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Problems with the operation and management of Japanese fishing boats in the fishing grounds around the Senkaku Islands, with a focus on the pole-and-line fishing of groundfish

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Summary

Problems have arisen not only between Japan and China but also between Japan and Taiwan over the Senkaku Islands. Under these circumstances, there are fishermen operating around the Senkaku Islands. In this paper, putting a focus on pole-and-line fishing boats for groundfish that belong to the Hinoshima Fishermen's Cooperative in Kumamoto Prefecture and the Ibusuki Fishermen's Cooperative in Kagoshima Prefecture, this paper discusses the utilization of fishing grounds and the forms of operation, clarifies the relationship between Chinese fishing boats and Chinese government vessels, and analyzes the problems these Japanese fishermen face in operations and management.

The results of the analysis are as follows. (1) The deployment of Chinese government vessels makes it almost impossible for ships of less than 5 tons from Okinawa Prefecture to operate. (2) Therefore, there is currently no competition between the fishing boats of Kyushu and Okinawa in the fishing grounds of the Senkaku Islands. (3) Chinese government vessels are deployed mainly in the waters surrounding Uotsuri Island and utilization of the Senkaku fishing grounds tends to concentrate in the territorial seas of Taisho Island.

As a result of the deteriorating functioning of the Japan-China fishery pact and the conclusion of the Japan-Taiwan fishery pact, confusion in Japanese fishing operations is growing more serious.

1. Objective and method of the research

A dispute arose not only between Japan and China but also between Japan and Taiwan over the territorial rights to the Senkaku Islands¹, and the territorial dispute affects fishing operations. The confrontation has become belligerent in the cases of both Japan and China. Up to 300 Chinese fishing boats swarmed in the waters of the Senkaku Islands in August 2016, and Chinese maritime police officials aboard government vessels² that accompanied the Chinese fishing boats intruded into the territorial seas of the Senkaku Islands. As many as 15 Chinese government vessels simultaneously intruded into the zone contiguous to the Senkaku Islands, with a total of 17 separate incursions into Japanese territorial seas, causing tension even

back in Japan. Japan and China concluded the Japan-China fisheries pact in the East China Sea, which includes the Senkaku Islands, for stable resource utilization, but it is clear that the pact is not playing its intended role.

Under these circumstances, there are fishermen operating around the Senkaku Islands, the fishing grounds that they consider the most important. They include not only fishermen from Okinawa Prefecture but also from all over Kyushu who sail to the fishing grounds around the Senkaku Islands³. Fishermen from Kyushu hardly attract any public attention, and the realities of their operations and their management problems remain unknown. Putting a focus on pole-and-line fishing boats for groundfish⁴ that belong to the Hinoshima Fishermen's Cooperative in Kumamoto Prefecture

and the Ibusuki Fishermen's Cooperative in Kagoshima Prefecture, this paper discusses the utilization of fishing grounds and the forms of operation, clarifies the relationship between Chinese fishing boats and Chinese government vessels, and analyzes the problems these Japanese fishermen face in operations and management.

Few research results have accumulated on the present fishing operations around the Senkaku Islands. The "Senkaku Kenkyu (Study on the Senkaku Islands)" (2015) published by the Compilation Committee of Literature and Materials of the Senkaku Islands, is a valuable source because it records the results of interviews conducted mainly with people involved in fishing operations in Okinawa Prefecture. However, it fails to clarify the change of utilization of fishing grounds and management trends amid the increase of problems, including the situation following the Japanese government's decision to nationalize the Senkaku Islands.

2. Recent situation of the Senkaku Islands and fishing operations

Taking opportunity of the collision between a Japanese ship and a Chinese fishing boat in 2010, the Japanese government nationalized the Senkaku Islands in September 2012. Assuming a defiant attitude toward the Japanese government's decision, China allowed its government vessels to intrude into the islands-territorial seas and contiguous zone and intensified its claim to them. The Permanent Court of Arbitration at The Hague rejected China's claim to be entitled to use landfill in the Spratly Islands in the South China Sea and the Japanese government agreed with the court's judgment. Frustrated with the court's decision and the agreement of the Japanese government, China strengthened its belligerence by deploying up to 15 government vessels in the territorial seas and contiguous zone of the Senkaku Islands in August 2016.

