

Anthropological Study on the Role of Gender in two Miyazaki Fishing Villages, Japan

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Abstract

Men are considered to have a monopoly in the fishery sector and women are not considered to play a significant role. But, directly or indirectly, many women are engaged in the fishery sector. Women are engaged directly in a fishery by engaging in fishing either individually or by accompanying their husbands, and by collecting seaweed. They may also get involved in a fishery indirectly by engaging in feed preparation and also marketing of processed seafood products. The present study deals with the various roles and activities of women and men in two fishing villages in southern Miyazaki Prefecture in Japan, namely Meitsu and Odoutsu. The fishing villages depend on the development of fishery technologies that have enhanced the fish catch. And recently, in the face of increasing challenges to fishing, the villagers have raised their income by opening seafood restaurants, fish stores and selling the processed products to tourists directly. The differences in the roles of women and men in the two villages are traced parallel to the decades of changes in the fisheries. In Odoutsu, with a history of coastal fishing, women are more involved in all modes of the fish value chain, whereas in Meitsu with more past emphasis on offshore fishing, women have in more restricted roles in the value chain.

Introduction

The Japanese fishery sector is facing a difficult outlook due to a decrease in marine resources, rise of fuel charges, aging of the fishermen and a lack of youth participation in the sector, and also a falling interest of Japanese youth in consuming seafood. But various strategies are being developed to rejuvenate fishing village economies. For example, besides selling fish directly, fishermen are also engaged in fish processing and marketing of these products and also running seafood restaurants, and increasingly women are coming to the forefront of these activities (Soejima 2005; Abe 2013).

Generally we tend to think that fishing in the sea is work for men, while women will sell fish on shore, according to the analysis of occupational activities and divisions of work between the two sexes based on ethnographic materials from all over the world (Murdoch 1981). In more than 50% of the Pacific region communities, however, both men and women are engaged in fishing

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(Akimichi 1995).

This paper reflects on the gender division of labor by comparative analysis of two fishing villages in southern Miyazaki, Japan and also highlights the factors causing changes within the social and environmental context. Fisheries here are taken to include activities that go beyond fishing, especially post-harvest, processing, marketing and also administration (Ii 2001; Ii 2012).

The fishery of the southern Miyazaki coastal fishing villages

Miyazaki Prefecture is located in southern Kyushu in Japan and is surrounded by Oita, Kumamoto, and Kagoshima Prefectures, facing the Pacific Ocean (Fig. 1). Coastal and offshore fisheries have been carried out off Miyazaki, depending on the coastal topography and location of fishing grounds. Coastal fisheries are generally pole-and-line fishing, long line fishing, and cuttlefish fishing using small boats of 5-10 m. In off-shore fisheries, boats of 20-150 m carry out pole-and-line fishing, long line fishing, and round haul net fishing and target bonitos (*Katsuwonus pelamis* (Linnaeus, 1758)), tunas, and sharks. Pole-and-line fishing and long line fishing are also used to catch bonitos and tunas on the large boats of 200-500 m in the Exclusive Economic Zone (EEZ) up to 200-nautical-mile fishing ground.



Fig. 1. Location of Meitsu (in the south) and Odoutsu (in the north) fishing villages in southern Miyazaki.

The central part of the coast of Miyazaki comprises emerged shorelines with extended sandy beaches, whereas the north and south parts of the coast consists of submerged shores with heavily indented coastlines. The different coastal topographies affect the management and methods of fishing.

The central part of the coast mainly serves as the fishing grounds for coastal fishing. In the northern part of the coast, fishers are engaged in coastal and offshore fishing. The southern part of the coast, however, is quite different. The shores are enriched by water from rivers of various sizes flowing from the land, but when the hot and oligotrophic Japan Kuroshio Current comes close to the coast, it carries away the eutrophic water. So, fishermen generally embark upon large boats, more than 30 m, to fish for tunas and bonitos in offshore and pelagic seas (Beppu et al. 1992).

