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Fisheries and Regional Cooperation in the Sea of Japan

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This paper explores the possibility of international cooperation in the management of fishery resources in the Sea of Japan (known as the Eastern Sea in Korea)! The central question I will address is: What have these countries learned from their postwar experiences in dealing with each other that is of relevance to the future management of the fisheries resources in the Sea of Japan? The study will conclude with an exploration of areas where mutually beneficial cooperation can be expected as well as areas where obstacles exist.

Although the geographical focus of this analysis is limited to the Sea of Japan, fishing activities and relations outside this area involving any of the countries facing this sea—Japan, the former Soviet Union, the Democratic People's Republic of Korea (DPRK), and the Republic of Korea (ROK)—have relevance to the current study. For example, Japan and China have developed relations with respect to the exploitation and management of fishery resources in the Yellow Sea, the East China Sea, and the South China Sea, and those relations will continue to affect Japanese fishing activities in the Sea of Japan. As well, Japanese-ROK fishery relations extend into the Yellow and East China seas. Finally, Japanese-Soviet fisheries relations extend into the Sea of Okhotsk and the North Pacific. I will touch upon these relations to the extent that they have important relevance to international cooperation in the Sea of Japan.

For the present analysis I use the concept of "regime," which has been used by students of international cooperation in such areas as trade, money, the ocean, energy, environment, resources, and security. According to Stephen Krasner, a regime is a set of "implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations."² Principles are "beliefs of fact, causation, and rectitude"; norms are "standards of behavior defined in terms of rights and obligations"; rules are "specific prescriptions of proscriptions for action"; and decision-making procedures refer to "prevailing practices for making and implementing collective choice."³ The absence of a mutually useful regime spells discord—failure to cooperate in order to attain mutually benefi-

fect on 12 December 1956, when diplomatic relations were restored between Moscow and Tokyo. The fisheries agreement played an important role in the normalization of diplomatic ties.⁹

The 1956 convention, initially effective for 10 years, covered salmon, trout, herring, and crab fisheries in waters outside the Soviet 12-mile territorial limits in the Sea of Japan, the Sea of Okhotsk, the North Pacific, and the Bering Sea.¹⁰ The treaty also set up a commission responsible for assessing the status of fisheries resources subject to the bilateral treaty and for determining catch quotas for each party in the high-sea areas of the Northwest Pacific. An important feature of the commission was that its recommended quotas were directly binding on both parties.¹¹ On the question of control, Tokyo and Moscow readily agreed on the shared right to seize and arrest suspected treaty violators and on the flag-state principle for court jurisdiction.

In the subsequent development of the Japanese-Soviet fishery regime, there were many surprises, at least for the Japanese. In February 1968, the Presidium of the Supreme Soviet issued a decree concerning the continental shelf, and this necessitated new fishery talks between Tokyo and Moscow. Negotiations in 1969 produced an agreement concerning Japanese crab fisheries in the Northwest Pacific, but the accord noted both the Soviet claim that the continental shelf resources in question belonged to Soviet sovereignty and the Japanese position that such resources should be defined as "high-sea resources" under no unilateral national jurisdiction. The one-year agreement was renegotiated each year until 1976, with the limits on Japanese crab fisheries becoming more stringent every year. The Japanese *tsubu* (sea snail) fishery in the Northwest Pacific met a similar fate. Subject to bilateral agreement beginning in 1972, this small but important Japanese fishery experienced a gradual decline due to increasing constraints arranged through negotiations between Moscow and Tokyo.

Against the backdrop of the third United Nations Conference on the Law of the Sea (UNCLOS III) and the growing tide of national ocean enclosure, Moscow established a 200-mile fishery zone effective 1 March 1977.¹² The Soviet Union included in its fishery zone, over Japanese protests, areas of the sea surrounding the disputed islands, known in Japan as the "Northern Territories." The ensuing deadlock between Tokyo and Moscow resulted in the suspension of Japanese salmon fisheries in the Northwest Pacific in 1977. To make the situation worse, Moscow served notice in April 1977 that it would terminate its 1956 fisheries agreement with Tokyo effective 1 May 1978. Unless a new agreement was negotiated, Japan could lose its Northwest Pacific salmon and herring fisheries altogether. After several months of intense domestic debate, Japan decided to counter the Soviet move by extending its territorial sea limit from 3 to 12 miles and setting up its own 200-mile fishery zone. The twin legislation for the 12-mile territorial sea and the 200-mile fishery zone went into effect on 1 July 1977. Tokyo and Moscow failed to agree on the delimitation question, and the two sides concluded a provisional agreement, effective 10

June 1977, which reflected both sides' claims.¹³ The agreement was renewed each year until 1984, when it was consolidated into a new agreement along with another provisional agreement that was concluded in August 1977 to regulate Soviet fishing within Japan's newly established 200-mile fishery zone.¹⁴

Following the conclusion of UNCLOS III in December 1982 and the establishment of the Soviet 200-mile exclusive economic zone (EEZ) on 1 March 1984,¹⁵ Tokyo and Moscow concluded in December of the same year a new treaty to replace the two provisional agreements on Japanese and Soviet fishing within each other's 200-mile zones. The new accord required each side to permit the other to fish in its 200-mile zone,¹⁶ with each side's catch quota to be determined through consultation at an annual Japan-Soviet Fisheries Commission meeting.¹⁷ In accordance with the new UNCLOS treaty, the quota determination was to take into consideration the "condition of resources," the coastal state's "own harvesting capacity, the traditional catch and methods of fishing by the other country, and other relevant factors" (Article 2). Also following the 1982 convention, the bilateral agreement called on each party to comply with the resource conservation measures that the other side may take within its 200-mile zone (Article 4). Moreover, the agreement called on the two governments to "cooperate in the conservation and optimal utilization of the living resources" within their 200-mile zones (Article 5). The treaty has been extended until today.

Through the consultation at the annual bilateral fisheries commission meetings, Japanese fishing within the Soviet 200-mile zone has been placed under increasingly restrictive control. The Soviets have persistently sought to equalize the actual size of the harvest rather than the total quota for each side and, more recently, to extract as many fishing fees as possible from the Japanese side. The Soviets eventually succeeded in both efforts. For example, for the 1987 fishing season the Japanese were required to pay 1,290 million yen for their quota of 100,000 tons in the Soviet waters, in comparison with 200,000 tons for which no fees were required. The Soviet fishing in Japan's 200-mile zone was limited to 200,000 tons.¹⁸ The most recent agreement concerning Japanese and Soviet fishing within each other's 200-mile zone in the 1991 fishing season provided for a Japanese payment of 1.1 billion yen in fishing fees for a quota of 35,000 tons and also included a fee-free Japanese quota of 182,000 tons. The Soviet quota in Japanese waters was set at 182,000.¹⁹ The Soviet side has also been frustrated by Japanese violations of the 1984 agreement.²⁰ To deal with this issue, the Soviet-proposed system of checkpoints was introduced into the bilateral fishery regime in 1988, whereby all Japanese fishing boats operating under the bilateral agreement were required to pass designated locations for inspection. This system continues today.

In the meantime, in April 1978, Tokyo and Moscow concluded a new agreement on Japanese salmon fisheries in the Northwest Pacific. Along with quota cuts, Japan for the first time accepted the principle of the "state of origin"—that is, the state in whose waters anadromous stocks of fish originate has sover-

ign claims to those resources. Moreover, again for the first time, Japan was required to pay "cooperation fees" (1.76 billion yen in 1978) to defray part of the cost of Soviet salmon resource preservation efforts. This feature has since become a permanent element of the Japan-Soviet salmon fisheries relations.²¹ The 1978 agreement was then replaced by a new one in 1985. The most divisive issue then concerned the coastal state's sovereign rights to anadromous species of fish outside its 200-mile EEZ. The 1985 agreement settled this issue by Japanese recognition of the Soviet Union's primary interest and responsibility concerning anadromous species originating in its rivers (Article 2, para. 1) and its right to institute regulatory measures vis-à-vis salmon within and outside its economic zone (Article 2, para. 2). This was in line with a similar provision of the 1982 UN Convention on the Law of the Sea (Article 66, para. 1).

