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メタデータ	言語: eng 出版者: 公開日: 2009-04-28 キーワード (Ja): キーワード (En): 作成者: 松田, 恵明, 金田, 禎之 メールアドレス: 所属:
URL	https://doi.org/10.15021/00003294

The Seven Greatest Fisheries Incidents in Japan

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The purpose of this paper is to review the history of Japanese fisheries management and the major fisheries disputes that have occurred in the postwar period. Although no common legal system existed for fisheries in feudal times, various customary laws regulated coastal fishing. The basic idea of such regulations was to create exclusive use rights in waters adjacent to coastal villages and thereby to provide revenues for local governments. Although such waters were regarded as common property, inequality in use developed. The Meiji *Fisheries Law* (1901) succeeded such customary laws and aggravated inequalities. With technological development, fishing tended to expand. Such expansion increased fisheries conflicts not only within the same village, but also between and among different fishermen's groups, villages and prefectures.

A great improvement in fisheries management took place in the postwar period. Nevertheless, there are still many conflicts. The seven greatest fisheries incidents discussed in this paper provide vivid illustrations of the processes that operate within the Japanese system of sea tenure. The incidents discussed here are the Sukumo Bay Incident, the Kyūroku-tō Incident, the Ariake Sea Incident, the Suō-nada Incident, the Essa Strait Incident, the Squid-Mackerel War off Hachinohe, and the Mackerel War off the Tone Estuary. These incidents and the solutions to them were unique to local conditions, but are important precedents for common property problems such as gear conflicts, limited entry, illegal fishing, island ownership, boundary jurisdiction and other institutional reform problems.

INTRODUCTION

No common legal system governed the fisheries of feudal Japan. However, various local customary laws and agreements regulated the use of coastal fishing grounds [ANON. 1889; YAMAGUCHI 1957; AKIMICHI and RUDDLE this vol.; KADA this vol.; KALLAND this vol.], the basic idea of which was the creation of exclusive use rights in waters adjacent to coastal villages, thereby providing revenues for local governments. Although such waters were also regarded as common property,

inequality in their use developed. The *Fisheries Law* of 1901 succeeded such customary laws and attempted to maintain peace and order in fishing communities. But, in effect, it merely aggravated the inequalities [SHINKAWA 1958; NÖRINTÖKEI KYÖKAI 1961; RUDDLE and AKIMICHI n.d.]. With technological development fishing expanded and conflict increased within villages and between and among different fishermen's groups, villages and prefectures.

A great improvement in fisheries management occurred during the immediately postwar period with the passage of new legislation for fisheries, which resulted in a new framework for fisheries administration. Based on democratic principles, the 1901 *Fisheries Law* was amended in 1949, and a new *Fisheries Co-operative Associations Law* was enacted in 1948. Together, these two pieces of legislation triggered a dramatic change in the Japanese system of fisheries organization. The *Fisheries Co-operative Associations Law* made the cooperative system an integral part of the national fisheries administration. Fishery rights, licenses and government subsidy schemes are closely tied with the system, and a commercial fisherman must be a member of a fisheries cooperative in order to engage in fishing and to receive benefits through its network.

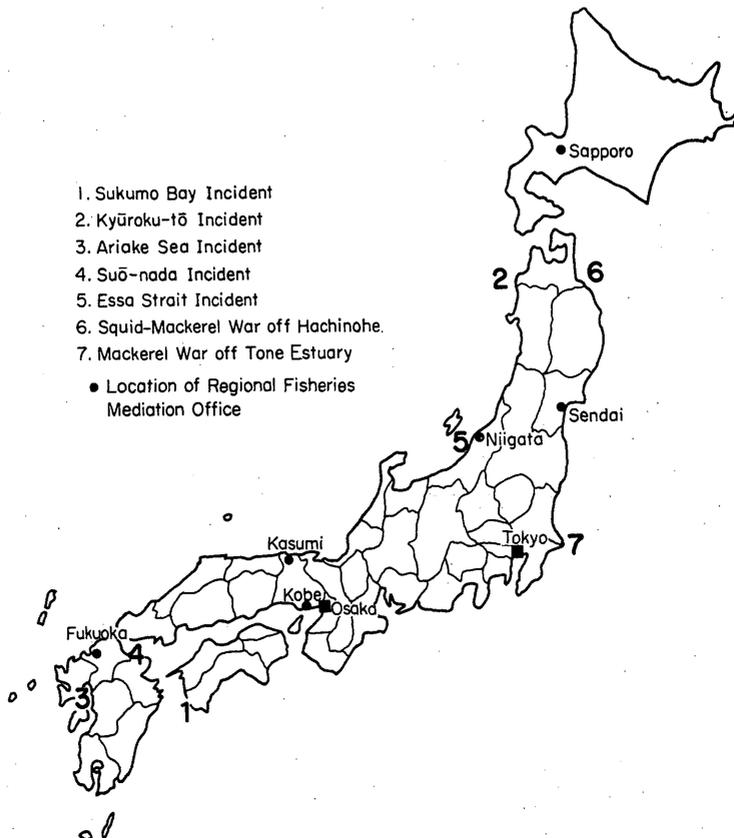


Figure 1. Location of the Seven Greatest Fisheries Incidents in Japan

Despite the merits of the Japanese system, many serious problems have arisen. The so-called "seven greatest fisheries incidents" among such problems [KANEDA 1979] provide good examples of the difficulties encountered in the Japanese system of sea tenure (Fig. 1). These incidents, together with the solutions applied to them, were unique to local conditions. Nevertheless they contain important common property management implications for institutional reform, boundary establishment, jurisdiction, island ownership, limited entry, gear conflict and illegal fishing, among others.

CASE 1: THE SUKUMO BAY INCIDENT

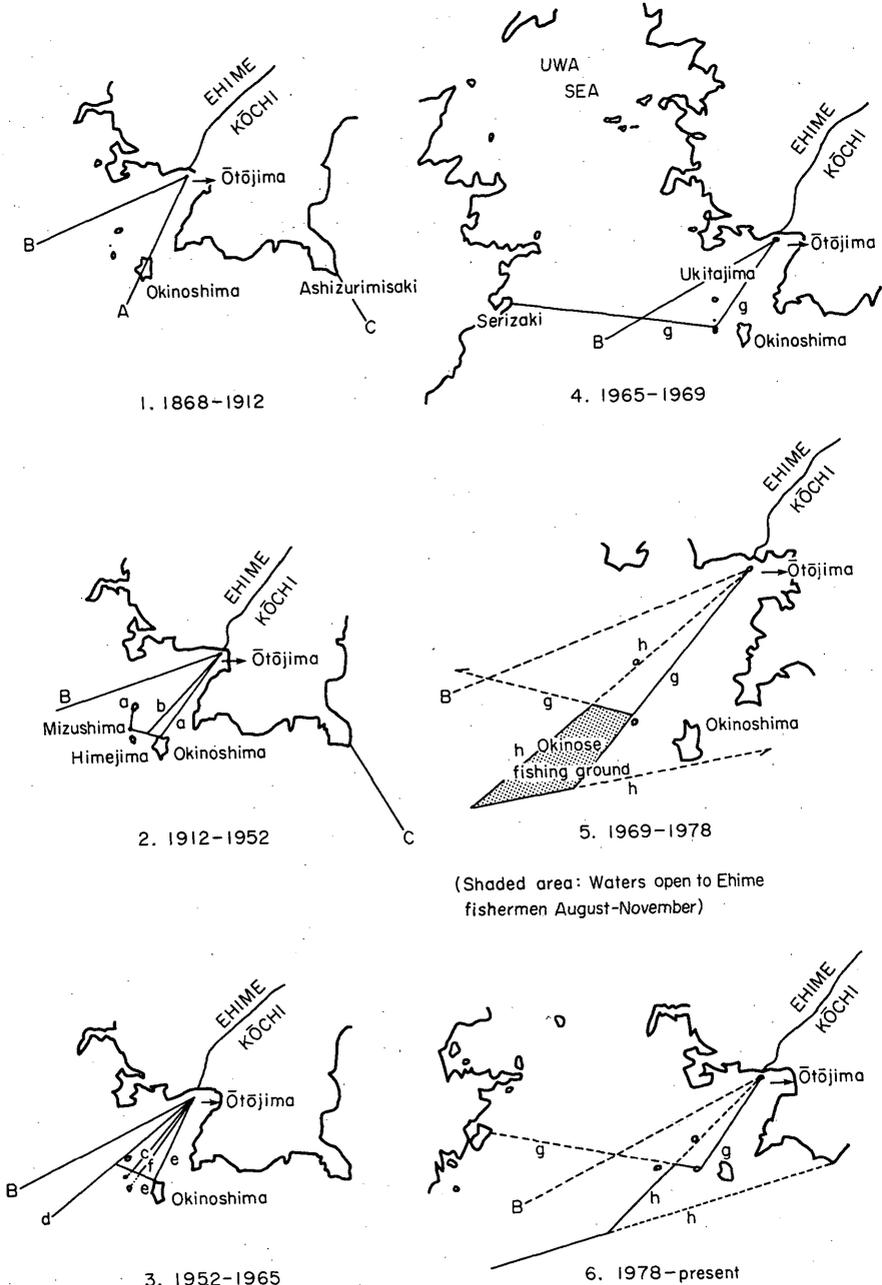
The waters within and outside Sukumo Bay, located off the boundary between Ehime and Kōchi Prefectures, on Shikoku Island, have always been good fishing grounds. Fisheries incidents between the two prefectures on these grounds were recorded in the Edo Period. However, they increased both in frequency and seriousness after the Prime Minister's 1874 notification for the settlement of fisheries disputes, after the 1871 dissolution of the feudal fiefs and their replacement by prefectures had transferred four islands in Sukumo Bay (Ukita, Mizu, Hime and Okino) from Ehime to Kōchi (Fig. 2-1). Since then the maritime jurisdictions of the two prefectures have become more obscure and fisheries incidents more frequent. Further complications were introduced by gear conflicts, since Ehime fishermen actively adopted such technological advances as purse seines and trawls whereas Kōchi fishermen retained their traditional techniques like angling, long lining and set net fishing.