For fishing bonitos, from February to May, fishermen move to the east towards Taiwan and from May to November they follow the shoals of bonitos heading north in the direction of the Japan Kuroshio Current. They go as far as off Sanriku (northern Honshu Island), using a port in the Tohoku district as the base. Eighty-five percent of the catch of bonitos is supplied for sashimi. The catch of bonitos is increasing through the introduction of more advanced boats worth several hundred million yen each and the introduction of state-of-the-art equipment. Therefore this fishery employs many young fishermen who are skilled in operating these boats. The majority of the bonitos catch come from the southern Miyazaki coastal area and it accounts for more than 90% of the total bonitos catch from Miyazaki. The bonitos are fish that are popular among Japanese. They are also mentioned in “Kojiki” or records of ancient matters, “Nihonshoki” or chronicles of Japan and “Manyoshu” or the oldest collection of Japanese poems.

Long-line fishing is carried out in the seas off the coast of Japan and within the 200 nautical mile EEZ. Also fishermen pay charges for fishing operations in the waters near to Palau, the Federated States of Micronesia, the Marshall Islands, the Solomon Islands and Kiribati. The ships vary from 17.23 tonnes to 363 tonnes. Smaller boats deal with fresh fish and large boats are equipped with freezers to preserve fish at -55 °C.

Population scales of Meitsu and Odoutsu villages

Odoutsu and Meitsu are villages located on opposite banks of the Nango River that flows into the Sea of Hyuga (Fig.1). Both are fishing villages with the fishermen engaged mainly in pole-and-line fishing for bonitos and long line fishing for tunas.

A large proportion of the populations in the two villages were in the age group 50 and above. However, fishermen were even older and in the age group of 60 years and above. Meitsu has around 4,000 households whereas Odoutsu has about 1,500 households. The village populations reached their peak in the 1960s in both the villages. The population of Meitsu plunged in the 1970s, but surged again from the 1980s. Since then, it has gradually gone down again and at present is about 10,000. In Odoutsu, the population has been decreasing since the 1960s and now stands at about 4,000 people. Meitsu has more households, which may be due to the fact that there has been less migration from there to urban areas.

Expansion and diversification of fishing activities in Meitsu

The Meitsu Fisheries Cooperative has a membership of 293, out of which 60% of the members are between 20-60 years of age and take part in pole-and-line fishing for bonitos. Eighty

percent of those who engage in troll fishing and pole-and-line fishing are in their 60s. The fishing methods also include pole-and-line fishing and long-line fishing. Fishing is coastal and has long been done within 12-37 km from the coast (Nango Town Local History Compilation Committee 1980).

In 1907, about 30 boats from the village would go to the seas off the Goto Islands of Nagasaki, Ohshima Island of Kagoshima and off Okinawa and Taiwan, mainly to fish for bonitos. In 1931, about 100 tuna boats from Hoto Island of Oita used the port of Meitsu as their base for tuna fishing, and this helped in developing the port as well as tuna fishing in the village. With the advancement in means of transportation and distribution, as well as improvement in the quality of life, fish was in greater demand. In the post-war period, the fishing industry grew further. Fishing boats became larger, and fishing grounds extended to the Philippines. According to records from 1951, the majority of the boats were still small boats carrying 2-3 fishermen to carry out night fishing with fish-luring lights. However, long-line fishing for tunas was assuming greater importance (Nango Town Local History Compilation Committee 2011).

In the late 1960s, more fishermen started to own more than one boat each and by the 1970s, with advanced freezing technologies and boats of over 100 tonnes the tuna fishing industry of Japan not only operated in the East China Sea but also began to explore deep seas in the Atlantic Ocean and near the coast of Africa. The catches rapidly increased, which led to a surge in the price of tunas in the late 1970s (Nango Town Local History Compilation Committee 1980).

But the fishing industry went in to a slump not long after due to the implementation of the 200 nautical-mile EEZs internationally in 1978. In addition, foreign purse-seiners came to fish for tunas in large numbers. Fisheries resources declined, fuel costs surged, the demand for marine products did not grow sufficiently to meet the increasing imports that caused an oversupply of fish and kept the prices of fish low. In the early 1980s, the increasing number of fishing boats and the use of larger boats of 50-100 tonnes made it possible to operate for longer periods, from three to six months, and bring back catches in both frozen and raw condition. An imbalance between supply and demand caused by an oversupply of bonitos and tunas, however, still kept prices low. From 1985, both national and prefectural governments subsidised the fleets as they strove to stabilise the prices of fish through adjusting production and at the same time reducing the numbers of bonito and tuna fishing boats (Nango Town Local History Compilation Committee 2011).