According to the new agreement, salmon fisheries were to be permitted only within the 200-mile zone. This also corresponded to the UN Convention (Article 66, para. 2). The agreement did recognize Japan's financial contribution to the reproduction of salmon stocks in the Soviet Union and stated that Moscow would give a special consideration to Japan and determine the latter's fishing conditions through bilateral consultation (Article 2, para. 3). Furthermore, control of salmon fisheries beyond the Soviet 200-mile zone was to be executed on the basis of agreement between the two countries (Article 2, para. 4). The determination of fishing areas, methods, and periods was also placed in Soviet hands for the first time (Article 3). Moreover, whereas the previous agreement had left to Japan the allocation of its total quota among fishing areas, the new accord specified the tonnage and the number of each type of fish that could be caught in each area (Article 3). The 1985 accord also provided for bilateral cooperation in scientific research of fisheries (Article 3, para. 1), for consultation of scientists and experts concerning the coordination and execution of cooperative scientific research (Article 3, para. 1), and for cooperation on the improvement of technology and methods for catching, propagating, and culturing fishery resources (Article 3, para. 2). The agreement also called upon the two governments to cooperate on the conservation and management of living resources of the Northwest Pacific outside the 200-mile zones (Article 4). Finally, the agreement charged the bilateral fisheries commission with the responsibility for assessing the status of the fisheries and fish stocks within the scope of the new agreement, including the determination of Japan's quotas within and outside the Soviet 200-mile zone (Article 7). These arrangements continue today.

The successive bilateral consultations have resulted in gradual but unmistakable declines in Japanese quotas of salmon catches outside the Soviet EEZ—from 24,500 tons in 1987 to 11,000 tons in 1990. The most recent agreement on Japanese salmon fisheries in 1991 requires the Japanese to pay almost 2.84 billion yen for a quota of 9,000 tons.²² The Japanese quota cuts are in line with the Soviet Union's proclamation in recent years that by 1992 all foreign catching of salmon of Soviet origin outside the 200-mile EEZ will be

banned. In 1991, in connection with the move among the United States, Canada, and the Soviet Union to conclude a multilateral North Pacific fisheries agreement prohibiting all salmon catching beyond their respective 200-mile limits, Tokyo announced it would accept the ban. On the other hand, the Japanese side has successfully increased its annual salmon quota within the Soviet EEZ since 1988 (2,000 tons in 1988 and 5,000 tons, 6,000 tons, and 8,000 tons in the following years)—in effect in return for Japanese financial and technological participation in bilateral salmon joint ventures.²³

These arrangements make it evident that the two sides can accommodate each other, with Moscow ensuring salmon allocations to Tokyo and the latter providing the former with financial resources. This pattern is also apparent in the development of fishery joint ventures between the two countries since 1987. The impetus for joint ventures came from a Soviet proposal in 1987 for Japanese capital and technological participation in the development of salmon hatcheries on Sakhalin Island. The first fishery joint venture company (Pirenga Godo) came into being in July 1988.²⁴ Now in its third year, the venture still operates in the red. Such a financial situation notwithstanding, both the Japanese government and the fishery concerns wish to maintain access to North Pacific salmon through bilateral arrangements including joint ventures with the Soviets. There are today seven other Japanese-Soviet joint ventures in the Soviet Far East that concern the production, processing, distribution, and sales of fishery resources.²⁵

Other elements of the present Japan-Soviet bilateral fisheries regime include annual consultations between Japanese and Soviet scientists and fisheries experts²⁶ and private-level arrangements for (1) Japanese crab fisheries off Sakhalin, in the seas of Japan and Okhotsk, in exchange for fisheries cooperation fees;²⁷ (2) Japanese sea-kelp and sea-urchin production around the Soviet-controlled Kaigara Island, east of Hokkaido;²⁸ (3) Japanese purchase at sea of Alaska pollack and herring;²⁹ and (4) Japanese *madara* (*Gadus macrocephalus*) drag net fishing in the Soviet EEZ.³⁰

JAPAN-ROK FISHERIES REGIME

The fisheries relations between Japan and the ROK in the postwar years were tense, acrimonious, and occasionally even violent. Establishment of a stable bilateral fisheries regime had to wait until the normalization of diplomatic relations between the two countries in 1965.³¹ Following 13 long years of off-again, on-again negotiations, Tokyo and Seoul concluded a government-level fisheries agreement in 1965.³²

The objectives and general principles guiding the government-level agreement were stated in its preamble: (1) to maintain a maximum sustainable yield of fishery resources of mutual interest to Japan and the ROK; (2) to contribute to the preservation and rational exploitation and development of the resources; (3) to respect the principle of freedom of the high seas except in

areas otherwise specified by the agreement; (4) to eliminate the causes of conflict stemming from the geographical proximity and the intersection of fishing activities of the two countries; and (5) to cooperate for the development of the two countries' fisheries.³³

The 1965 agreement recognized each party's right to establish an exclusive fishery zone up to 12 miles from its baseline.³⁴ Outside the ROK fishery zone were established "joint regulation zones" in which the two governments would take provisional measures limiting the number and size of fishing boats.³⁵ Japanese fishing boats in the joint regulation zones were limited to 1,700 in number at any time and 60 tons in size. The agreement adopted the flag-state principle for control and court jurisdiction outside the 12-mile fishery zone.³⁶ Outside the joint regulation zones were established "resource survey zones" in which the two governments would conduct scientific surveys to assess the condition of fishery resources in the area.³⁷ The 1965 agreement also established a binational fisheries commission charged with the responsibility of discussing and providing advice on (1) scientific studies and regulatory measures based on such studies, (2) the delimitation of the joint resource survey zones, (3) provisional fisheries regulatory measures, and (4) matters concerning the safety and order of fishing and general procedures for handling accidents involving fishing boats.

The 1965 agreement also obligated the two governments to take necessary measures to ensure the safety and order of fishing operations and to settle accidents smoothly and expeditiously and provided for dispute settlement procedures. Accordingly, a private-level agreement was concluded in December 1965 providing for detailed rules for safe fishing and for the establishment of a private-level binational committee for expeditious resolution of accidents. It also established a binational committee to deal with cases involving Japanese-ROK fishing accidents in the joint regulation zones and surrounding waters. Initially, the government agreement was to be in force for five years but it has been extended since 1970.

A number of important developments have taken place since 1965, and occasionally they have threatened the stability of the bilateral fisheries regime. The first such development was the establishment of Japan's 12-mile territorial sea and 200-mile fishery zone in 1977.³⁸ At the time Tokyo was considering extension of Japan's fishery jurisdiction from 12 to 200 miles, fishermen in the western and southwestern parts of the country were fearful that such a move would prompt the ROK and China to establish their 200-mile fishery zones, forcing Japanese fishing out of the Korean and Chinese coastal waters. The most important Japanese fisheries in the area, *isei sokobikiami* (bull trawl), yielded 206,000 tons of fish valued at 71.9 billion yen in 1977. Of this, more than 90 percent came from within 200 miles of the ROK and Chinese coasts. Another major Japanese fishery in the area, *enyo makiami* (pelagic purse seine), produced a total of 280,000 tons of fish in 1978 representing 34.8 billion yen. Of this about 60 percent came from within 200 miles of the neighboring coun-

tries. Additionally, otter trawl and squid angling collectively produced 5.4 billion yen in the southern part of the Sea of Japan off the ROK coast and 72.8 billion yen in the East China and Yellow seas.³⁹ To protect these fisheries, Japan decided to exclude Chinese and ROK nationals from application of the legislation establishing the Japanese 200-mile fishery zone. Also exempted from the legislation were the East China Sea, a part of the Pacific Ocean adjacent to the East China Sea, the Yellow Sea, and the Sea of Japan west of longitude 135 degrees east.