Taiwan also opposed Japan's decision to na-

tionalize the Senkaku Islands. It put pressure on the Japanese government by adopting an attitude whereby it explored ways to collaborate with China over the issue. To avoid the possibility of Taiwan's siding with China, the Japanese government concluded the "Sino-Japanese Agreement on Public Fishing" that allowed Taiwanese tuna trawlers to operate in the waters around the Senkaku Islands. As the Japan-China fishing pact previously concluded enabled Chinese fishing boats to operate in the same area, this agreement with Taiwan created a situation whereby the fishing vessels of all three nations were operating there.

Consequently, large numbers of Chinese roll-net fishing boats and coral fishing boats, as well as Taiwanese tuna trawlers, gather in the waters south of 27 degrees north, making it hard for Japanese fishing boats to operate safely.

3. Influences on fishermen of Kumamoto Prefecture

(1) History of Kaiei Maru

The growing tension over the situation involving the Senkaku Islands seriously affects the work of fishermen in every prefecture of Kyushu. Kaiei Maru⁵, which is a pole-and-line fishing boat belonging to the Hinoshima Fishermen's Cooperative in Kumamoto Prefecture, is also affected. The first generation of Kaiei Maru was built in 1962 by Fumio Maruyama, who is the eldest son of a fishing family in Hinoshima. It was a 19-ton wooden boat built with five million yen that he borrowed as a subsidy provided by the Fisheries Agency for modernizing fishing operations.

The Hinoshima Fishermen's Cooperative today is a small fishermen's cooperative that has 26 full members (in their seventies on average) who operate pole-and-line fishing aboard a fishing boat of less than five tons, but it was very active in the late 1970s, with seven 19-ton type pole-and-line tuna fishing boats. However, it has only two 19-ton fishing boats including Kaiei Maru today.

Kaiei Maru started operating in the Senkaku

fishing grounds by making the best use of the information it got from Oita Prefecture fishing boats in 1978. It soon successfully secured regular catches, catching six tonnes of snapper per five- to six-day voyage in the Senkaku fishing grounds. Fishing operations in remote fishing grounds produced a profit because the unit price was 2,500-2,800 yen per kg and fuel oil was about 50 yen per liter back then. There was no move to keep foreign fishing boats away, and it sometimes sailed as far as the Mariana Islands, the Pratas Islands, and Taiwanese coastal waters to fish. Mr. Maruyama enjoyed a stable business and built the second generation of Kaiei Maru, a 19-ton boat made of fiber-reinforced plastic, in 1977.

(2) Present operation and realities of business

The present Kaiei Maru is a 19-ton boat made of fiber-reinforced plastic that Mr. Maruyama purchased in 1999, and the captain is Fumihiko Maruyama, born in 1965, who is the eldest son of Fumio Maruyama. All other four crew members are

from the Maruyama family. It usually operates in the fishing grounds around the Senkaku Islands and Yonaguni Island from November to the following March, in the fishing grounds near the boundary on the East China Sea between Okinawa's main island and Miyako Island from April to July, and in the southeastern waters designated by the Japan-China temporary measures from August to October. Each of the four fishing grounds is south of 28 degrees north, and catches are landed in its base city of Naha where the families of the crew members live.

Japanese fishing boats compete with Chinese and Taiwanese fishing boats in all fishing grounds south of 28 degrees north. The fishing grounds around the Senkaku Islands where Kaiei Maru fishes in winter are especially important because winter catches from these fishing grounds account for 40% in amount and 50% in value of the total annual catches. Because not only Japanese but also Chinese and Taiwanese fishing boats operate sim-

Table 1 List of sales and expenses of Kaiei Maru (Unit: yen)