Meitsu fishermen also promoted coastal fishing in such ways as releasing fries and employing foreign workers who were trained to acquire know-how and techniques concerning fishing. They took steps to encourage the consumption of fish by selling fish and providing free fish dishes at various events, such as the *Nango Kuroshio Matsuri* (Nango Kuroshio Current Festival) in August and *Sangyo Bunka Fukushi Matsuri* or the festival for promoting industry, culture and welfare, in autumn. In 2005, to further expand the consumption of fresh marine products and create awareness about the importance of including more fish in the diet, the Fisheries Cooperative opened a restaurant to serve fish dishes and sell processed marine products. Its annual average sales is about 170 million yen.

The Fisheries Cooperative has several subordinate organisations, namely the Tuna Fishing Boat

Owners' Cooperative (with a membership of 8), Bonito Fishing Boat Owners' Cooperative (membership of 14), Small Boat Owners' Cooperative (membership of 42) and the Women's Division (membership of 130). Thus the Women's Division has a greater number of members than the total of all the other subordinate organisations.

The stagnation of fishing activities in Odoutsu

With coastal and offshore fisheries as their mainstay, Odoutsu fishermen actively engage in pole and line fishing for bonitos in fishing grounds off Okinawa and Taiwan. After the fishing season for bonitos from March to August, fishermen also operate pole-and-line fishing for mackerels.

In the early 1930's, fishing boats started becoming larger and the village attracted long-line boats from all over Japan as the base for tuna fishing. Over the stretch of coast from Odoutsu to Tanegashima and Yaku Islands, the catches were very good. After a slump during World War II, from 1946 onwards the catches increased. In 1964, coastal long-line fishing for tunas by small boats lighter than 10 tonnes and using horse mackerels as live baits was thriving, and the village installed a 100 tonnes refrigerator and an ice-making machine. Till 1969, the village flourished because the catches increased rapidly due to upgrading to larger vessels, modernising the fishing boats and improved construction of cargo boats to carry the fish. Thereafter, confronted by constraints like the oil shocks in 1973 and 1978, falling fish surging prices, fuel oil prices, and restrictions on fishing grounds by the 200-nautical-mile EEZ regulations, in 1993 the Fisheries Cooperative decided to merge with the fisheries cooperatives of two neighbouring villages (Nichinan Industry Revitalisation Council 1993). In 2013 Odoutsu village owned 33 fishing boats, varying from 0.5 tonnes to 137 tonnes. Before 1993, the Fisheries Cooperative membership was about 200, but has decreased to 78 at present, 70% of whom are aged 60 and above.

Regarding tuna fishing, two 19 m boats designed for three fishermen each, carried out fishing in the fishing grounds which stretch from the East China Sea to the Southwest Islands of Kyushu. Bonito fishing boats exploit two fishing grounds. One fishing ground is off Miyazaki to Okinawa and the Goto Islands of Nagasaki; and the second is the Nansei Islands. Eight boats of less than 5 tonnes capacity engage in long-line fishing for flying fish for about 180 days from September to March. Pole-and-line fishing for bonitos is carried out during April and May, after watching the tidal currents as well as taking into account the market prices of fish. Long-lining for dorados (*Coryphaena hippurus* Linnaeus, 1758) is carried out from June to August.

In contrast, neighbouring Meitsu village has combined coastal and offshore fishing, and its vessels catch full-grown bluefin tuna (*Thunnus orientalis* (Temminck and Schlegel, 1844)), young bluefin tunas and yellow porgies (*Thunnus albacares* (Bonnaterre, 1788)) to earn 50,000 yen a day or more. Despite the example of Meitsu, fishermen of Odoutsu do not want to develop new fishing methods, saying, "You do, but we'd rather not". As they started the job when big catches were common, fishermen of 60 years of age and over are reluctant to change their fishing methods to new ones. Fishermen in their 40s and 50s are constantly trying to develop new methods to increase production, as they became professional fishermen when fish catches were already declining. A little less than 80%

of the members who go fishing on small boats are 65 years old and over. A fisherman who is in his 50s and works on a tuna fishing boat explains the situation by saying that few young people want to join the profession, because fishing requires hard work, but unlike thirty years ago, it doesn't pay, and they cannot be free until they return to their base port.