In April 1978, the ROK established a 12-mile territorial sea. As a result, the 1965 fisheries agreement upon which the two countries' 12-mile fishery zones had been based had practical effect only in limited areas of the sea surrounding the Tsushima Islands where Japan retained the 3-mile territorial limit.⁴⁰

Another development that continues to affect the stability of the post-1965 bilateral fisheries regime has been the modernization and expansion of the ROK offshore and distant-water fisheries. This has increased the number of incidents involving Japanese and Korean fishing boats in the Sea of Japan. Indeed accidents have been a permanent feature of the post-1965 bilateral fisheries regime. Initially Japanese fishing operations caused most of the trouble. As the ROK fisheries experienced an unprecedented expansion since the mid-1970s, however, the ROK caused a total of 323 accidents in comparison with 71 accidents caused by Japanese fishing. Resulting damages paid by Japanese and ROK fishermen between 1965 and 1984 amounted to 306,485,008 yen and 14,034,996 yen, respectively. Although the dispute settlement procedures of the 1965 government and private agreements did not preclude recourse to court adjudication, fishermen of the two countries have opted to settle most of their complaints through the private-level binational committee.⁴¹ Since the mid-1970s, ROK fishing has also increased dramatically in Japanese coastal waters outside the joint regulation zones, including the bilateral fishery resource survey zones and Japanese territorial sea and fishery zone. In the peak year of 1982, as many as 984 ROK boats were cited by Japanese authorities for violating Japanese territorial sea and fishing zone regulations. The number has since declined, however.⁴²

In the meantime, government action became necessary. In response to Seoul's concern about the deteriorating condition of fishery resources in areas of the sea surrounding Cheju Island (Saishuto) and to Tokyo's call for ROK fishing restraint in the northern coastal waters of Japan, the two governments agreed in 1980 to call for self-restraint by their fishermen. When trouble continued, Tokyo and Seoul agreed to extend the provisional arrangement and also to further strengthen the regulatory measures in the relevant waters.⁴³ The ensuing bilateral discussions have highlighted several shortcomings of the fisheries regime established in 1965.⁴⁴

First, the 1965 fisheries agreement has proved ineffective in controlling the level of ROK fishing effort off Hokkaido. Particularly problematic have been the large ROK trawlers operating in those areas in which Japanese trawl

fisheries are banned by domestic legislation. Second, the existing bilateral agreement has proved ineffective in regulating ROK dragnet, purse seine, squid angling, and conger eel (*anago*) pot fisheries in areas where Japanese fishing is domestically prohibited. The number of disputes between Japanese and ROK fishermen has also grown in alarming proportions. Third, the flag-state principle adopted for the control of violations of the 1965 government agreement no longer suits the Japanese interests. According to Japanese accounts, for example, about 85 percent of the fishing boats suspected of violating the bilateral agreement concealed their national identity, making it virtually impossible for Japanese authorities to report suspected cases to the ROK. Furthermore, coastal fishermen in northern Japan have begun to press their demand for a uniform application of the nation's 200-mile fishery jurisdiction against all foreign fishermen including ROK nationals.⁴⁵ The demand has subsequently spread to western fishermen operating in the coastal areas of the Sea of Japan as well.⁴⁶

Faced with these problems, Tokyo has proposed revision of the existing bilateral fisheries agreement, including the establishment of a "fisheries resource management zone" in the area of the sea between the two countries where trouble continues. According to the Japanese proposal, the number of each country's fishing boats would be limited in the proposed zone and, breaking with the past practice of the flag-state control and court jurisdiction, the coastal state would enforce control against suspected violators of the new agreement. Japan has also called on ROK fishermen to observe more strictly the otter trawl prohibition line off Hokkaido and Japanese domestic fishery restrictions in Japan's western waters. The ROK has been reluctant to revise the existing bilateral fisheries framework. More specifically, Seoul has argued that the 1965 agreement was negotiated as part of the overall bilateral relations and that, considering the national sentiments on both sides, time is not ripe for a revision of the agreement. Seoul has also pointed out, correctly, that the flag-state principle was incorporated into the existing agreement upon Japan's insistence.⁴⁷

Tokyo and Seoul did agree in October 1987 that ROK trawl fisheries would be gradually phased out and by April 1991 would be totally eliminated inside the otter trawl prohibition line and in return Japanese bull trawlers operating around Cheju Island would be reduced by 50 percent and the fishing period for the remaining boats would be cut by 50 percent by April 1991. The agreement has been implemented. The two sides also agreed that ROK dragnet, squid angling, and conger eel pot fisheries in Japan's western waters would observe strict prohibition by area and period, and Japanese dragnet, squid angling, and coastal fishing would also be subject to prohibition by area and period. Third, Japan and the ROK agreed they would strengthen and expand their control of fishing operations in the areas concerned by extending the joint control arrangement then in existence in the joint regulation zones to surrounding areas, including the assignment of officials from both governments on the same patrol boats.⁴⁸ The patrol by the two governments' officials in the affected areas has also been increased to 10 times a year, each lasting a week to 10 days.⁴⁹

The Japanese side believed the new arrangement would have its most extensive impact on Japanese fishing in the area between the two countries. For example, bull trawl, purse seine, squid angling, and globefish (*fugu*) long-line fisheries were expected to lose about 3,000 tons, 1,100 tons, 220 tons, and 40 tons of catch, respectively.³⁰ Japan was willing to suffer these losses, however, because the need to reduce its fishing effort in the area was recognized not only in the ROK but also in Japan against the backdrop of the deteriorating resource situation.³¹ The change in the bilateral fisheries regime has had some positive results. For example, the number of ROK fishing boats operating off Kyushu has dropped and ROK violations of Japanese territorial waters have also declined.³²

On the question of whether Japan should apply its 200-mile fishing zone legislation uniformly throughout its coastal waters, a simple cost/benefit analysis still indicates that Japan is better off with the status quo—particularly in view of the extensive and lucrative Japanese bull trawl and globefish long-line fisheries off the Chinese and ROK coasts.³³ Japanese fisheries officials believe that neither Japan nor the ROK can set up a 200-mile fishery zone without terminating the 1965 fisheries agreement but agree that the existing agreement should not be terminated until after a substitute arrangement has been found. Tokyo fears that termination of the current agreement might lead to resurrection of the Rhee Line, which in the immediate postwar years extended the ROK's jurisdictional claims far beyond its current limits.³⁴

In conclusion, one may safely observe that although the post-1965 fisheries arrangements between Japan and the ROK have been far from satisfactory to either side, the existing regime has provided a modicum of stability in the bilateral fisheries relations. It has facilitated mutual policy adjustment—that is, “cooperation” as defined in the present study. One can only speculate what would have happened if the two countries had not developed cooperative arrangements.

JAPAN-DPRK FISHERY RELATIONS

In September 1975, an incident took place that dramatically exemplifies the precarious nature of the postwar fisheries relations between Japan and the DPRK. A DPRK military vessel shot at a Japanese fishing boat, the *Sho'omaru*, operating off the DPRK coast in the Korea Bay close to the DPRK-PRC border, and killed two Japanese fishermen and wounded two more. Tokyo failed to serve its protest to Pyongyang because the two countries had no diplomatic ties. Without accepting the Japanese claims or admitting the purported responsibility under international law, however, Pyongyang released the Japanese boat and crew, stated the incident was “unfortunate and regrettable,” and paid \$20,000 to each of the families of the deceased.³⁵ However, the legal status of the incident remains unresolved to this day.

On 1 August 1977, Pyongyang established a 200-mile economic zone and a 50-mile military boundary zone. The latter was designed to "reliably safeguard the economic sea zone and firmly defend the national interests and sovereignty of the country."⁴⁶ The precise outer limits of the military boundary zone have remained unknown because Pyongyang has failed to make public where and how it will draw the straight baselines that are presumed necessary because of the many indented DPRK coasts and offshore islands. Nor has the exact nature of the jurisdiction within the zone been clarified by Pyongyang.⁴⁷ Fearful as to the fate of Japanese fishing in the area, Tokyo immediately but unsuccessfully protested the establishment of the military boundary zone. Japan had been catching more than 80,000 tons of fish in DPRK coastal waters.

A private delegation including some members of the Japanese parliament visited the DPRK in 1977 and successfully negotiated a provisional agreement whereby Japanese fishing would be allowed to continue within the DPRK economic zone but outside the military zone.⁴⁸ The agreement also established a nongovernmental binational fisheries committee to review and determine the state of Japanese fishing in the DPRK exclusive economic zone. The agreement resulted in the loss of an estimated 20,000 tons of Japanese fish catch (about 25 percent of the estimated catch in 1976), or about 8 billion yen (20 percent of the estimated value in 1976). Particularly hard hit were the Japanese bull trawl and globefish long-line fisheries within the 200-mile zone, both of which were totally eliminated.⁴⁹

The precarious fishery relations have continued even after a new provisional agreement was concluded in December 1987 guaranteeing small-scale Japanese fishing activities within the DPRK-designated "provisional operation zone" established within the 200-mile EEZ but outside the 50-mile military boundary zone. The arrangement also reaffirmed an earlier agreement on Japanese purchase at sea of 50,000 tons of Alaska pollack from the DPRK. Earlier, when Japan rejected the DPRK demand for a 300,000-ton Japanese purchase, Pyongyang banned all Japanese fishing activities in the DPRK coastal areas of the Sea of Japan.⁵⁰ Since 1988, Japan has been required to pay fishing fees in return for the resumption of fishing in the DPRK economic zone, the amount of fees to be reviewed and determined annually through consultation by the working-level Japan-DPRK Joint Fisheries Committee.⁵¹ Another provisional agreement was concluded in 1989, providing for continued Japanese fishing in the "provisional operation zone" off the DPRK in exchange for Japanese payment of fishing fees for squid angling and "cooperation fees" for driftnet and long-line fisheries.⁵² The arrangement also provided for the transfer of Japanese sea-kelp processing machinery and equipment to Pyongyang in 1989.