		FY 2012	FY 2013
Sales	Catches	47,564,493	58,188,876
Operating expenses	Terminal charge	1,041,633	1,221,238
	Box charge	1,043,026	1,309,355
	Fuel charge	5,810,050	7,324,379
	Bait charge	1,006,971	1,693,565
	Ice charge	854,608	948,633
	Fishing equipment charge	1,498,359	1,877,266
	Landing charge	2,388,247	2,913,155
	Others	59,340	45,286
	Total operating charges	13,702,234	17,332,877
Labor costs	Wages	19,327,000	18,710,000
	Statutory welfare charge	2,570,213	3,542,947
	Welfare expenses	789,016	773,995
	Food expenses (on the boat)	1,964,917	1,646,908
	Total labor costs	24,651,146	23,270,063
Administrative charges	Repair charge	715,382	1,956,892
	Tax and public charges	677,590	2,100,110
	Depreciation charge	0	2,567,374
	Others	8,562,438	10,038,735
Total administrative charges	9,955,410	20,980,053	
Miscellaneous income	Subsidy from monitoring foreign fishing boats	329,604	4,497,482

Note : Compiled from the material of Kaiei Maru Suisan, Ltd.

ultaneously in the fishing grounds south of 28 degrees north, Japanese fishing boats suffer various kinds of damage. For example, their fishing equipment gets tangled in fishing equipment abandoned by Chinese coral fishing boats. As a matter of fact, the safe operation of Japanese fishing boats is being threatened. Though not in large numbers, fishing boats supposed to be Taiwanese fishing boats can also be seen.

Taking the above situation into consideration, pole-and-line fishing boats of less than five tons, which are dominant in Okinawa Prefecture, tend not to operate and no competition can be seen between Okinawan and foreign fishing boats. Fishing boats below five tons rarely sail from Miyako Island to Taisho Island ; if so, they usually fish for two days at most and then return to port because of the limited amount of fuel oil and fish they can load on the boat.

The present level of daily catches is 300 kg, two tonnes at most per voyage that is usually 4-10 days long, and annual catches are about 60 tonnes. Snapper are 800-1,200 yen per kg, and annual catches amount to 50-60 million yen. Table 1 shows operating expenses for 2012 and 2013.

The fluctuation in annual catches is around 10 million yen, and irregular catches are inevitable because catches depend on the length of operation, the plentifulness of fish, and the supply of baitfish. The fluctuations in fuel cost are far from insignificant. Handling charges for catches, terminal charges, and the cost of boxes necessary for shipment are also considerable. Operating expenses account for 30% of revenue from catches. At the same time, although efforts are being made to reduce labor charges, labor costs (wages and salaries), including statutory welfare expenses (social insurance expenses) account for 40-50% of the value of catches. Consequently, decreased catches affect business immediately. The miscellaneous income that amounts to three to four million yen is the subsidy that each fisherman can get by participating in the project to monitor foreign ships. Because it is hard

for sales to cover manufacturing expenses, laborexpenses, and administrative expenses, this subsidy plays an important role in stabilizing business.

The problems the Kaiei Maru faces includes catches that fluctuate greatly and a management structure that does not allow labor charges to increase despite workers being engaged in labor-intensive fishing operations, not to mention damage inflicted by the above-mentioned Chinese fishing boats and Chinese government vessels. The succession problem has arisen because of the necessity to control the growth of labor expenses. Captain Fumihiro Maruyama,s eldest son has decided to stop fishing and find another job because of a management environment that is growing increasingly difficult. Other crew members do not have sons or are not married. The problem of generational change remains a problem, though it is not imminent.

4. Influence on fishermen in Kagoshima Prefecture

(1) Operational realities of the Ibusuki fleet

Ibusuki Fishermen's Cooperative in Kagoshima Prefecture was established through a merger between Ibusuki Municipal Fishermen's Cooperative and Iwamoto Fishermen's Cooperative in 2006. It had 128 full members as of the end of 2013. Members are engaged in gill-net fishery along the sea coast and small-scale trawler fishing off the coast of Makurazaki to catch Higenaga sea shrimps as well as trapping fishery. It should be noted that a fleet operating in the waters around the Senkaku Islands belongs to this fishermen's cooperative. Naming itself the Iwamoto Fleet, it started pole-and-line fishing of snappers in 1970. It gradually expanded the fishing area southward and began to exploit the fishing grounds around the Senkaku Islands in 1983. It enjoyed a golden age until the beginning of the 1990s and had a maximum of 16 fishing boats. Back then, each fishing boat achieved daily catches of one tonne, and

the unit price sometimes exceeded 2,000 yen per kg. It enjoyed stable business and accumulated capital by purchasing land at home with surplus capital.