Under the mediation of the Ministry of Agriculture and Commerce, a Sukumo Bay fisheries agreement was reached in March 1900, by fishermen from both prefectures (Fig. 2-1C). Since then the agreement has been renewed more than 24 times. However, renewals have not been smooth, owing mainly to the illegal activities of Ehime fishermen. As a consequence, mediation has been difficult, with many temporary agreements that have been kept for about two years. Fundamental solutions were never discussed and as a result both administrative efforts and costs were enormously high.

HISTORY OF THE INCIDENT

Although the 1874 line was legally valid, fishermen of neighboring villages (Higashi Sotoumi and Nishi Sotoumi), in Ehime Prefecture (hereafter referred to as Ehime fishermen), customarily fished in the waters in and off Sukumo Bay. As a consequence, fee fishing arrangements between Ehime and Kōchi Prefectures became problematical. The results of the 1887 and 1895 prefectural mediations were that Ehime fishermen could become members of the Kōchi Prefecture Fisheries Association on payment of an annual membership fee and could then fish in Kōchi waters.

In 1899 Kōchi Prefecture sent the Ehime fishermen licenses which clearly specified the conditions under which they could fish in Kōchi waters. The Ehime fishermen



(Shaded area: Waters open to Ehime fishermen August-November)

Figure 2. Mediation Maps of the Sukumo Bay Fisheries Incident
 A: Boundary before 1874; B: The boundary (1874-present);
 C: Agreed line in 1900 (1900-29); a: Agreed line in 1929 (1929-50);
 b: Agreed line in 1950 (1950-52); c: Agreed line in 1952 (1952-55);
 d: Agreed line in April 1955 for free fishing (1955-57); e: Agreed line in May 1955 (1955-57); f: Agreed line in 1957 (1957-65);
 g: Agreed line in 1965 (1965-present); h: Agreed line in 1969 (1969-present) Source: [KANEDA 1979]

disregarded these modifications incorporated in the new licenses and fished as usual off Sukumo Bay. Based on the new licensing system, Kōchi Prefecture arrested more than 70 Ehime fishermen and confiscated their catches, thus creating an uproar between the prefectures. Under the mediation of the Ministry of Agriculture and Commerce Ehime fishermen became eligible to fish in Kōchi waters, up to the Asizurimisaki line, on payment of a fee (Fig. 2-1C).

In 1916 a special fishery right covering all coastal fishing was granted to Kōchi Prefecture. However, it was conditioned in such a way that Kōchi Prefecture could not refuse fishing by members of the Ehime Higashi- and Nishi Sotoumi village Fisheries Associations. Kōchi Prefecture revised its fisheries regulations in 1924 and via a licensing system excluded light-cum-net fishing by Ehime fishermen. Although application of this technique to the purse seining of sardine was relatively new, it had been traditionally used by Ehime fishermen. The men from Ehime disregarded Kōchi's new regulation and continued fishing as before in that prefecture's waters. As a result, Kōchi Prefecture seized the vessels that fished illegally, and when Ehime attempted to recover them a bloody incident resulted.

Following an agreement between the two prefectures, made in 1929, renewals were carried-out relatively smoothly (Fig. 2-2a). But as a result of the postwar revision of the 1901 *Fisheries Law*, Kōchi Prefecture attempted to cancel all past agreements with Ehime fishermen pertaining to fishing in Sukumo Bay, and to prevent their fishing in Kōchi waters. This revived the previous troubles. Based on the 1949 *Fisheries Law*, the TOYO (Kōchi-Ehime) United Regional Fisheries Mediation Committee was established, and by adopting line b in Fig. 2-2, in 1950, was able to temporarily solve the problem.

But in 1952 a financial crisis occasioned by decreased catches struck Kōchi fishermen and caused unrest in the fishing communities, which believed that the source of their problem resided in the fishing effort of Ehime fishermen. As a result, Kōchi fishermen determined to exclude from Kōchi waters men from Ehime. In defense of their position, Kōchi fishermen asserted that since the fishing fleets of Ehime were larger and more mobile than theirs, that fishing in Sukumo Bay was not essential to their survival. The Kōchi fishermen further contended that since their own vessels were too small to operate in the Uwa Sea of Ehime Prefecture, to which Kōchi fishermen were permitted access, they had to depend on the waters of Sukumo Bay. Moreover, the Kōchi men protested that the Ehime fishermen did not adhere to the inter-prefectural fisheries agreement. As a consequence, they saw no alternative but to exclude Ehime fishermen from Sukumo Bay. The Ehime fishermen countered by claiming that it was they who had established the fishing grounds in Sukumo Bay, on which they depended for 70 percent of their annual catch, and that their historical rights to the area should not be neglected. They noted that it was Ehime fishermen who had made concessions in terms of fishing grounds and fees during negotiations for renewal of the agreement, and further that they had permitted Kōchi fishermen access to the Uwa Sea. In fact they had never pressed anything on the men from Kōchi.

As a result a temporary line (Fig. 2-3c) was set and a final compromise was reach-

ed in 1955 (Fig. 2-3 e). The area to the north of the 1955 line was regarded as a mixed fishing zone for men with an admission permit issued by Ehime Prefecture. However, in 1957 the line was again changed, from Fig. 2-3e to 2-3f. But in the meantime, in 1956, sardine catches in the Sukumo Bay area decreased, and Ehime fishermen explored new fishing grounds. Nevertheless, illegal activities by Ehime fishermen were again repeated in 1959, causing problems with Kōchi anglers. As a result, the fisheries agreement was not renewed until July 1961, thus causing an eighteen-month period of inactivity.

Owing to another breach of the agreement, by an Ehime purse seiner, the agreement has not been renewed since 1963. After two years of mediation, a final plan for the agreement was prepared by the TOYO United Regional Fisheries Mediation Committee. But just before the expected date of signature, 11 Ehime purse seiners were arrested (on March 7, 1965) by the Coast Guard for invasion of Kōchi waters. Further, similar illegal conduct by Ehime fishermen amounted to 37 cases by May 23. Angry Kōchi pole-and-line fishermen with 40 vessels captured an invading vessel, and burned it at Tosa-Shimizu.