These elements of cooperation may be small at this point, but they are likely to grow. Cooperation with Japan is certain to benefit Pyongyang in its ambitious effort to expand its fishery production. The DPRK planned to expand its fish production to 5 million tons by 1989,⁵³ but it is unclear whether this goal was attained. The current seven-year plan calls for an annual fish catch

of 3 million tons, as well as shallow-water aquaculture production of 8 million tons, for a total of 11 million tons of marine production.⁶⁴ In the mid-1980s, it was reported that the DPRK fishery production stood at 3.5 million tons, with Alaska pollack representing the largest share (1,996,000 tons); sardine, anchovy, silverfish, invertebrates, crustacea, and seaweeds were the other main marine products. The per capita production of marine products in the DPRK equaled world levels. The fishing fleet is relatively underdeveloped: only 2,000 of the 11,150 boats operating in the country are motorized. The fleet operates within the DPRK economic zone and in the Soviet EEZ based on a reciprocal fisheries agreement between Pyongyang and Moscow. The most important fishing gear are trawl nets handling 70 to 80 percent of the country's total catch.⁶⁵

COOPERATIVE FISHERIES MANAGEMENT IN THE SEA OF JAPAN

There is no doubt that Japan holds the key to international cooperation in the management of fishery resources in the Sea of Japan. It has been the most extensive user and beneficiary of the marine living resources in the area. Furthermore, Japan has the most advanced scientific and technological know-how in the exploitation, conservation, and management of marine living resources in the area. Finally, it has had the most extensive experience in dealing with the other countries concerned.

If cooperative efforts in the management of fishery resources are to develop, several factors must be present. First, the need to cooperate must be clearly recognized by the parties concerned. Second, the parties must individually or collectively possess sufficient technical expertise with which to meet the substantive requirements of fishery resource management. Third, there must be sufficient institutional support to initiate and then sustain cooperative ventures in this area. Fourth, there must be a political will to overcome obstacles that may stand in the way of developing cooperative arrangements. Fifth, the parties must be persuaded that the cooperative ventures will produce tangible benefits or an adequate return on investment. Sixth, the parties must expect equity and fairness to characterize both the procedural aspects and substantive results of international cooperation. Finally, each party must have sufficient confidence in the willingness and capability of the others to carry out their respective obligations arising out of the eventual cooperative arrangements.

This analysis of the postwar Japanese fishery relations with the former Soviet Union, the ROK, and the DPRK has amply demonstrated the need to develop effective international means to manage fishery resources. Unilaterally and bilaterally each coastal state has at a minimum imposed increasingly stiff restrictions on foreign fishing within its coastal waters and at a maximum forced some foreign operations out of its coastal area altogether. Yet the coastal state's need to conserve its fishery resources has often given way to its need to gain immediate benefits (such as fishing fees) by allowing some foreign fishing

within and outside its 200-mile zone. Reciprocity has also conflicted with the need to conserve and rationally utilize coastal fishery resources. Deterioration of fish stocks has often been the unfortunate result. This can only be prevented through mutually reinforcing management and conservation efforts among the countries in the area.

The essence of fishery management is the rational use of fishery resources through regulated and efficient exploitation and effective conservation of those resources for the attainment of a long-term stable fishery. A stable supply requires reliable information on the status of the resources in demand. The analysis of the postwar fisheries relations in the Sea of Japan has made it clear that the parties concerned often come up with different and competing resource assessments. This fact alone argues strongly for coordinated efforts at resource studies and improved information exchange among the countries.

Marine living resources often travel across maritime boundaries of neighboring states, rendering unilateral resource assessments less than complete, even inadequate. Fishery resources in the Sea of Japan are no exception. This observation applies particularly to those anadromous species that spend part of their migratory life in the area, especially *krafutomasu* (pink salmon or *Oncorhynchus gorbuscha*) and *sakuramasu* (cherry salmon or *Oncorhynchus masou*). Other valued stocks of fish in the Sea of Japan that require careful up-to-date assessments include *masaba* (mackerel or *Scomber japonicus*), *gomasaba* (spotted mackerel or *Scomber tapeinocephalus*), *sanma* (saury or *Cololabis saira*), *maiwashu* (sardine or *Sardinops melanosticta*), *katakuchiwashi* (anchovy or *Engraulis japonica*), *urume-iwashu* (round herring or *Etrumeus micropus*), *maaji* (common horse mackerel or *Trachurus japonicus*), *huri* (yellowtail), *surumeika* (Japanese common squid or *Ommatostrephes sloani pacificus*), *kuromaguro* (bluefin tuna), *suketoodara* (Alaska pollack or *Theragra chalcogramma*), and *nishin* (herring or *Clupea pallasii*).⁶⁶

Japan's visible commitment to effective management of fishery resources is a relatively recent phenomenon. With some notable exceptions of Japanese efforts to control coastal fishing in the postwar years,⁶⁷ virtually all reductions of Japanese fishing effort in the postwar period have come as a result of foreign pressure and policy changes.⁶⁸ Yet Japanese fishery policymakers today clearly understand and publicly call for resource conservation and management. Japan's effort in this area has so far focused primarily on its immediate coastal areas, but the effort can be extended further offshore.⁶⁹ Moreover, its increasing experience in resource conservation and management can be transferred to the other countries in the area. Particularly important in this regard is the development of fishery propagation technology in Japan. In this area Japan may be able to make an immediate and significant contribution to international collaboration in the Sea of Japan.⁷⁰ Japan has also been engaged in scientific studies of the interaction between marine plants and animals.⁷¹

Is there sufficient institutional support for cooperative ventures in the Sea of Japan? It is apparent that Japan, the former Soviet Union, the ROK, the

DPRK, and China are intent on observing the UN Convention. They have all signed both the Final Act of UNCLOS III and the Convention. The convention will enter into force "12 months after the date of deposit of the sixtieth instrument of ratification or accession" (Article 308). It is simply a matter of time. Moreover, many provisions of the convention have already become customary international law. As I point out in the next section, however, a number of questions remain as to the adequacy and propriety of certain provisions of the convention even if the countries with interest in the Sea of Japan are intent on adjusting their domestic fishery laws and regulations to comply with the international law.

The next question is: What tangible benefits can the countries in the area expect from cooperation in the management of fishery resources in the Sea of Japan? The exact extent of the benefits to the parties is difficult to estimate. An alternative question may be: What would the countries lose if no cooperation developed? Some estimates in Japan indicate that enormous losses to Japan would result from a hypothetical enclosure of the entire Sea of Japan as exclusive economic zones of the countries surrounding the sea. One study in the mid-1970s estimated Japan would lose about 35 percent of its squid angling fisheries (or 80,000 tons) and about 60 percent of its offshore dragnet fisheries (200,000 tons).⁷³ Another study, published in 1977, estimated that if the median-line principle were used to divide up the Sea of Japan, Japan would lose four major fishing grounds entirely, 90 percent of one fishing area, 40 percent of two fishing grounds, 25 percent of another area, 10 percent of two more areas, and 1 percent of one other fishing area.⁷⁴ The study recommended that the countries in the area conduct joint scientific studies of fishery resources, collectively determine the total fish quota for each of the countries, establish joint resource conservation zones and joint fishing zones, and carry out joint fishery propagation projects. It further proposed that foreign fishermen be given a share of the Japanese trawl fisheries in the Sea of Japan in return for Japanese access to the neighbors' coastal waters.⁷⁴ These ideas deserve careful attention.

Finally, Japanese fishery policymakers today realize whatever fisheries relations may develop between Japan and its neighboring countries in the future must be beneficial not only to Japan's economy but also to its neighbors'. The postwar record of Japanese behavior often failed to generate foreign confidence in Japan's willingness to play an equitable and fair game. This was initially unavoidable given the overwhelming Japanese presence in their neighbors' coastal waters in comparison with the negligible presence of Soviet and ROK fishermen in Japanese coastal waters. The same applied to Japan-DPRK relations. Today, the Japan-USSR and Japan-ROK fisheries regimes more closely approximate an equitable and fair game. Japan must fully commit itself to the idea of fisheries resource management and conservation and thus cultivate sufficient confidence on the part of its neighbors across the Sea of Japan. Equity and fairness will be essential to any successful cooperative arrangements with these other countries in the area.