Today, it has four fishing boats, each of which has five to six crew members, because the price of snapper declined after the bubble burst and because the number of fish declined. They cannot expect catches as they enjoyed in the past, and they are operating with the aim of achieving daily catches of 300 kg. Between November and the following June, the main fishing ground is the territorial seas off each of the Senkaku Islands. Between July and October, the fleet sails north to the Amami and Tokara Islands because the tidal current speed increases around the Senkaku Islands in this period. They land catches in Naha city when fishing around the Senkaku Islands and in Kagoshima Prefecture when they fish around the Amami and Tokara Islands.

The Senkaku fishing ground is very important because catches there account for about half of annual catches in both amount and value (Fig. 1). On top of that, the tidal current speed sometimes reaches three miles per hour outside the territorial seas of the Senkaku Islands, and a refuge in the southern part of the Senkaku Islands to avoid tides and wind is required. In this sense, access within the Senkaku Islands' territorial seas is indispensable on grounds of safety as well as fishing.

(2) **Operational interference by Chinese government vessels**

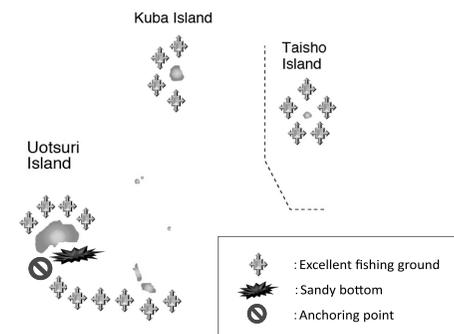


Figure 1 Extremely important Senkaku fishing ground and anchoring points

The Senkaku Islands fishing grounds are important, and Chinese government vessels have intruded into their territorial seas following the Japanese government's nationalizing of the islands⁶, and interference in operations, such as being pursued by Chinese government vessels, has occurred. To be specific, Chinese government vessels interfered with the operation of the Iwamoto fleet in February 2013. The Sakae Maru and the Takayoshi Maru of the Iwamoto fleet were relentlessly chased by Chinese Coast Guard officials inside the territorial seas of Uotsuri Island for six hours. Shinobu Takasugi, the captain of the Takayoshi Maru, testified to and detailed the chase by Chinese government vessels as follows:

- First day to third day: Having confirmed with the Japanese Coast Guard officials the absence of Chinese Coast Guard officials, began operating inside the Taisha Island territorial seas.
- ⇒ Night on the third day: Anchored at the point 22 miles north of Uotsuri Island because the weather was fine.
- ⇒ 7 a.m. on the fourth day: Received a report from the Japanese Coast Guard that Chinese Coast Guard officials were acting suspiciously near Kuba Island (no evacuation order was dispatched).
- ⇒ 9 a.m. - 11 a.m. on the fourth day: Operated in the territorial seas four miles off Uotsuri Island.
- ⇒ 11:30 a.m. on the fourth day: a China Coast Guard vessel moved from Kuba Island to eight miles southwest of Uotsuri Island crossed the fleet course. It suddenly changed course, closed in on the Takayoshi Maru, and turned around suddenly.
- ⇒ 12:00 p.m. - 5:00 p.m. on the fourth day: Following orders from the patrol boat Echizen, sailed three rounds of the island under Echizen's protection.
- ⇒ 5:00 p.m. on the fourth day: Because the Chinese vessel did not seem to stop their pursuit, the fleet escaped from the north part of Kitakojima Island and sailed to Yonaguni Island at full speed.
- ⇒ Early in the morning of the fifth day: Arrived in the territorial seas of Yonaguni Island.