In the 1965 and 1966 temporary agreements particular attention was given to enforcement and surveillance, boundary lines and a partial limited entry against light-cum-net purse seine fishing vessels from Ehime Prefecture (Fig. 2-4g).

On March 3 1969, the day before the expected signing of a new agreement, some 500 Kōchi angling fishermen with 380 fishing vessels demonstrated against the operation of large Ehime purse seiners off Sukumo Bay, the potential expansion of the Ehime fishermen's fishing ground, the neglect of the Kōchi coastal fishermen's input in the agreement, and a lack of surveillance and enforcement strategies to stop illegal conduct by Ehime fishermen. With mediation efforts of the Fisheries Agency, of both prefectures, and mediation committee members from both prefectures, the 1969 agreement was signed on April 4 (Fig. 2-5). As a result, the Okinose fishing ground was newly opened to Ehime fishermen.

Except for problems associated with the loss of a dolphin stocking raft belonging to a Kōchi fishermen, large- to medium-scale Ehime purse seine fishing license renewal and Okinose fishing ground use, few problems arose between 1969 and 1977. This resulted from the strengthened administrative efforts of both prefectures, particularly the enhancement of surveillance capability by an increase in number of Coast Guard boats and the promotion of enforcement education among fishermen; a shift of good purse seine fishing grounds from waters off Sukumo Bay to Ehime waters, owing to ecological changes; a change in the wage system for fishermen from a rate wage to a fixed wage; and good communication with local fishermen at each renewal. Further, a research committee on the use of Sukumo Bay fishing grounds was established in 1970. This reported on the resource situation of Sukumo Bay and its vicinity in 1977, noting that demersal species had been overfished whereas pelagic species were being fished at maximum sustainable yield levels.

New members of the TOYO United Regional Fisheries Mediation Committee were elected in August, 1976. Again, just before the first meeting of the committee,

on May 8 1977, illegal fishing by an Ehime fisheries company was reported. Further, intentional illegal fishing by Ehime purse seiners was reported just before the second meeting, whereas a Central Terminal System plan off Sukumo Bay was announced by the governor of Kōchi Prefecture on September 28, just before the third meeting. As a result, mediation became difficult. At the sixth meeting, in February 1978, an agreement was reached when Ehime Prefecture abandoned all rights to the Okinose fishing ground (Fig. 2-6).

CASE 2: THE KYŪROKU-TŌ (ISLAND) INCIDENT

Kyūroku-tō is located in the Sea of Japan 20 miles off the Aomori and Akita prefectural boundary (Fig. 3). In 1891 it was registered to Fukaura Village, Aomori

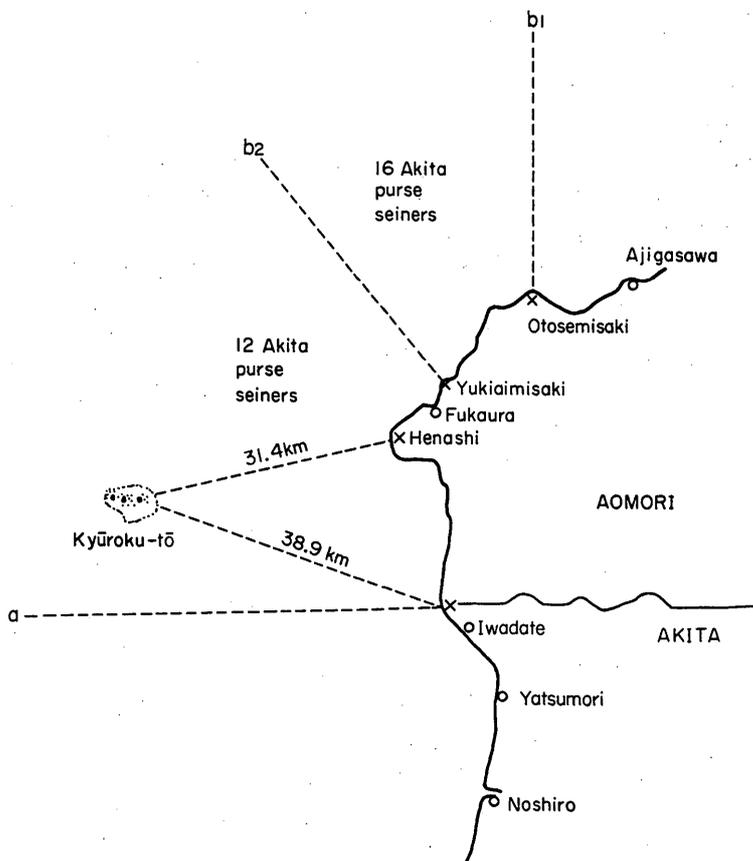


Figure 3. Mediation Map of the Kyūroku-tō Fisheries Incident

a: Direct westward extension of the boundary between Aomori and Akita prefectures; b: Outer limit of Akita mackerel fishing by Akita fishermen (agreement reached on April 22, 1953)

Source: [KANEDA 1979]

Prefecture. But this registration was cancelled in 1897 because Kyūroku-tō is not an island but rather three rocks that either appear above the surface or disappear, according to tidal conditions. Inter-prefectural fisheries incidents around Kyūroku-tō and problems associated with its ownership as well as jurisdiction of the surrounding waters were reported at that time.

Although both prefectures attempted several times to mediate the dispute their efforts were to no avail. As a consequence, in August 1952, the central government revised the *Local Autonomy Act* to clarify the ownership of Kyūroku-tō, and in August, 1953 enacted a special law (*Special Fishery Right Treatment Law Concerning Fisheries Surrounding Kyūroku-tō*) to clarify the jurisdiction of the surrounding waters. By the law Kyūroku-tō was awarded to Aomori Prefecture, and the jurisdiction of the surrounding waters became the responsibility of its governor. Based on the past participation in fishing, governors of both prefectures can grant fishing licenses and permission to their fishermen to work the Kyūroku-tō area.

HISTORY OF THE INCIDENT

The origins of Kyūroku-tō fisheries are unknown. In 1891 Aomori Prefecture unilaterally declared both the ownership of Kyūroku-tō and fisheries jurisdiction in the surrounding waters. Akita Prefecture immediately objected. The Meiji government investigated the matter and asked Aomori Prefecture to cancel its declaration, as well as to open the fishing grounds to Akita fishermen and to begin discussion on management rules of the fisheries in the waters with Akita Prefecture.

Before W W II both prefectures independently granted licenses and permission to their fishermen to work the Kyūroku-tō area, and no serious problems arose. Although both prefectures wanted exclusive fisheries rights in the waters, the central government rejected their proposals of 1928 and 1929. Consequently, Aomori Prefecture established demarcated fisheries rights for abalone and conch fishing there in 1929 and set net fisheries rights for minnow fishing in 1934. Akita Prefecture established a licensing scheme for diving fisheries for abalone and conch as well as set net fishing for minnow fishing, at about the same time.

After W W II Akita mackerel purse seine fishing became common and triggered the postwar fisheries incidents in the waters. Faced with the postwar administrative change in fisheries, both prefectures had to propose use plans for the fishing ground. But this was difficult because each interpreted its fisheries jurisdiction differently. On April 25 1951, Aomori prefectural vessels checked Akita purse seiners in the waters around Kyūroku-tō. In protest Akita dispatched its vessel.

On July 1 1951, Aomori Prefecture announced the first fishing grounds utilization plan, without solving the Kyūroku-tō problem. According to the plan the waters around Kyūroku-tō were included in the common fishery right area of Aomori Prefecture. Further, on October 28, Aomori declared the ownership of Kyūroku-tō and registered Kyūroku-tō to Fukaura Town. In response, Akita lobbied the Fisheries Agency for the exclusive fishery right for Akita fishermen, who depended more on fishing in Kyūroku-tō waters than did those from Aomori.

Based on that petition, the Fisheries Agency investigated the situation. Meanwhile, Akita Prefecture also unilaterally declared ownership and registered Kyūroku-tō to Iwadate Village. The situation therefore became more difficult and the Fisheries Agency became involved in unsuccessful mediation of the problem in December, 1951.