The activities of the Women's division affiliated with the Japan Fisheries Cooperatives

The National Liaison Conference of Women's Divisions is affiliated to Japan Fisheries Cooperatives. The women's divisions are organisations comprising of women living in the area of each cooperative, who themselves belong to the cooperative or whose family members belong to the cooperative. They are unique organisations united by the power and energy of women who work on the beaches and have been making a persistent effort for the development of the cooperatives and also for improving the socio-economic conditions of their villages. The fisherwomen cooperatives initiated their activities on their beaches in the 1950s. The women also started saving their income with the help of these cooperatives to help them during financial crisis. Women are also involved in many activities, such as conservation of the environment, promotion of savings, fund-raising campaigns for children who lost parents in maritime accidents on fishing boats, and expansion of the consumption of processed marine products. Their previous projects mainly concentrated on promoting diets containing more fish and also conserving the beach environment by activities like cleaning beaches, and planting trees to create fishermen's forests. They also use and disseminate environmentally friendly soaps named *wakashio*, give cooking lessons as part of the efforts to encourage people to eat more fish, have started up a team of entrepreneurs to promote local people's consumption of local products, as well as to produce and sell processed products made from local marine resources.

Fisheries related activities of women of Meitsu village

According to Ms. M, who was born in Meitsu in 1947 and is now President of the Meitsu division, the Women's Division of the Meitsu Fisheries Cooperative was established in 1978. At the time of foundation the Women's Division of the Cooperative had 400 members which had decreased to 130 in 2012. More than 60% of the members were of age 60 and above. Less than 10% of the members belonged to the age group between 20-30 years old as women of this age group were busy taking care of their young children. Women whose husbands belonged to the Fisheries Cooperative automatically become members of the Women's Division, but today even non-fisherwomen are also permitted to join the division.

The Women's Division have encouraged savings as part of an effort to abolish customs which seemed to be merely for vanity or a waste in the community, such as return offerings by the families of the deceased to people who have made funeral offerings and monetary gifts for the Bon Festival and the first Bon Festival after the funeral. Today however, their activities comprise: (1) assistance for various events; (2) promotion of detergents which are eco-friendly; and (3) encouraging fish in the diet by giving cooking classes to show how to cut, trim and cook fish at elementary schools twice a year, at junior and senior high schools four times a year as well as to elderly people living alone. The restaurant run by the Fishermen's Cooperative employs 24 people, and two of them are the staff of the Cooperative. The others are women working part-time, and five of them are members who are

in their 70s and earn an hourly wage of 700 yen.

A member who owns bonito and tuna boats deals with accounting and management of the wages, insurance premiums and other expenses of the 24 fishermen and crew on the boat, including 6 Indonesian trainees, while her husband goes fishing off Katsu-ura of Chiba and Kesen-numa of Miyagi from January through November. After deducting the expenses from the total income, the net income is divided among the captain, chief engineer, chief fisherman and cook.

Spiny lobster fishing is carried out by one fisher couple, and in cases of trawl-line fishing and long-line fishing, one fisherwoman helps fixing baits on the hooks.

Women of Odoutsu village becoming processors and sellers of seafood

In 1952, the forerunner of the Women's Division was founded and named the Ladies' Division. As of 2012, there were 75 women belonging to the Division, and those in their 60s account for a little less than 80%. Members in their 40s and under make up a little more than 1%. The staff in charge of management and operations of the local processing center consists of twenty women, of whom two are in their 50s, eleven in their 60s, and seven in their 70s.

With allocations from the national and prefectural budgets, the Nichinan City Fisheries Cooperative established the processing center in 1994 for the purpose of processing and selling dorados, as the catches were too big to be priced properly and there was no demand for them. In 1997, however, the catches of dorados plunged, and the cooperative had to operate the center while incurring loss. In 2001, it entrusted the operation to the Women's Division. They process the catch of bonitos, dorados and flying fish and produce local products of their own brand, trying to meet the consumer demands.