The Iwamoto fleet stopped operations in the Senkaku fishing grounds in the year this incident

occurred. Although it is impossible to measure the specific effect just of Chinese government vessels, the Iwamoto fleet's Hōei Maru saw the value of its catches decrease from an average of about 40 million yen between 2007 and 2011 to about 34 million yen in 2013. The effect of being unable to fish in the seas adjacent to the Senkaku Islands was therefore a fall in value of around 15%. In addition, four ships changed their target fish, went out of business, or suspended operations. The impact of the incident was considerable: it is physically hard for the Japanese Coast Guard to protect all Japanese ships at any time and, therefore, leaving the Senkaku fishing grounds was the realistic response.

The Iwamoto fleet is also afraid of interference in their operations by Chinese marine survey ships and fishing boats. Because Chinese marine survey ships tow equipment while sailing, it is impossible to eliminate the possibility that anchor ropes will become entangled in the survey equipment being towed while the Iwamoto fleet anchors and crew members sleep at night. There was in fact an incident whereby the fishing equipment of Chinese fishing boats snagged on the Iwamoto fleet's anchor ropes.

In order to avoid such possible incidents, the Iwamoto fleet moved to the fishing grounds of Yonaguni Island because the west side of Taisho Island is not readily accessible. Because the fleet has changed its fishing grounds, and because groundfish occupy regular fishing grounds and do not migrate, competition with the fishermen of Yaeyama and increased pressure on groundfish resources is foreseen in the future.

The severe operational environment described above is not the only management problem. Snapper resources decreased and, simultaneously, the prices of snapper declined after the bubble burst, while fuel prices remain high. In addition, the present level of catches makes it necessary to set the minimum monthly salary of crew members at only 200,000 yen each. This leads to a problem

with finding successors, with four ships of the Iwamoto fleet currently lacking any. Crew members are now old, and Hello Work plays an important role in recruiting new employees for vacancies. However, crew members recruited through Hello Work quit the job within about three years because of the severe working environment and wages inappropriate for that environment. As a result, the average age of crew members is 50, even on the Takayoshi Maru whose crew has the lowest average age of all.

5. Japanese government measures to reduce damage

Responding to the worsening operational environment for Japanese fishing boats, the Japanese government is carrying out a project on measures regarding the operation of foreign fishing boats. The policy target is resource conservation by strengthening controls on foreign fishing boats and making the system to control illegal operations stricter. In addition, it aims to extend support on management and relief from damage by providing financial aid for collecting fishing equipment abandoned by Chinese fishing boats and for monitoring their operations. This is actually an income-securing policy which is indispensable in order for business operations to continue.

The project for surveying and monitoring fishing boats of every prefecture in Kyushu is incorporated into the budget of the Fishery Agency, and it is carried out by the Japan-Korea and Japan-China Fishery Promotion Foundation⁷. The level of subsidy as of August 2016 was 25,200 yen per person per day (including insurance of 3,800 yen and food expenses of 1,200 yen). The charter fee for a fishing boat between 15 and 30 tons is 54,000 yen per ship per day. Expenses for fuel, consumables, and communications is at cost⁸. Characteristically, the survey and monitoring project allows fishing boats to survey and monitor while they are operating. In the case of the pole-and-line fishing of groundfish in Kumamoto and Kagoshima, the subsidy amounts

to about 3.5 million yen per year. Because no system to compensate for catches exists, the project to survey and monitor the operation of foreign fishing boats is central to the policy of reducing damage and an extremely important measure to stabilize business amid the continuing uncertainty. For this project, 2.6 billion yen was allocated to the 2015 budget and 2.48 billion yen to the budget for 2016.

6. Conclusion

After Japan nationalized the Senkaku Islands in September 2012, Chinese government vessels intruded into the territorial seas and contiguous zones and have not stopped their intrusions, causing tensions and strain in this area. Today, at least four Chinese government vessels are deployed around Uotsuri Island and standoffs between these vessels and patrol boats of the Japanese Coast Guard continue. It has become hard for fishing boats from Kumamoto and Kagoshima Prefectures to carry out smooth pole-and-line fishing for groundfish inside the territorial waters of the Senkaku Islands, the activity on which they place most importance, and it has become impossible to ensure safe operations even with the protection of the Japanese Coast Guard.