INTERNATIONAL COOPERATION UNDER THE UN CONVENTION

The fishing activities of the countries in the region are currently guided by their national laws and regulations and by the existing bilateral regimes discussed above. To the extent that the fisheries-related provisions of the UN Convention have already become part of the customary international law, such provisions also apply to the fishing operations in the Sea of Japan. What obligations does the convention entail for the countries? This is the question addressed here. A number of problems are also discussed briefly.

The relevant provisions of the UN Convention concerning the fisheries within the EEZ and in the high seas beyond it call for improved technical capabilities of the coastal state as well as incorporation of those provisions into the existing bilateral fisheries regimes. The latter task clearly requires mutual policy adjustments and closer consultation among the countries concerned. International cooperation is also essential if the countries are to comply with the convention's provisions concerning the settlement of disputes over the interpretation and implementation of the convention.

One may question the competence of all the countries to fully and precisely comply with the provisions of the convention. There also remain some difficult questions regarding the adequacy and desirability of certain provisions of the convention in providing a sufficiently precise guide for the formulation and execution of domestic laws and regulations in the coastal states that are parties to the new law of the sea.³

Within the EEZ, whose breadth must not exceed 200 nautical miles from the baselines from which the breadth of the territorial sea is measured, the coastal state has "sovereign rights for the purpose of exploring and exploiting, conserving and managing" the living resources of the "waters superjacent to the sea-bed and of the sea-bed and its subsoil."⁴ In exercising its rights and performing its duties in the EEZ, however, the coastal state "shall have due regard to the rights and duties of other States and shall act in a manner compatible with the provisions of this Convention" (Article 56, para. 2).

The coastal state has a number of obligations with respect to the conservation of the living resources within its EEZ. The coastal state must "determine the allowable catch of the living resources" in its EEZ; ensure that the maintenance of the living resources in the EEZ is not endangered by overexploitation; develop conservation and management measures to "maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield"; take into consideration "the effects on species associated or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened"; and contribute and exchange on a regular basis "available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks" through competent international organizations with "participation by

all States concerned, including States whose nationals are allowed to fish" in the EEZ (Article 61). These obligations presume adequate technical expertise on the part of the coastal state and its willingness to cooperate with other states. Such expertise, however, is technically and financially difficult to develop and sustain. Even in Japan, with its scientific, technical, financial, and bureaucratic competence, a systematic effort to gather data on the living resources within its 200-mile fishery zone did not begin until after the zone had become law. Since then many new species have been discovered in the area. Most stocks of fish in the Sea of Japan have so far defied Japanese attempts at scientific assessment. Interspecies interaction is a particularly puzzling scientific question that awaits further Japanese effort to cooperate with Soviet counterparts in joint stock assessments. Moreover, the question of quota allocation between Japan and the former Soviet Union has also prevented full disclosure of scientific data.⁷⁷

To promote "the optimal utilization of fishery resources," the coastal state is obligated to "determine its capacity to harvest the living resources of the exclusive economic zone" and "give other states access to the surplus of the allowable catch" when it "does not have the capacity to harvest the entire allowable catch" (Article 62, para. 2). The precise meaning of the "capacity to harvest" is unclear, however. Does "capacity" mean actual or potential ability, or even intended ability?⁷⁸

The UN Convention also obliges the coastal state to take into account a number of factors in determining foreign access to the surplus of the allowable catch. These factors include "the significance of the living resources of the area to the economy of the coastal State concerned and its other national interests"; "the requirements of developing States in the subregion or region in harvesting part of the surplus"; and "the need to minimize economic dislocation in States whose nationals have habitually fished in the zone or which have made substantial efforts in research and identification of stocks" (Article 62, para. 3). How each of these factors will be weighed and made relevant to the allocation of the surplus is left unanswered, however, and will most likely be subjected to the often arbitrary discretion of the coastal state.⁷⁹

Nationals of other states fishing in the EEZ must "comply with the conservation measures and with the other terms and conditions established in the laws and regulations of the coastal State."⁸⁰ In enforcing its laws and regulations, the coastal state may take necessary measures, including boarding, inspection, and arrest and judicial proceedings (Article 73, para. 1). The coastal state must, however, promptly release arrested vessels and their crews upon the posting of reasonable bond or other security (Article 73, para. 2).

For fish stocks occurring within the EEZ of two or more coastal states, the UN Convention stipulates that the states concerned "shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary to coordinate and ensure the conservation and development of such stocks" (Article 63, para. 1). For stocks occurring both

within the EEZ and in an area beyond and adjacent to it, the coastal state and the states fishing for such stocks in the adjacent area "shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area" (Article 63, para. 2).

Systematic data on fish stocks in the Sea of Japan and its adjacent sea areas are lacking, but there are variably valued stocks that occur within the jurisdictional waters of more than one of the countries facing or adjacent to the Sea of Japan. These include chub mackerel (*Scomber japonicus*), Japanese anchovy (*Engraulis japonica*), hairtail (*Trichiurus lepturus*), conger pike eel (*Muraenesox cinereus*), jack mackerel (*Trichiurus japonicus*), lizard fish (*Saurida tumbil*), black scraper (*Navodon modestus*), and Japanese Spanish mackerel (*Scomberomorus niphonius*).

With respect to highly migratory species, the UN Convention obligates the coastal state and other states fishing for them to cooperate directly or through appropriate international organizations "with a view to ensuring conservation and promoting the objectives of optimum utilization of such species throughout the region, both within and beyond the exclusive economic zone" (Article 64, para. 1).

For anadromous species, the convention recognizes the "primary interest" of the states in whose rivers such stocks originate (Article 66, para. 1). The state of origin is obliged to ensure the conservation of anadromous species originating in their rivers by establishing appropriate regulatory measures for fishing in all waters landward of the outer limits of its exclusive economic zone and for fishing beyond those limits (Article 66, para. 2). The state of origin may establish, after consultation with the other states concerned, total allowable catches for stocks originating in its rivers (Article 66, para. 2). Although fisheries for anadromous stocks are to be conducted only in waters landward of the outer limits of the EEZ, the convention recognizes an exception for fishing beyond the outer limits of the EEZ in cases where the prohibition of such fishing would result in economic dislocation for states other than the state of origin (Article 66, para. 3(a)). These states are to be given "special consideration" by the state of origin in the harvesting of stocks originating in its rivers (Article 66, para. 3(c)). Enforcement of regulations regarding anadromous stocks beyond the EEZ must be by agreement between the state of origin and the other states concerned (Article 66, para. 3(d)). Clearly, all countries in the region must cooperate on the conservation and management of anadromous species if they are to comply with these provisions of the UN Convention.

International cooperation is also required for the conservation and management of catadromous species. The UN Convention gives responsibility for the management of these species to the coastal state in whose waters they spend the greater part of their life cycle (Article 67, para. 1). Harvesting of catadromous species is limited to waters landward of the outer limits of the EEZ (Article 67, para. 2). In cases where catadromous fish migrate through the EEZ

of another state, the management, including harvesting, of such fish must be regulated by agreement between the states concerned (Article 67, para. 3).

Moreover, the delimitation of the EEZ between states with opposite or adjacent coasts must be effected by agreement on the basis of international law (Article 74, para. 1). Failing agreement within a reasonable period of time, the states concerned are required to resort to the dispute settlement procedures provided for in Part XV of the convention (Article 74, para. 2). I discuss these procedures later. Pending agreement, the states concerned "shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement." The provisional arrangements must not prejudice the final delimitation (Article 74, para. 3). Of course, if there is an agreement in force between the states concerned, questions relating to the delimitation of the EEZ must be determined in accordance with the provisions of that agreement (Article 74, para. 4).

