied seasonally.

In addition, field studies to clarify the methods of fishing operations have been carried out, which are performed with work line, and defining the processes with time passes in the fishing boat(1-3) . These results of analysis will also be introduced on another occasion and will provide insight into

potential improvements in job training for professional fishery workers.

### References

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