On the other hand, a cabinet meeting concluded that it was impossible to register unregistered islands or rocks to any administrative unit under the current law. The Minister of Agriculture and Forestry established the fisheries jurisdiction of the waters around Kyūroku-tō, based on Article 136 in the *Fisheries Law*. These conclusions were announced to the governors of both prefectures in late-December, by the Prime Minister and the Minister of Agriculture and Forestry.

The governor of Aomori Prefecture, however, issued the fisheries licenses to the fishermen on January 1, 1952, just before receiving the formal announcement. Aomori disregarded it whereas Akita responded favorably. The Fisheries Agency regarded the licenses issued by the governor of Aomori Prefecture as invalid and withdrew Aomori's fisheries management plan, according to cabinet decision.

With the approach of the Akita mackerel fishing season, in spring, 1952, both prefectures intensified negotiations on the issue, but in vain. Akita mackerel purse seiners and abalone fishing vessels started fishing in the waters in late-April. However, Aomori Prefecture regarded this as illegal. As a result, inspections by Aomori Prefecture and protection by Akita Prefecture were repeated. Incidents escalated and culminated in a four-hour fight at sea, on May 9. The Fisheries Agency requested the cooperation of the Maritime Safety Board and urged both prefectures to withdraw prefectural protection vessels from the waters. A Coast Guard boat patrolled the waters during the fishing season and further violence was prevented.

In August 1952 the central government revised the *Local Autonomy Act* so that in future the cabinet would determine the registration of unregistered areas to a local administrative unit. Further, in March 1953, the Cabinet concluded that it was essential to enact a special law under which the Minister of Agriculture and Forestry would have jurisdiction *in lieu* of prefectural governors in problems associated with licensing and permissions in cases like that of Kyūroku-tō.

Eventually, an Akita mackerel fishing agreement between both prefectures was reached in April, 1953. According to the agreement, Akita Prefecture accepted the withdrawal of prefectural licensing for the waters surrounding Kyūroku-tō while Aomori Prefecture admitted Akita fishermen's limited access to the waters (Fig. 3).

On July 24 1953, a memorandum was signed by the governors of Aomori and Akita prefectures and the head of the Fisheries Agency. According to the memorandum, the Minister of Agriculture and Forestry, based on Article 136 of the *Fisheries Law*, granted licenses to fisheries cooperatives on August 25 1953; the *Special Fishery Right Treatment Law Concerning Fisheries Surrounding Kyūroku-tō* was enacted on August 28 1953; the Government, based on the revised *Local Autonomy Act*, registered Kyūroku-tō to Aomori Prefecture, on October 15 1953; and the

Governor of Aomori Prefecture became responsible for fisheries management in the waters.

CASE 3: THE ARIAKE SEA INCIDENT

Incidents between Fukuoka and Saga prefectures in the Ariake Sea off Kyūshū Island accelerated after the implementation of the 1901 *Fisheries Law*, but the Ministry of Agriculture and Commerce successfully mediated them, in June 1908. As a result, four boundaries were set (lines ab, ac, ad and bd in Fig. 4-1). The line ac was designated as the fisheries boundary between Fukuoka and Saga prefectures. Lines ab and ad were designated as the outer limits of conditional fishing grounds for Fukuoka and Saga fishermen, respectively. The line bd was the outer limit of their exclusive fishery right area. Based on the agreement, exclusive fishery rights were granted to both prefectures.

The boundary problem arose again after the postwar reorganization of fisheries because Fukuoka Prefecture claimed a new line, ae (Fig. 4-2), instead of the line ab as the outer limit for free fishing by Fukuoka fishermen. But Saga Prefecture insisted

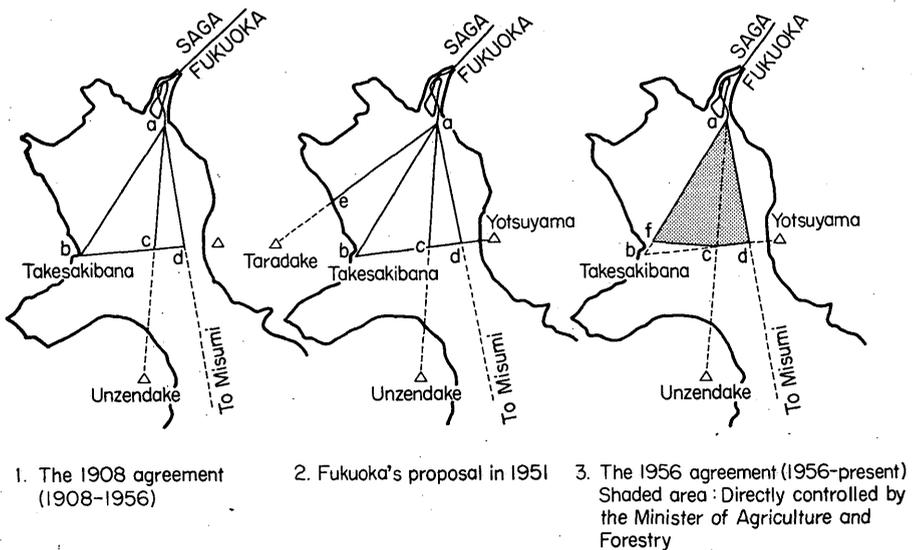


Figure 4. Mediation Map of the Ariake Sea Fisheries Incident

- a: Center of Chikugo River; b: Takesakibana;
 c: Chikugo River-Unzendake/Takesakibana-Yotsuyama junction;
 d: Chikugo River-Misumi/Takesakibana-Yotsuyama junction;
 e: Chikugo River-Taradake/Saga coast junction; and
 f: 1 km north of Takesakibana
 ab: Outer limit for Fukuoka fishermen; ac: the boundary;
 ad: Outer limit for Saga fishermen; and ae: proposed outer limit
 to Fukuoka fishermen for free fishing.

Source: [KANEDA 1979]

on retaining the original boundary while expressing a willingness to consider Fukuoka's claim to entry conditions in the exclusive fishery right area of Saga Prefecture. Mediation efforts led by the Ariake Sea United Regional Fisheries Mediation Committee were not successful. As a result, the Fisheries Agency became involved in the mediation. An agreement was reached on February 21 1952 such that the disputed waters were placed under the direct control of the Minister of Agriculture and Forestry, and based on Article 136 of the *Fisheries Law*, the Minister, instead of the prefectural governors, issued licenses directly for common and demarcated fishery rights in the areas. Since that time there have been no further difficulties (Fig. 4-3).

HISTORY OF THE INCIDENT

The 1901 *Fisheries Law* required the clarification of prefectural fishing grounds for the issuance of licenses for prefectural exclusive fishery right areas. Since that time fisheries incidents in the Ariake Sea increased and bloodshed occurred between Fukuoka and Saga fishermen. Although negotiations between both prefectures were in vain, mediation led by the Ministry of Agriculture and Forestry successfully concluded their exclusive fishery right areas in June 1908 (Fig. 4-1).

With the postwar change in the fisheries system, in April 1951, Fukuoka Prefecture claimed the line *ae* in Fig. 4-2 while Saga Prefecture insisted on the original boundary, *ac*. Neglecting Fukuoka's claim, Saga Prefecture announced its own fisheries management plan for common fishery right areas, on May 30 1951. Fukuoka Prefecture protested Saga's action and announced its own fisheries management plan, based on its claim, on August 2 1951. As a result, part of the fishing grounds became controlled by both prefectures. Since this was illegal, the Fisheries Agency stepped-in to mediate, in October 1951.

Fukuoka claimed in January 1952 that the basic philosophy of the postwar fisheries system change was to democratize fisheries for increasing production and improving the welfare of fishermen; Fukuoka fishermen without fishery rights had paid unreasonable rental or entry fees for fishing and had suffered unstable incomes, whereas Saga fishery right owners without fishing vessels and gears had often exploited poor Fukuoka fishermen; fishing grounds should be opened only to working fishermen and not to absentee fishermen; the 1908 agreement had been maintained at a cost to Fukuoka fishermen; in terms of catches and numbers of fishermen and fishing vessels, involvement of Fukuoka Prefecture in the claimed area (surrounded by *a*, *b*, and *c*, in Fig. 4-2) is greater than that of those from Saga Prefecture; since the Fukuoka Prefecture exclusive fishery right area is only one third the size of the total exclusive right area of both prefectures in the Ariake Sea, a large portion of the catches by Fukuoka fishermen had depended on their use of the Saga Prefecture exclusive fishery right area, and in fact, Fukuoka fishermen have utilized about 90 percent of the claimed area (in Fig. 4-2). Thus the present boundary was unfair, and the outer limit for Fukuoka fishermen for free fishing must be changed to the line *ae*.