The UN Convention recognizes the freedom of fishing on the high seas, subject to various restrictions stipulated in the convention. All states are obliged to take conservation and management measures necessary for the conservation of the living resources of the high seas (Article 117). For the purposes of the conservation and management of living resources in the areas of the high seas, international cooperation and negotiations are required of states whose nationals exploit such resources (Article 118). In determining the allowable catch and establishing other conservation measures for the living resources in the high seas, states are required to use the best scientific evidence available to them to "maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield," subject to environmental and economic factors and taking into account "fishing patterns, the interdependence of stocks, and any generally recommended international minimum standards: (Article 119, para. 1(a)). States are all obligated to "take into consideration the effects on species associated with or dependent upon harvested species with a view to maintaining or restoring populations of such associated or dependent species above levels at which their reproduction may become seriously threatened" (Article 119, para. 1(b)). Finally, states are also required to contribute and exchange available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks through international organizations (Article 119, para. 2).

In implementing the UNCLOS provisions, differences and disagreements may occur among the countries with interests in the Sea of Japan. Does the UN Convention provide adequate guidance to deal effectively with such differences and disagreements? Serious questions remain about the adequacy of the convention's provisions concerning the settlement of disputes arising out of the interpretation and implementation of the convention.

Part XV of the convention provides for the principles and procedures for settling disputes concerning the interpretation or application of the conven-

tion. Section 1 of this part of the convention provides for the obligation to settle disputes by peaceful means, the settlement of disputes by any peaceful means chosen by the parties concerned, the procedure where no settlement has been reached by the parties, obligations under general, regional, or bilateral agreements, and the obligation to exchange views. Section 2 provides for compulsory procedures entailing binding decisions. At the time of signing, ratification, or accession to the UN Convention, a state is free to choose one or more of the following means for settlement of disputes: the International Tribunal for the Law of the Sea established in accordance with the UN Convention; the International Court of Justice; or an arbitral tribunal constituted in accordance with Annex VIII of the convention (Article 287).

Many types of disputes are not mentioned in the dispute settlement provisions of the convention and are left to the discretion of the coastal state.⁴¹ Perhaps the most important in this regard is the convention's provision that the coastal state is not obliged to submit to the UNCLOS-stipulated compulsory settlement procedures "any dispute relating to its sovereign rights with respect to the living resources in the exclusive economic zone or their exercise." The "sovereign rights" of the coastal state include discretionary powers for determining the allowable catch, its harvesting capacity, the allocation of surpluses to other states, and the terms and conditions established in its conservation and management laws and regulations.⁴² This provision is understood to mean that the compulsory procedures apply to disputes over fisheries on the high seas beyond the EEZ.⁴³

Subject to the provision just mentioned, a dispute is to be submitted to conciliation at the request of any party to the dispute when it is alleged that (1) "a coastal State has manifestly failed to comply with its obligations to ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not seriously endangered"; (2) "a coastal State has arbitrarily refused to determine, at the request of another State, the allowable catch and its capacity to harvest living resources with respect to stocks which that other State is interested in fishing"; or (3) "a coastal State has arbitrarily refused to allocate to any State," contrary to its obligation under the UN Convention, "the whole or part of the surplus it has declared to exist."⁴⁴ However, in no case may the conciliation committee substitute its discretion for that of the coastal state (Article 297, para. 3(c)).

Finally, when signing, ratifying, or acceding to the convention or at any time thereafter, a state may declare it does not accept any one or more of the compulsory dispute settlement procedures with respect to three categories of disputes: (1) disputes concerning sea boundary delimitations or those involving historic bays or titles; (2) disputes concerning military activities; and (3) disputes in respect of which the UN Security Council is exercising its functions (Article 298, para. 1).

What options the countries in the region will choose remains to be seen. One can reasonably speculate that there will be differences and disagreements among them over the interpretation and application of the provisions of the UN Convention concerning the rights and duties of the coastal and other states with respect to the fisheries within and beyond the areas of their jurisdiction. To prevent the potentially adverse and complicating consequences of these problems for international fisheries cooperation between and among the five countries of the Northwest Pacific quadrille would require frequent and frank consultation and negotiation.

To reiterate, Japan holds the key. It holds the key because it provides the necessary governmental and nongovernmental ties with the other countries in the area. Japan's extensive experience in cooperating with the former Soviet Union, the ROK, and China should stand Japan in good stead in initiating the dialogue that is necessary to develop multilateral cooperation. Once some experience is gained, the countries in the area have the institutional wherewithal to develop and maintain cooperative arrangements in the fisheries field. The establishment of diplomatic relations between the former Soviet Union and the ROK in September 1990 is a welcome development as well.

The role of the DPRK in international cooperation in the management of fishery resources of the area is uncertain. Small beginnings were seen in the nongovernmental fisheries agreement between Japan and the DPRK, but far greater commitment, probably involving government involvement in the two countries, must be forthcoming if Pyongyang is to play an active part in future cooperative ventures in the area. The ongoing talks between Tokyo and Pyongyang for the establishment of diplomatic relations may well lead to improved bilateral fishery relations between the two countries. Here, more than anywhere else in the Northwest Pacific quadrille, sufficient political will must be created on each side to overcome the long years of hostility and suspicion.

There are potentially disruptive factors in Japanese-Soviet and Japanese-ROK relations. The most troublesome is the territorial dispute between Japan and the former Soviet Union, but the pragmatism that has characterized the two countries' fishery relations so far may very well continue until the dispute is settled in one way or another. Similarly, the Japanese-ROK dispute over the sovereignty of Takeshima (Tokto) Island may well be moderated or controlled by the two countries' pragmatism. When the ROK extended its territorial limit to 12 nautical miles in April 1978, the territorial dispute was reignited, but apparently the two governments have since preferred to avoid the issue. The Tokyo-Seoul agreement in January 1974 on the joint development of the mineral resources of the continental shelf to the west of Japan demonstrated that the two governments could develop mutually beneficial arrangements by shelving the potentially explosive territorial issue.¹³ If tangible benefits can be foreseen from cooperation in the Sea of Japan, the scientific, technological, and financial resources of Japan and the ROK can be put to constructive use for mutual benefit.

If Japan, the former Soviet Union, the ROK, the DPRK, and China are to maintain their status as five of the most important fishing nations of the world, it is imperative that they learn to cooperate with one another, bilaterally or multilaterally, in the effective management and efficient use of fishery resources. The alternative—conflicting claims and unbridled competition—will surely bring about irreversible consequences, unwanted deterioration of nature's bounty, and in the end harm those whose livelihood depends critically on the stable supply of marine living resources.

RECOMMENDATIONS

In concluding this paper, I wish to put forth several recommendations to promote international cooperation in the area of concern.

First, international law scholars of the five countries should be brought together in either bilateral forums or, ideally, multilateral forums to compare their nations' laws and regulations regarding the fisheries within their respective areas of jurisdiction and determine where conflict may arise due to incompatible legal provisions and state practices. They should also identify discrepancies between the practices of their respective governments with respect to the relevant laws and regulations on the one hand and, on the other, the international law of the sea as represented by the UN Convention on the Law of the Sea. Included in their agenda may be, among other things, clarification of their respective governments' interpretation and practice with respect to those provisions of the UN Convention that remain ambiguous, inadequate, or otherwise problematic. The presence in private capacity of a UN official versed in the international law of the sea may facilitate the discussion as well. The participants may also inform each other of developments surrounding their respective countries' preparation for ratification of the UN Convention. Although the purpose of such forums should be strictly scholarly, participants may wish to put forth recommendations for avoiding potential conflict. This will allow a free exchange of information and ideas without prejudicing the participants in terms of their national identity.

Second, independent forums of fisheries experts from the five countries should be established to exchange information on the important aspects of the fisheries resources and fishing activities in the Sea of Japan. Again, the purpose should be strictly for a free exchange of information. This will help the participants gain access to badly needed data on the status of fisheries resources, the scope of national fishing activities, and the impact of the latter on the former. The presence in a private capacity of an FAO official familiar with the issues of fisheries resources and fishing practices in the area may be useful as well. Such forums should distinguish themselves clearly from government-appointed fisheries commissions that annually exchange and review information on similar matters in order to determine allowable national catch quotas as part of the bilateral fisheries regimes studied in the present analysis. The

forums will also be helpful in assessing the level of demand for the variably valued fishes in the countries concerned. The swapping of catches according to the different national market demands is an idea that may be explored in these forums.

Third, exchange of information among the participants in these two forums may be facilitated by the use of modern communications technology such as the computer and other electronic equipment. Participants should inform each other of the availability of such facilities and, to the extent possible, assist each other in gaining access to the technology. They may form an informal transnational "lobbying" group bringing to the attention of possible funding agencies the need to develop transnational communications networks. Other logistical cooperation may include the publication of working papers and proceedings of the proposed forums for both domestic and international consumption. Again, the funds for this purpose may be raised through national and transnational efforts.