Besides, fishing equipment abandoned by Chinese coral fishing boats lies scattered on the seabed, which damages the fishing equipment of Japanese pole-and-line fishing boats. In addition, some Chinese fishing boats approach Japanese boats at night with their fishing lights on, making it hard for crew members to sleep. Because Taiwanese tuna trawlers rarely access the territorial waters of the Senkaku Islands, it is the damage inflicted by Chinese government vessels and fishing boats that is growing more conspicuous.

The deployment of Chinese government vessels makes it almost impossible for ships of less than 5 tons from Okinawa Prefecture to operate. Operations by 19-ton ships are most efficient from the viewpoint of fuel consumption rate, carrying ca-

capacity, and seaworthiness. Therefore, there is currently no competition between the fishing boats of Kyushu and Okinawa in the fishing grounds of the Senkaku Islands. However, if these fishing grounds become unavailable, fishing boats will have to move to the Sakishima Island fishing grounds. In this case, there is a strong possibility of competition between Kyushu's and Okinawa's fishing boats. Under the present circumstances, Chinese government vessels are deployed mainly in the waters surrounding Uotsuri Island and utilization of the Senkaku fishing grounds tends to concentrate in the territorial seas of Taisho Island. The decrease in the general availability of fishing grounds has led more fishermen to move to the territorial waters off Taisho Island searching for groundfish, increasing the problem of pressure on fish stocks. As a result of the deteriorating functioning of the Japan-China fishery pact and the conclusion of the Japan-Taiwan fishery pact, confusion in Japanese fishing operations is growing more serious.

In addition to the influence of extraneous factors, the management problems of pole-and-line fishing for groundfish can be summarized as follows: decreasing employee retention rates against a background of reducing labor charges has become an important issue in the situation, characterized by decreased amounts of and prices for snapper, high fuel costs, and the heavy burden of labor costs of which wages and salaries make up the bulk. From the viewpoint of continuance of management, chronic labor shortages and the absence of successors is critical. It is, therefore, important to develop a policy of developing successors with support from the project to monitor the operation of foreign fishing boats carried out by the Fisheries Agency. Otherwise, the pole-and-line fishing boats of Kagoshima and Kumamoto Prefectures catching groundfish will have to quit, and there will be scarcely any operational or business activities by Japanese boats in the fishing zone of the Senkaku Islands.

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Notes

- ¹ The Senkaku Islands is a collective term that covers the five islands of Uotsuri Island, Kitakojima Island, Minamikojima Island, Kuba Island, and Taisho Island and three small islands: Okinokita Island, Okinominami Island, and Tobise Island. All five islands and three reefs belong to Ishigaki City in Okinawa Prefecture. They are located about 170 km north-northwest of Ishigaki Island and about 410 km west of the Okinawa mainland.
- ² The maritime police of the Maritime Police Bureau, the sea police of the State Oceanic Administration, and the officials of the Bureau of Fisheries were responsible for the management of government-owned vessels in the past. These organizations were reorganized in July 2013, and since then the Chinese Coast Guard has deployed maritime police.
- ³ In this paper, this means the fishing grounds inside the territorial waters of each of the Senkaku Islands.
- ⁴ Pole-and-line fishing for groundfish using a powered fishing boat bigger than five tons are fishing operations approved by the governors in Tokyo and in Okinawa Prefecture. The target is queen snappers, blue fusiliers, and crimson snappers.
- ⁵ This fishing boat is owned by Eimaru Suisan, Limited.
- ⁶ “Minami Nihon Shimbun” dated July 2, 2013.
- ⁷ The Okinawa Fisheries Foundation promotes the project for the fishing boats of Okinawa Prefecture.
- ⁸ Japan-Korea and Japan-China Agreement on Fisheries Promotion Foundation, “Implementation of and clerical procedures for Japan-Korea and Japan-China projects,” 2016, pp. 164-165.