But Saga Prefecture countered with the claim that the 1908 agreement was con-

cluded after a thorough consideration of conditions. Subsequently, order had been maintained for more than 40 years, and both prefecture's fishermen had established good fishing grounds in the area. As the problem directly affected the living of Saga fishermen, Saga Prefecture could not accept the claim made by Fukuoka Prefecture. Saga Prefecture wanted to solve the problem by an open access arrangement between both prefectures, based on the greater economic dependency of Saga fishermen than Fukuoka fishermen on the claimed area; since the improvement of shell fishing areas is directly correlated with the development of shell farming, Saga Prefecture had promoted shell farming and had improved shell fishing areas; and Saga Prefecture had promoted the conservation of marine resources through orderly operations at natural spawning and nursing grounds, thinning out abundant juvenile shells, conservation of fish fingerlings and juvenile shells, and limited fisheries.

The Fisheries Agency's mediation resulted in the 1952 agreement in which common and demarcated fisheries rights (the shaded area in Fig. 4-3) became directly controlled by the Minister of Agriculture and Forestry. These licenses had, without further difficulty, been renewed 6 times by October 1983.

CASE 4: THE SUŌ-NADA INCIDENT

Suō-nada, located at the northwestern extremity of the Inland Sea, has long provided good fishing grounds for fishermen from Yamaguchi, Fukuoka and Ōita prefectures. Fisheries in Suō-nada were formerly based on open access, except for inshore waters 4-6 km from the coast, which were regarded as an extension of land areas.

As part of the postwar reorganization of fisheries, the Suō-nada Fisheries Mediation Committee was established in 1950, consisting of representatives from the three prefectures. However, mediation was difficult because the socio-economic background and fishing interests differed among the three prefectures. Fukuoka and Ōita prefectures proposed the elimination of common fishing grounds from Suō-nada, whereas Yamaguchi Prefecture insisted that prefectural exclusive fishery right areas must be limited to 4-6 km from their respective coasts, and that the rest must be opened to all fishermen from the three prefectures concerned.

In 1962, the Inland Sea United Regional Fisheries Mediation Committee became involved in the mediation. However, multilateral mediation was difficult and the committee decided to set aside such a complicated approach. In December 1964 an agreement was reached between Yamaguchi and Fukuoka prefectures (Fig. 5-1), and in July 1966 another agreement was reached between Yamaguchi and Ōita. As a result a multilateral agreement was signed by the governors of the three prefectures, on February 13 1967 and implemented on April 1 of that year (Fig. 5-2). With partial revision, this agreement has been renewed ever since (Figs. 5-3 and 5-4). This agreement leaves clearly identified common fishing grounds in the middle of the prefectural exclusive fishery right areas.

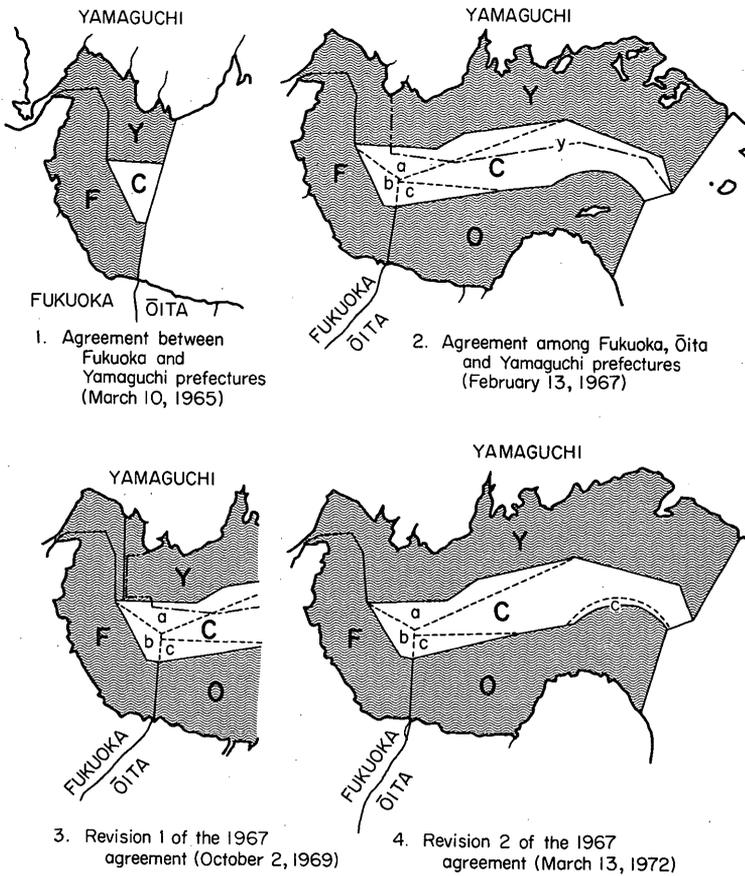


Figure 5. Mediation Maps of the Suō-nada Fisheries Incident

□: (Exclusive fisheries zone [Y: Yamaguchi, F: Fukuoka, and O: Ōita]; C: Common fishing area; —: Limits to hand trawling type 3 by Yamaguchi fishermen; a, b, and c: Areas with limited fishing periods (March 19 to May 31) for small trawl fishing vessels with less than a 10 HP engine, belonging to the respective prefectures adjacent to the exclusive fisheries zones.)

Source: [KANEDA 1979]

CASE 5: THE ESSA STRAIT INCIDENT

Since the introduction of a trawl fishery, in 1919–21, conflicts have continued between trawl fishermen and traditional fishermen who did angling or long lining in the Essa Strait, off Niigata, on Honshū Island (Fig. 6–1). These hostilities escalated, particularly after the postwar change in the fisheries system. Trawl fishermen claimed open access to areas prohibited to trawling, based on democratic and rational management, whereas traditional fishermen insisted on the protection of coastal fisheries.

Niigata Prefecture coordinated the Central and the Northern Regional Fisheries Mediation Committees to solve the problem. However, the Central Regional

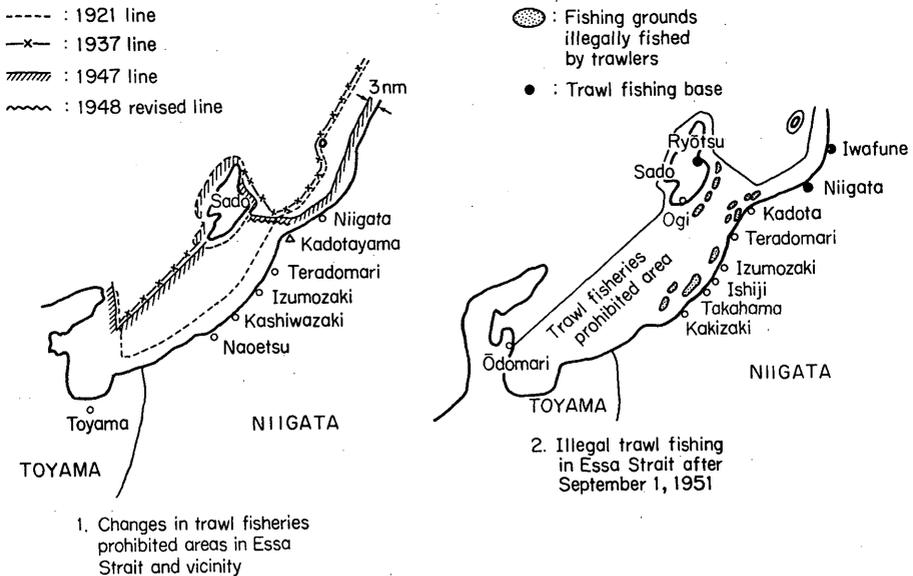


Figure 6. Mediation Maps of the Essa Strait Fisheries Incident

Source: [KANEDA 1979]

Fisheries Mediation Committee members represented traditional fishermen whereas the Northern members represented trawl fishermen. As a result, prefectural mediation failed.