NOTES

1. Portions of this paper have been presented at earlier international conferences including: the International Conference on the Sea Between Japan, Korea, and the Soviet Union: Transnational Resource Management Issues and Possible Cooperative Responses, 11-14 October 1988, Niigata, Japan; the International Conference on the Seas of Japan and Okhotsk, 16-21 September 1989, Nakhodka, USSR; and the International Conference on the East China Sea, 27-29 June 1991, Dalian, China. Further updating of information has been done for the present paper. The author wishes to thank the following individuals and organizations for providing information that has contributed to the development of the earlier papers: Yutaka Fujii, director, Nihonkai Regional Fisheries Institute, Japan; Akira Okamoto, Research Section, Japanese Fisheries Agency; Kaoru Yoshimura, International Section, Japanese Fisheries Agency; Shiro Chikuni, FAO, Italy; David Fluharty, University of Washington; Moritaka Hayashi, Office for Ocean Affairs and the Law of the Sea, United Nations, New York; the Bureau of Oceans and International Environmental and Scientific Affairs, U.S. Department of State, Washington, D.C.; and the Japan Fisheries Association, Tokyo. For more recent information, the author thanks Shinichi Mio, director, Nihonkai Regional Fisheries Institute, Japan, and Hideo Kudo. The author alone is responsible for the contents of this paper.
2. Stephen Krasner, "Structural Causes and Regime Consequences: Regimes as Intervening Variables," in Krasner, *International Regimes* (Ithaca: Cornell University Press, 1983) p. 2.
3. Ibid.
4. Robert Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy* (Princeton, N.J.: Princeton University Press, 1984), p. 12.
5. An earlier version of this section has been published as "The Postwar Soviet-Japanese Fisheries Regime and Future Prospects" in *Ocean Yearbook 9* (Chicago: University of Chicago Press, 1991).
6. Roy I. Jackson and William F. Royce, *Ocean Forum: An Interpretive History of the International North Pacific Fisheries Commission* (Farnham, Surrey: Fishing News Books, 1986), p. 25.

7. For a detailed account of Japanese-Soviet fishery negotiations in the postwar years, see Kenzo Kawakami, *Sengo no Kokusai Gyogyo Seido* (The postwar international fisheries regime)(Tokyo: Dainihon Suisankai, 1972); and Norinsuisansho hyakunenshi hensan-iinkai (ed.), *Norinsuisansho Hyakunenshi* (The 100-year history of the Ministry of Agriculture, Forestry, and Fisheries), *Gekan* (vol. 2)(Tokyo: Norinsuisansho Hyakunenshi Kankokai, 1981).
8. Jackson and Royce, p. 65.
9. In fact, a Japanese foreign ministry official most knowledgeable about the postwar Japanese-Soviet fisheries relations has speculated that Moscow tactically used the fisheries negotiation to promote the diplomatic normalization talks, which had reached an impasse. See Kawakami, p. 436; see also Norinsuisansho hyakunenshi hensan-iinkai, p. 679.
10. Douglas M. Johnston, *The International Law of Fisheries: A Framework for Policy-Oriented Inquiries* (New Haven and London: Yale University Press, 1965), pp. 391-396; cited in Jackson and Royce, p. 65; Kawakami, p. 417. An annex to the treaty specified delimitation of fishing areas that the two sides agreed was necessary.
11. Kawakami, p. 422.
12. For a detailed study of Japan's response to the Soviet 200-mile decision, see Akaha, *Japan in Global Ocean Politics* (Honolulu: University of Hawaii Press and Law of the Sea Institute, 1985), pp. 122-149.
13. Articles 1 and 2 of the agreement acknowledged a Soviet fishery zone based on the decision of the Soviet Council of Ministers and Japan's fishery zone delimitation, respectively. Moreover, Article 8 provided that nothing contained in this agreement should be deemed to affect or prejudice in any manner the positions or views of either government with respect to the questions relating to the mutual relations between the two countries. The "questions relating to the mutual relations;" Tokyo has argued, include the territorial dispute over the "Northern Territories." Until the Gorbachev-Kaifu summit in Tokyo in April 1991, however, Moscow had long denied the existence of any territorial disputes between the two countries.
14. The latter agreement included regulatory measures with respect to all fishery resources except the highly migratory species, which Tokyo maintained should be managed not by unilateral coastal state action but through regional and international fisheries organizations.
15. The Soviet 200-mile economic zone was established by a decree of the Presidium of the Supreme Soviet on 28 February 1984. For a full English text, see *The Law of the Sea: Current Developments in State Practice* (Office of the Special Representative of the Secretary-General for the Law of the Sea, United Nations, 1987), pp. 103-110.
16. Article 1 of the agreement. An unofficial English translation of the agreement—the Agreement Between the Government of Japan and the Government of the Union of Soviet Socialist Republics Concerning the Fisheries Off the Coasts of Japan and Off the Coasts of the Union of Soviet Socialist Republics—is found in *Japanese Annual of International Law* 28 (1985):297-299.
17. Established in accordance with Article 6 of the same agreement.
18. *Suisan Nenkan* (Fisheries yearbook)(Tokyo: Suisansha, 1988), p. 29.
19. "Nisso Chisen Okiai Kosho" (Japan-Soviet offshore fisheries negotiations), *Suisankai* 1272 (January 1991):60.
20. *Ibid.*, pp. 45-47.
21. *Suisan Nenkan*, 1988, p. 26; Hiroshi Murabayashi, "Nisso Gyogyo Kyoryoku Kyotei no Shisasuru Mono" (What the Japan-Soviet fisheries cooperation agreement suggests), *Juristo* 843 (September 1985):63.
22. "Nisso Sakemasu Kosho Choin" (Japan-Soviet salmon negotiations concluded), *Suisankai* 1275 (April 1991):8.

23. Ibid. See also Kazuhiro Baba, "Nisso Gyogyo Godoiinkai. Dai 6-kai Kaigi no Kekka" (Japan-Soviet joint fisheries commission: Results of the sixth meeting), *AJF* (July 1990):30.
24. For a summary description of the joint venture, see "Soren 200-kairinai de 11-nenburi ni Sake-masu Sogyo" (Salmon fishing operations within the Soviet 200-mile zone for the first time in 11 years), *Suisankai* 1251 (April 1989):55. Eventually the joint venture plans to build salmon hatcheries on five other Sakhalin rivers. In addition to the hatching of salmon, the new binational enterprise is scheduled to conduct scientific studies with a view to developing scallop culture farms in Sakhalin. See "7-gatsu Jojun, Nisso Gobengaisha ga Hassoku" (Japan-Soviet joint venture company to be established early July), *Suisankai* 1242 (July 1988):53.
25. For the list see *Hokkaido Shimbun*, 11 July 1991, p. 15.
26. See the Fisheries Agency's annual document "Nisso Gyogyo Kankai Shiryo" (Japan-Soviet fisheries relations information).
27. In 1988, Japan was allotted a total quota of 9,900 tons and 20-21 fishing boats in these areas; *ibid.*, p. 33.
28. *Suisan Nenkan*, 1988, p. 32. In 1987, Japan collected 1,031 tons of sea kelp in exchange for 110,500,000 yen (*Suisancha*, 1988, p. 36). Japan harvested 260 tons of sea urchin in 1987, in exchange for 57 million yen; *ibid.*, p. 37.
29. Japan bought a total of 38,950 tons of Alaska pollack in 1987 through this arrangement; Japan started buying herring from the Soviets at sea in 1988, purchasing 361 tons that year; *ibid.*, p. 38.
30. Japan's 1988 quota was 25,500 tons and the number of Japanese boats permitted to operate within Soviet waters was 17-18; *ibid.*, p. 35. In 1989, a maximum of eight Japanese boats was allowed at any one time. The total allowable catch of *madara* was set at 25,000 tons. See "Kotoshi no Nisso Haenawa Kyodo Jigyo" (This year's joint Japan-Soviet dragnet enterprise), *Suisankai* 1244 (September 1988):60.
31. For a detailed account of postwar Japan-ROK fisheries relations, see Kenzo Kawakami, *Sengo no Kokusai Gyogyo Seido* (The postwar international fisheries regime) (Tokyo: Dainihon Suisankai, 1972), pp. 412-413; Tsuneo Akaha, *Japan in Global Ocean Politics*, pp. 42-48; and Choon-ho Park, *East Asia and the Law of the Sea* (Seoul: Seoul National University Press, 1983) pp. 145-149.
32. Akaha, p. 46.
33. *Ibid.*
34. Article 1 of the agreement. Accordingly, on 12 December 1965 Japan established a 12-mile fishery zone applicable only to ROK nationals.
35. Articles 2 and 3. Accordingly, restrictions apply to Japanese offshore trawl, bull trawl, purse seine, and mackerel angling fisheries in the area.
36. Article 4. According to the Japanese interpretation, acceptance of the flag-state principle implied the status of the area beyond the 12-mile ROK fishery zone as high seas, thus de facto abolishing the Rhee Line; Kawakami, pp. 257-258, 274.
37. Article 5. The survey zones were defined by the bilateral fisheries commission, established by the 1965 agreement, as lying north of latitude 30 degrees north and west of longitude 132 degrees east.
38. For a detailed study of Japan's extension of its territorial and jurisdictional limits, see Akaha, *Japan in Global Ocean Politics*.
39. *Ibid.*, p. 135.