Processed marine products are produced based on according to orders. The Women's Division members also participate in various events including the open-air markets held in the morning twice a month. Also, the women visit elementary schools and high schools to give cooking lessons which was started in 1975, so that young people may be encouraged to eat more fish. Their fisheries products are advertised through mass media, including national television and newspapers, word-of-mouth communication, and on the cooperative's website. The women are paid daily wages of 5,000 yen.day⁻¹.

The processing center operates for 130 days a year and its annual sales amount to 20 million yen. The income earned is used for buying/replacing equipment, development, management and administration, and new product ventures. From February to November, the women make *katsuo-shoyu-bushi* or boiled bonito meat marinated in soy sauce, and from September to March, they process *tobiuo-surimi-udon* or noodle made from flying fish mince.

Women consider these processing centers as not just a place to earn income but also as a space through which they could promote and propagate the traditional preserved fish products. Processed foods are supplied to commercial trade shows in Tokyo and Miyazaki, Michi-no-ekior rest areas along the highways, Minato-no-ekiora restaurants combined with shops that sell local products at

Meitsu Port, and local supermarkets. Also, they sell those products to people who order it for *chugen* or mid-year gifts, *seibo* or year-end gifts, souvenirs, gifts, and return gifts to people who gather at anniversary memorial services. Popular products of their own brand are *sakana-udon* or noodle made from fish mince, *katsuo-shoyu-bushi*, and *shiira-no-surimi* tempura or deep-fried mince of dorados. The Odoutsu village Women's Division has developed 13 products so far.

Difference in gender roles among the two coastal villages

With the Fisheries Cooperative having a growing membership and with the development of larger fishing vessels, Meitsu village built larger and more modernised fishing boats and they were able to carry out fishing in distinct fishing grounds and stay at sea for longer duration. Moreover, when marine resources decreased, they changed their fishing method from pelagic fishing to small coastal fishing, and also improved fishing tools and methods, which led to an increase in production.

As part of their efforts to expand consumption of marine products and encourage people to eat more fish, members who engage in small-scale fishing participate in festivals and open-air fish markets and gauge consumer preferences. Attempts are also made to create more awareness about their locally produced products in order to revive the declining marine fish industry. They are marketing locally processed marine products at the restaurant run by the Cooperative. Fishermen's wives help their husbands in management of overhead expenses and preparation for going fishing but do not engage in processing and sales or marketing the products, as is the case in Odoutsu village.

Odoutsu village has fewer members in the Cooperative and most of them are aged. They use simpler forms of fishing. Therefore, fishermen's wives support their husbands in fishing, and at the same time, they buy a large amount of local fish to process, and visit various events to advertise and sell their products. These efforts, however, are made without any assistance of the Cooperative. Based on traditional recipes, they developed various processed products of their own brand to meet the popular demand of the consumers (Table 1).

Table 1. The differences in gender roles in fishing activities in Meitsu and Odoutsu villages (● indicates participation, x indicates no participation).

Village	Direct sale by fishermen	Processing and sale by women	Processing facilities of marine products by women	Participation in events for publicity and sale of products of women
Meitsu	●	x	x	x
Odoutsu	x	●	●	●

Conclusion

The Meitsu fishermen depends mainly on the bonito and tuna fishery to cope with the changes such as decrease in marine resources, the slump in the price of fish, the rise in fuel costs and by the employment of young foreigners on fishing vessels. In addition, the fisheries cooperatives provide new opportunities not only in the capture fishery but also in processing and marketing of

fish products. Wives of fishermen also support their husbands in these ventures.

However, the Odoutsu fishermen depend mainly on the coastal fishery and harvest flying fishes, dorados and bonitoes and are engaged only in the small scale fishery. Therefore their wives depend on their traditional knowledge, and they process and market their value-added products directly.

The study elaborates how two fishing villages which have almost the same kind of fishing activity, exhibit differing roles among men and women in terms of the scale of the fishing industry and fisheries cooperatives as well as the ways of responding to the changes in social and environmental conditions. The division of roles between men and women are not as simple as “men go fishing while women sell fish,” but the roles may actually take various and variable forms, even in villages that are adjacent to each other.

Further studies may be required to show differences in the processes by which the divisions of roles and occupations between men and women were formed in fishing villages with different forms of fishing as well as comparing fishing village communities with villages that have totally different forms of occupations, such as farming villages and mountain villages.

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