In March 1950 the governor of Niigata Prefecture proposed a new mediation plan that included partial open access to the conventional coastal fishing grounds for small trawlers during the winter season. However, this was not accepted by the traditional fishermen. Consequently, Niigata Prefecture left mediation to the Fisheries Agency.

On November 5 1950 more than 20 trawlers illegally fished in the prohibited areas (Fig. 6-2). Expecting major chaos to result from illegal fishing, the Fisheries Agency temporarily allowed trawling in limited areas in the prohibited areas, from November 19 1950 to the end of February 1952. This, however, angered the traditional fishermen. On November 22, the Fisheries Agency advised trawlermen to stop fishing until an agreement between them and the traditional fishermen could be reached. But, based on the temporary permission from the Fisheries Agency, they continued to operate. On January 27 1951, a trawler was arrested by angry traditional fishermen. Trawlermen asked Niigata Prefecture and the Coast Guard for protection. Angry traditional fishermen finally gave the vessel to the Coast Guard.

At the same time lobbyists from both sides handled the problem in Tokyo. To put an end to such a chaotic situation, on January 4 1952 the Fisheries Agency announced that the Minister of Agriculture and Forestry absolutely prohibited trawling operations in the Essa Strait until a mutually acceptable agreement could be reached between the trawlermen and traditional fishermen. Immediately after the

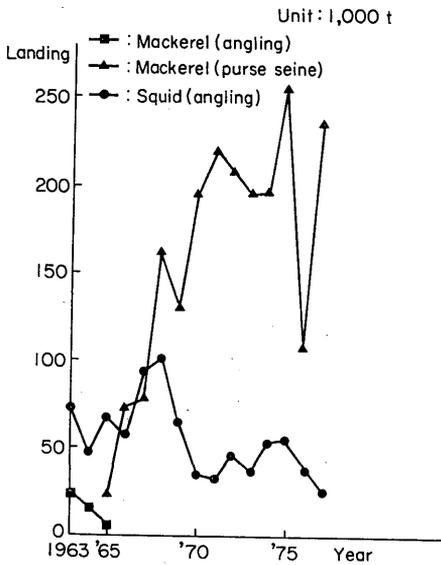


Figure 7-1. Squid and Mackerel Landing by Gear at Hachinoe Port (1963-77)
 Source: [KANEDA 1979]

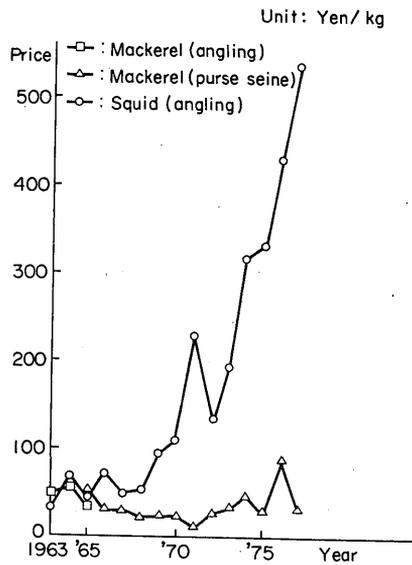


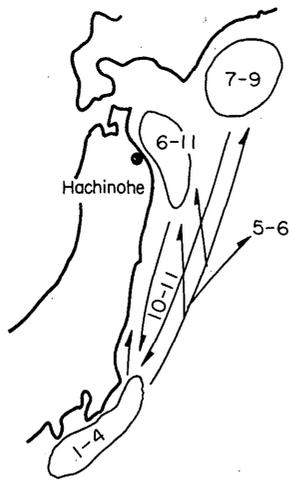
Figure 7-2. Squid and Mackerel Prices at Hachinoe Port (1963-77)
 Source: [KANEDA 1979]

announcement, both the Director-General of the Fisheries Agency and his Deputy resigned and other high officers were obliged to change their positions. To this day a mutually acceptable agreement has not been reached.

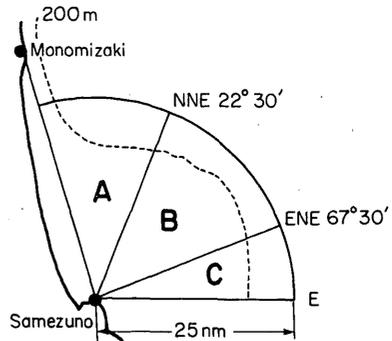
CASE 6: THE SQUID-MACKEREL WAR OFF HACHINOHE

The waters off Hachinoe, in Aomori Prefecture of northern Honshū, have been developed as angling grounds for squid and mackerel (Figs. 7-1 and 8-1). However, a purse seiner with an echo sounder was introduced with great success in 1964. By the fall of 1965, 23 purse seiners had entered these waters, where they fished for mackerel at night and landed them at Hachinoe Port. On the other hand, mackerel angling catches decreased. Further, the price of mackerel decreased owing to increasing landings by the purse seiners, so that mackerel angling became economically infeasible, and all 280 angling vessels were withdrawn. In contrast, the number of purse seiners increased rapidly.

Since the fishing seasons for both squid and mackerel were from June to November, conflicts between squid angling and mackerel purse seine fishermen emerged. The Fisheries Agency mediated and an agreement on fishing operations was first signed by the Northern Pacific Purse Seine Fisheries Production Adjustment Association, the Hachinoe Squid Fisheries Council and the Eastern Japan Mackerel Fisheries Production Adjustment Association, in March 1966 (Fig. 8-2). The agreement created three purse seine restricted areas within 25 nm of Samezuno, and all purse

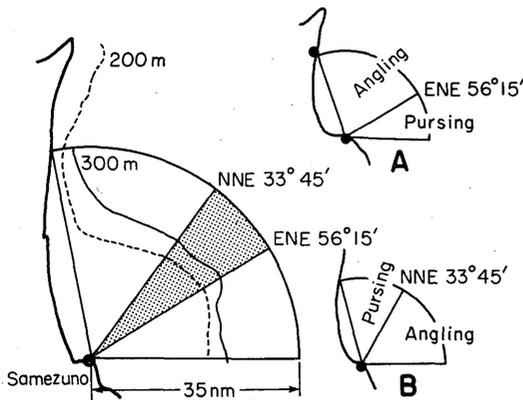


1. Mackerel migration patterns in the Pacific



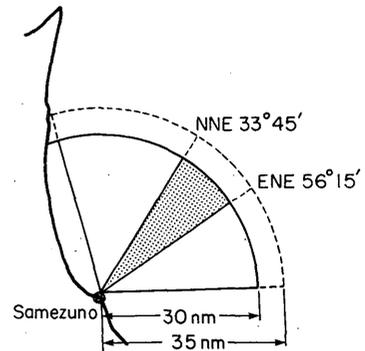
2. Mediation map a (Mar. 5 1966)

All purse seiners except from Aomori prohibited from December 1-31. Further restrictions for purse seining include A: Nov. 1-30 (20:00-04:00); B: Nov. 1-15 (17:00-05:00) and Nov. 16-30 (12:00-24:00); C: Nov. 1-30 (22:00-05:00)



3. Mediation map b (Aug. 9 1967)

☐: Exclusive area for angling.
Detail restrictions include preferential fishing rights for both angling and purse seining as follows A: Nov. 1-3 (12:00-12:00), 5-7, 9-11, 13-15, 17-19, 21-23, 25-27, and 29-31; B: Nov. 3-5 (12:00-12:00), 7-9, 11-13, 15-17, 19-21, 23-25, and 27-29.



4. Mediation map C (June 11 1969)

☐: Exclusive area for angling
- - - : Reduced restricted area

Figure 8. Mediation Maps of the Squid-Mackerel War off Hachinohe

Source: [KANEDA 1979]

seiners except those from Aomori Prefecture were prohibited during December. During November time limits for purse seining were partially adopted in the restricted areas. This limit was revised in August, 1967 (Fig. 8-3). The restrictions were further confined, though the restricted areas extended to within 35 nm of Samezuno.