40. Gaimusho Johobunkakyoku, ed., *200-kairijidai no Gyogyo: Saikin no Taigai Gyogyomon-dai to Kokusai Kyoryoku* (Fisheries in the 200-mile era: Recent external fisheries problems and international cooperation) (Tokyo: Sekai no Ugokisha, 1980), p. 80.
41. *Ibid.*, pp. 29-31.
42. *Ibid.*, p. 31.
43. *Ibid.*
44. See *Suisan Nenkan*, 1988, pp. 33-35.
45. *Ibid.*, p. 33. Fishermen in southern and southwestern Japan continued to oppose a uniform application of the nation's 200-mile limit for fear of losing their fishing grounds in the ROK and Chinese coastal waters. For a debate on this question, see "Nikkan Seifukan Sessho to 200-kairi Taisaku e no Gyokai no Kenmei na Ugoki" (The Japan-ROK government negotiations and the industry's earnest move concerning the 200-mile measure), *Suisankai* 1220 (September 1986):8-14.
46. *Asahi Shimbun*, 1 August 1988, p. 3.
47. *Suisan Nenkan*, 1988, pp. 33-34.
48. *Ibid.*, p. 35.
49. *Asahi Shimbun*, 1 August 1988, p. 3.
50. Sohei Tsuyoshi, "Shinjidai o mukaeru Nikkan Gyogyo Taisei" (The dawn of a new era in Japan-ROK fisheries regime), *Suisansekai*, March 1988, p. 59.
51. *Ibid.*
52. *Asahi Shimbun*, 1 August 1988, p. 3.
53. *Ibid.*
54. Isoroku Satake, "Shinjidai ni Taio shita Seisaku o Tenkai" (Developing policy measures adapted to the new era), *Suisansekai*, January 1987, p. 19.
55. Soji Yamamoto, *Kokusai Gyogyo Funso to Ho* (International fisheries disputes and law) (Tokyo: Tamagawa Daigaku Shuppanbu, 1977), pp. 110-114.
56. The English text can be found in FBIS, *Asia and Pacific*, 1 August 1977, p. D6, and *The People's Korea*, 10 August 1977. The quotation is from Choon-ho Park, *East Asia and the Law of the Sea* (Seoul: Seoul National University Press, 1983) p. 163.
57. *Ibid.*, pp. 163-164.
58. *Ibid.*, p. 165.
59. *Suisan Nenkan*, 1978, p. 52.
60. "Niccho Gyogyo Zantei Goisho ni Choin" (Japan-DPRK provisional fisheries agreement signed), *Suisankai* 11236 (January 1988):46-47.
61. *Ibid.*, p. 46.
62. "Ikatsuri, Nagashiami, Nobinawa tomo Sakunen dori" (Squid angling, driftnet, long-line fishing at last year's levels), *Suisankai* 1252 (May 1989):47. "Cooperation fees" were paid in the form of fishing equipment.
63. *Fisheries of Korea* (Pyongyang: Foreign Languages Publishing House, 1984), n.p.
64. *Shiryo: Chosen Minshushugi Jinmin Kyowakoku* (Information: Democratic People's Republic of Korea) (Tokyo, 1991), p. 297.
65. "Country Profile: DPR Korea's Fisheries Industry," *INFOFISH International*, April 1988, pp. 39-42.
66. A convenient set of maps showing the distribution and fishing grounds of these and other fish stocks around Japan can be found in Suisancho Kenkyubu, *Nihon Kinkai ni okeru shuyo*

- Gyorui no Bunpu oyobi Gyozozu* (Maps showing the distribution and fishing grounds of major types of fish in the areas of the sea around Japan)(Tokyo: Suisancho Kenkyubu, 1962).
67. See, for example, Yutaka Hirasawa, *Nihyaku-kairi Jidai to Nihon Gyogyo—Sono Henkaku to Saisei no Michi* (The 200-mile era and Japanese fisheries—its road to reform and renovation)(Tokyo: Hokuto Shobo, 1978) p. 188.
 68. For critical views of Japanese lack of conservationist tradition in the fisheries sector, see Hirasawa, p. 193; see also Yoshihide Uchimura, "21-seiki no Wagakuni Suisangyo no Tenbo" (Prospects for the Japanese fishery industry in the twenty-first century), *Aff* (April 1986):24.
 69. A good example of Japanese efforts in this area is the seven-year national plan, at the cost of 200 billion yen, beginning in 1976, to develop and improve coastal fishing grounds.
 70. For accounts of Japanese efforts in this area see, for example, Toru Amano, "Toru Gyogyo kara Shigen Baiyogata Gyogyo e-Kaiyo Bokujo Gijutsu no Kaihats" (From exploitative fisheries to resource incubation-type fisheries—the development of marine ranching technology), *Aff* (March 1978):38–42; Hisashi Kanno, "Shigen Baiyo: Kaiyo Bokujo Kijutsu Kaihatsu Kenkyu no Keika" (Resource propagation: The status of research for the development of marine ranching technology), (April 1986):6–7; and Tetsuo Kobayashi, "Jiniteki Kontorofu ni yoru Sakuramasu Shigen no Zodai" (The propagation of dog salmon resources by artificial control), *Aff* (April 1986)11–18.
 71. Kobayashi, "Jiniteki Kontorofu . . ." pp. 7–9.
 72. Cited in Kaiyo Sangyo Kenkyukai, ed., *200-kairi Jidai no Sekai to Nihon* (The world and Japan in the 200-mile era)(Tokyo: Kajima Shuppankai, 1977), p. 101.
 73. *Ibid.*, p. 102.
 74. *Ibid.*, pp. 102 and 104.
 75. For example, a UN review of the state practice in ocean laws and regulations in 1986 revealed many discrepancies; see Office of the Special Representative of the UN Secretary-General for the Law of the Sea, *The Law of the Sea: National Legislation in the Exclusive Economic Zone, the Economic Zone, and the Exclusive Fishery Zone* (New York: United Nations, 1986).
 76. UN Convention, Article 56, para. 1(a).
 77. Author interview with Hideo Kudo, Nihonkai Regional Fisheries Institute, Niigata, Japan, 7 August 1991.
 78. This point is raised by Shigeru Oda, a member of the International Court of Justice, in his "Fisheries Under the United Nations Convention on the Law of the Sea," *American Journal of International Law* 77(4) (October 1983):743–744.
 79. Oda, pp. 744–745.
 80. UN Convention, Article 62, para. 4.
 81. See Hideo Takabayashi, "Haitateki Suiiki ni okeru Gyogyo Funso no Shori" (The settlement of fisheries disputes in the exclusive economic zone), *Hosei Kenkyu* 51(2) (February 1985):255–264; 51(3–4) (March 1985):571–614; 52(1) (September 1985):89–110.
 82. UN Convention, Article 297, para. 3(a).
 83. See, for example, J. Peter Bernhard, "Compulsory Dispute Settlement in the Law of the Sea Negotiations: A Reassessment," *Virginia Journal of International Law* 73(1) (1979):98; cited in Takabayashi, 51(2) (February 1985):262.
 84. UN Convention, Article 297, para. 3(b).
 85. For a critical analysis of the agreement, see Masayuki Takeyama, "Japan's Foreign Negotiations Over Offshore Petroleum Development: An Analysis of Decision-Making in the Japan-Korea Joint Continental Shelf Development Program," in Robert L. Friedheim et. al., *Japan and the New Ocean Regime* (Boulder: Westview Press, 1984), pp. 276–313.