Mackerel landings at Hachinohe Port continued to increase whereas squid landings decreased after 1968, so that squid prices increased sharply (Figs. 7-1 and 7-2). As a result, squid fishermen claimed that purse seiners were intentionally making "incidental" catches of squid, and the two groups fought at sea. This problem was settled in June 1969, under the mediation by the Fisheries Agency, by reducing the restricted areas and prohibiting all but local purse seiners from November 16 to December 31 (Fig. 8-4).

In 1970 squid fishing was poor whereas mackerel fishing was highly productive (Fig. 7-1). More than 50 purse seiners began operations in the waters in the middle of September, and this increased to 70 by the end of the month. Squid angling vessels returned from the Sea of Japan and the coasts of Hokkaidō and also started operations in the same waters. Including 400 squid angling boats and other small local vessels, more than 1,000 fishing boats were competing on the same fishing grounds. Illegal fishing and disturbances from both sides were repeated, and from September 18 to October 18, 35 incidents were reported. The Coast Guard tried to prevent violence at sea, and the Fisheries Agency became involved in the mediation. Discussions centered on the distance between fishing vessel operations, incidental squid catches by purse seiners, the prevention of illegal fishing and the treatment of vessels fishing illegally, and night-fishing.

A revision to the agreement was signed on July 18 1971. It included adjustment with coastal fisheries, the distance between vessel and gear operations, production adjustment, prevention of incidental squid catches and the settlement of disputes. The mechanization of squid angling gradually developed and conflicts lessened. Renewals of the agreement have been smoothly contracted ever since.

CASE 7: THE MACKEREL WAR OFF THE TONE ESTUARY

Mackerel angling was widespread in the East China Sea, the Sea of Japan and along the Pacific coasts of Hokkaidō and northern and central Honshū (Fig. 9-1). However, fishing in the East China Sea declined after 1952, when South Korea unilaterally declared the Lee Line, an extended maritime jurisdiction. Their fishing grounds then moved southwards. Despite a revival, the fishery was eventually terminated in 1964. Northern Honshū and Hokkaidō mackerel angling developed around 1951 and was participated in by the fleets that lost their grounds as a result of the Lee line. But this fishing was terminated in 1966 (see Case 6). The waters off central Honshū became good mackerel angling grounds, particularly after the fishing grounds off the Tone estuary were established in 1960. From December to April, about 600 mackerel angling vessels operated in those waters, where they take 110-160 thousand t/yr. However, about 15 large- and medium-scale purse seiners

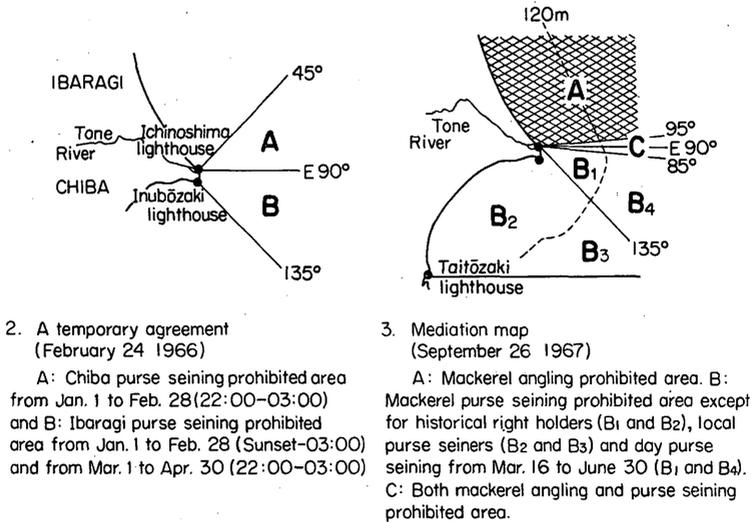
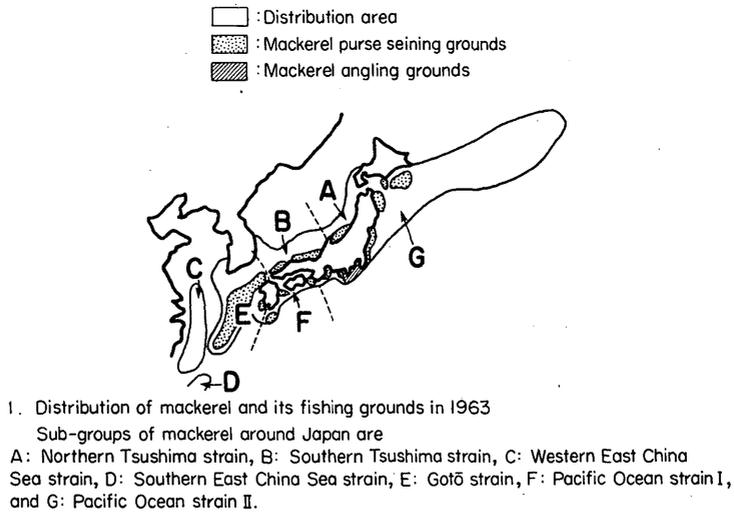


Figure 9. Mediation Maps of the Mackerel War off the Tone Estuary
 Source: [KANEDA 1979]

suddenly began operations in the Tone Estuary waters in 1964. Their impact on mackerel angling was severe, and the mackerel anglers protested. They appealed for a ban on purse seining, but nevertheless the number of purse seiners increased. Petitions were repeated, and finally the Fisheries Agency stepped in to mediate.

As a result, an agreement between the Northern Pacific Purse Seine Fishery Production Adjustment Association and the Eastern Japan Mackerel Angling Fishery Production Adjustment Association was signed in February 1966 (Fig. 9-2). Under it purse seining was restricted from January to April in waters off the Tone estuary. However, conflicts did not stop, and the agreement was further confined in 1967 (Fig.

9-3). In the new agreement, prohibited areas for mackerel angling and purse seining were separated by zoning, and a buffer zone was established between the prohibited areas. Since then conflicts have ceased, and renewal of the agreement has been smooth.

IMPLICATIONS OF THE SEVEN CASES

The fishing industry today suffers from a unique and complex combination of critical yet now familiar, if still not fully understood, problems which aggravate the difficulties of management, and which are unlike the problems of land-based industries [MATSUDA 1982]. These problems stem from a dependency on a naturally occurring resource which over much of the world is regarded as a common property and therefore subject to over-exploitation with little incentive to conserve. This has been exacerbated by unbalanced development and institutional reforms, administrative complications in terms of problems of competing government jurisdictions, power plays among different interest groups and an inadequate data base for predicting the availability of resources.

These problems are combined uniquely in the seven cases presented briefly in this paper. Since it is impossible to control nature completely, the best that can be done is to manage fisheries—as distinct from fisheries resources—more wisely and in accord with the natural dynamics of the stocks involved. Thus management aimed at mitigating or preventing major fisheries incidents should have the highest priority, in large part because of their extremely high cost.

Institutional Reforms: Paradoxically, one of the most important causes of the fisheries incidents discussed here were institutional reforms. In effect, they were the main cause of the first five cases. Transfer of island ownership (Case 1) and unilateral declaration of unregistered islands ownership (Case 2) often create severe fisheries incidents since these changes affect jurisdictions of the surrounding waters, thereby obscuring fisheries jurisdictions and leading to strong objections from other common users.

Although clarification of the jurisdiction over coastal fishing grounds may be important in developing a fisheries management plan, it is often followed by the establishment of new boundaries and limited entry, and requires the payment of fees for fishing and a definition of the conditions under which fishing may be done. However, historical precedents must be considered carefully, as must economic dependency, equity (including compensation) and legal procedure (Cases 1 to 4), and the resulting decisions must be flexible.

Further, reform itself induces conflict because it tends to change traditional patterns to those that are administratively more efficient or equitably. Based on democratic principles, a drastic reform of the fisheries system was introduced in Japan after WWII. This resulted in frustration vis-à-vis traditional patterns. Saga Prefecture for example, believed that following the 1908 agreement between Saga and Fukuoka prefectures order had been maintained for more than 40 years and that fishermen from both Saga and Fukuoka prefectures had established good fishing

grounds in the area at issue, whereas Fukuoka Prefecture claimed that the 1908 agreement had been maintained at the expense of Fukuoka fishermen (Case 3). Another example is that of the trawlermen who claimed open access to prohibited coastal waters for trawling, whereas traditional fishermen insisted on the protection of coastal fisheries (Case 5). These cases imply that general principles must be applied flexibly according to local conditions, and that open discussion must be guaranteed among the parties involved.

Technological Development: Technological development is inevitable. Except for Case 2, all incidents were more or less affected by technological development. In fisheries the adoption of more powerful and/or larger vessels, for example, has contributed to neither resource conservation nor to resource enhancement. Adoption of a technology within a group of fishermen is hardly ever uniform since it depends on the financial capability and the skill of each man. As a result, any technological development could become an important cause of conflicts or an accelerator of conflicts between and among fishermen, villages, towns, cities, prefectures and nations.

To fully benefit from technological development, Ehime fishermen, for example, actively sought more efficient fishing methods and adopted light-cum-net fishing and mechanical fishing, whereas Kōchi fishermen retained their traditional techniques (Case 1). A similar phenomenon was also observed in Niigata Prefecture (Case 5). Widening gaps further created conflicts between different groups.

Apart from coastal fisheries, where coastal fishermen were somewhat protected from mechanical fishing by the common fishery rights, Cases 6 and 7 dealt with offshore fishing for migratory species. In those cases conflicts were both more visible and more severe. For example, owing to the rise of purse seine operations off Hachinohe, mackerel angling became economically infeasible, and all angling vessels were withdrawn (Case 6).

Technological development also played an important role in reducing conflicts when dependency on natural spawning was drastically reduced in a demarcated fishery (Case 3) and the gap in mechanization became narrower between the parties concerned (Cases 4 and 6). However, zoning (with buffer zones) seems to be quite effective in solving problems involving wide gaps in mechanization.

Illegal Conduct: Disputed fishing grounds are one of the most sensitive areas, and inherent in any such disturbance is a great potential for conflict. Mutual agreements among interest groups tend to include drawing boundaries, limiting entry and prohibiting certain gears. Once a fisheries agreement has been reached, illegal conduct by one side generally becomes the most important cause for reviving disputes (Cases 1, 3, 4, 5, 6 and 7). Such fisheries agreements are usually valid for only one or two years. As a result, illegal conduct on one side creates distrust among fishermen and makes renewal difficult.

There is both unintentional (stemming from ignorance of the rules) and intentional illegal conduct. The former stems mainly from misinterpretation of the content of an agreement (Case 3), lack of communication among fishermen or the exclusion of outsiders (Case 1), whereas intentional illegal conduct usually arises from a per-

ception that the agreement is unfair (Cases 1, 2, 3, and 5), mobility (Cases 1, 4, 5, 6 and 7), violation of unity of command (Case 5), and a lack of surveillance. Illegal conduct usually results in escalation, such behavior by one party leading to reciprocity by the other and thereby to an increase in hostilities.

Illegal conduct can be reduced when an agreement between or among interest groups results from thorough discussion about and a complete understanding of the issues. Open discussion is the key to success because it provides an early warning of conflicts or potential conflicts. Institutional reforms should be designed and complemented so as to avoid illegal conduct with regard to principal and incidental catches.

Catch Impacts: Perhaps the most important interest of a fisherman is his catch, and this therefore has an important bearing on fisheries incidents. For example, decreased catches by Kōchi fishermen forced the exclusion of Ehime fishermen from disputed fishing grounds (while the decreasing catches led Ehime fishermen into greater exploitative efforts [Case 1]). Although this resulted in more severe restrictions being placed on Ehime fishermen, and therefore increased illegal conduct by them, conflicts between Kōchi and Ehime fishermen were drastically reduced when the good fishing grounds moved to the Uwa Sea, in Ehime's coastal waters.

Further, the rapid development of particular types of fishing and widening gaps in catch size also leads to increased tension among competing fishermen. The squid-mackerel war off Hachinohe (Case 6) is such an example. The fishing season for both fisheries was the same. However, mackerel catches landed at Hachinohe Port by the newly developed purse seine fishery increased rapidly whereas squid landed by traditional anglers decreased, after 1968. Tension culminated in the fall of 1970. However, the conflict was lessened when the squid anglers gradually mechanized.

Although catch size is influenced by various factors, including uncontrollable natural conditions, it is greatly influenced by price and fishing mobility, *i.e.*, both a high price for the species at issue and high mobility of the fishing for it may compensate for the reduction of the catch under contention or may lead to a higher gross income. As a result, incidents may be avoided. However, this type of solution may increase fishing pressure such that overfishing may result, or it may be limited by the availability of good alternative fishing grounds.

Administrative Responsibility: The careless transfer of island ownership, the unilateral declaration of ownership of unregistered islands and the introduction of limited entry schemes are also examples of the type of administrative misbehavior which aggravates disputes. The announcement of a CTS plan in a disputed area (Case 1), the implementation of respective fisheries management plans based on the unilateral declaration of extended maritime jurisdiction (Case 2), and an easy way out of problems by political pressure (Case 5) are examples. The limitations of politics and violence are self-evident, thus, careless administrative support and misbehavior must be avoided.

After many years of experience, the legal framework of Japanese fisheries administration was firmly established. However, the system is now confronted by

problems associated with internal corruption and inflexibility to handle outsider interest concerning the use of the sea. As the economic function of Fisheries Cooperative Associations (FCAs) increased so their administrative function began to be misused, *i.e.*, they took advantage of their administrative function only for the members' short-run economic welfare, but neglected both social welfare as well long-term economic welfare.

For example, except in limited areas, the productivity of common fishery rights areas has not increased since 1952, regardless of high subsidies for coastal fisheries development, which have included nationwide ocean ranching programs and artificial reef projects [NÖRINTÖKEI KYÖKAI 1983]. Most efforts have been offset by coastal reclamation, collection of bottom gravels and water pollution, which partially destroyed important spawning and nursing grounds. Fishermen's protests against such coastal developments initially received public support, and resulted in increased compensation being paid to fishermen. Consequently, compensation being associated with the abandonment of certain fishery right areas has benefited members of the affected FCAs but it has not contributed to the fisheries, because the money was usually distributed to individual FCA members equally and not invested in fisheries development.

As a result fishermen have gradually lost public support, and the continuation of current fishery rights as well as compensation itself now must be reconsidered. Further, increased public support for ocean ranching and artificial reef projects as well as the inability of FCAs to accommodate recreational fisheries under the current legal framework has limited the future of the associations. This is becoming increasingly important because recreational fishermen, once neglected by commercial fishermen, now number some 10–20 million. They have begun to claim their rights in the common fishery right areas. In addition, the beach rights claimed by the general public are now also increasingly important [TAKASAKI and TAKAKUWA 1976].

The causes of fisheries incidents are becoming increasingly involved and complicated. To prevent major fisheries incidents the fisheries administration must actively respond to the following basic problems. Regaining the checking function of the administration during the renewal of fishery rights and licenses; the utilization of minor fisheries incidents as a management tool; coping with problems of internal corruption and massive political pressure; the coordination of the various interest groups for the better use—including multiple or transboundary uses—of the sea; and the improvement of current legal structures.

Responsibility of the FCAs: With their administrative function, Japanese FCAs are a unique economic organization that is supported by nationwide financial, marketing, mutual aid and political (quasi-governmental) networks. Fisheries infrastructure such as ports, wholesale markets and artificial reefs have been constructed by both local and central governments. Throughout the country living standards in fishing communities have improved greatly, although many fishermen are now facing both the problems of old age and finding a successor.

The FCAs must be responsible for administrative functions. If such functions

are actively pursued at least increased fisheries yields could be anticipated as could a mitigation of the littoral pollution problem and accommodation of other interest groups in the common fishery rights areas. Effective utilization of fisheries infrastructure, subsidies and the nationwide economic networks in terms of fisheries development, including resource conservation and enhancement, could also be expected. Other results could be the full trust and cooperation among members for the maximum use of the democratic and economic power of the associations; more careful allocation of compensation money; and further study of options and investment for the future.

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