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Fisheries Cooperatives in Southeast Asia, an Institutional Perspective

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Although the situation differs according to country, small-scale traditional fisheries in Southeast Asia are now in a serious socio-economic situation. The causes of this condition are analyzed together with the potential role that fisheries cooperative institutions can play in ameliorating it. The retardation of the fisheries cooperative movement in Southeast Asia is contrasted with the Japanese history in institution-building for small-scale fisheries.

INTRODUCTION

The objective of this paper is to identify trends in marine fishery production and to analyze their institutional context in the major coastal countries of Southeast Asia, during the period 1960–1980. I examine the constraints on and problems in fisheries, trace the organizational history of fisheries and the attempts by both fishermen and governments at institution building.

Fisheries cooperatives are the principal organizations discussed in this paper. The complicated processes of legal and legislative formation are treated only minimally, as required to describe succinctly the national picture. This is admittedly unfortunate but fisheries in Southeast Asia are full of complexities, which, owing to poor documentation, are not amenable to clear understanding. Given the great differences in basic socio-economic background in each of country of the region, I have limited my concern here to such economic aspects of cooperatives as marketing, credit provision, and the like. The paper deals mainly with Malaysia, the Philippines, Indonesia and Thailand, and comparisons are made with the evolution of Japanese fisheries institutions.

The development of fisheries institutions in Southeast Asia requires strong policy measures in view of the sector's relatively low level of income and education on the one hand, and the deteriorating position of commercial fish stocks and virtual disappearance of new resource frontiers—high quality fishing grounds—on the other [SAKIYAMA 1982a]. These conditions are the consequence of the massive introduction of technology and capital embodied in the more powerful and efficient fishing vessels, *i.e.*, larger and more durable fishing gear, fish-finders, radar, together with other devices. Consequently, virtually unregulated marine capture fishing by these power-

ful boats has led to a decrease in the fish stocks of commercial value in the important fishing grounds, which fished by less-heavily capitalized fleets could have provided long-term sustained yields. Fisheries in Southeast Asian marine waters have been jeopardized not only by overfishing by trawlers but also oil, natural gas and other mineral extraction, and by the rapid urbanization and industrialization that has contaminated coastal zones regionwide, particularly the brackish waters of estuaries which are important fish nurseries [RUDDLE 1981, 1982]. As the experience of Japan and other developed countries shows, one of the major forces countering such tendencies is inshore fishermen rather than governments, particularly where organized fishery cooperatives have a powerful voice [SAKIYAMA 1982b].

TRENDS, PATTERNS AND FACTORS OF EXPANDED PRODUCTION

Total fish production in Southeast Asia has expanded tremendously from 1.3 million to 8.1 t million, or some 6.4 times, during the period 1938–1980 [SAKIYAMA 1982b]¹⁾. Most of this expansion occurred during the two decades 1960–1980.²⁾ Southeast Asia's share of world production increased from 6 to 11 percent, and as a consequence Southeast Asia has emerged as one of the world's leading marine fishing regions.

In world terms Southeast Asia was a relatively insignificant fish producer until the beginning of the 1960's, when the region eventually became independent of colonial rule. A sharp upward trend in fisheries production has continued for about two decades (Fig. 1). Since 80 to 90 percent of each country's production is accounted for by marine fish catches, the figure shows the general trend of marine fisheries production. In contrast, freshwater capture and culture fisheries have shown little significant expansion, and their share of total production has declined from a prewar level of 20–25 percent to some 10 percent at present.

Two principal factors account for this rapid expansion in marine catch during the period 1960–80; the supply side and demand side. The former consists of three major elements: 1) the massive introduction of modern technology and technical assistance from advanced countries and international agencies; 2) capital investment and assistance from industrialized countries for building physical infrastructure; and

1) Defined here as the total of marine and freshwater fish landings plus marine and freshwater aquaculture production. It is evident that a considerable tonnage is discarded at sea, but there is no way of measuring the amount dumped. Increasingly more fish of low economic value, under the rubric "miscellaneous species," are discarded. When landed they are classed as "trash" fish and commonly processed for fish meal or used as fish feed in aquacultural ponds. Unless otherwise stated "catch" here signifies "landings."

2) In this paper the communities treated are Brunei, Hong Kong, Indonesia, Malaysia, Philippines, Singapore, Taiwan, Thailand and Vietnam. Estimated total world fish production during the same period increased from 20 million to 72 million t, or 3.5 times.

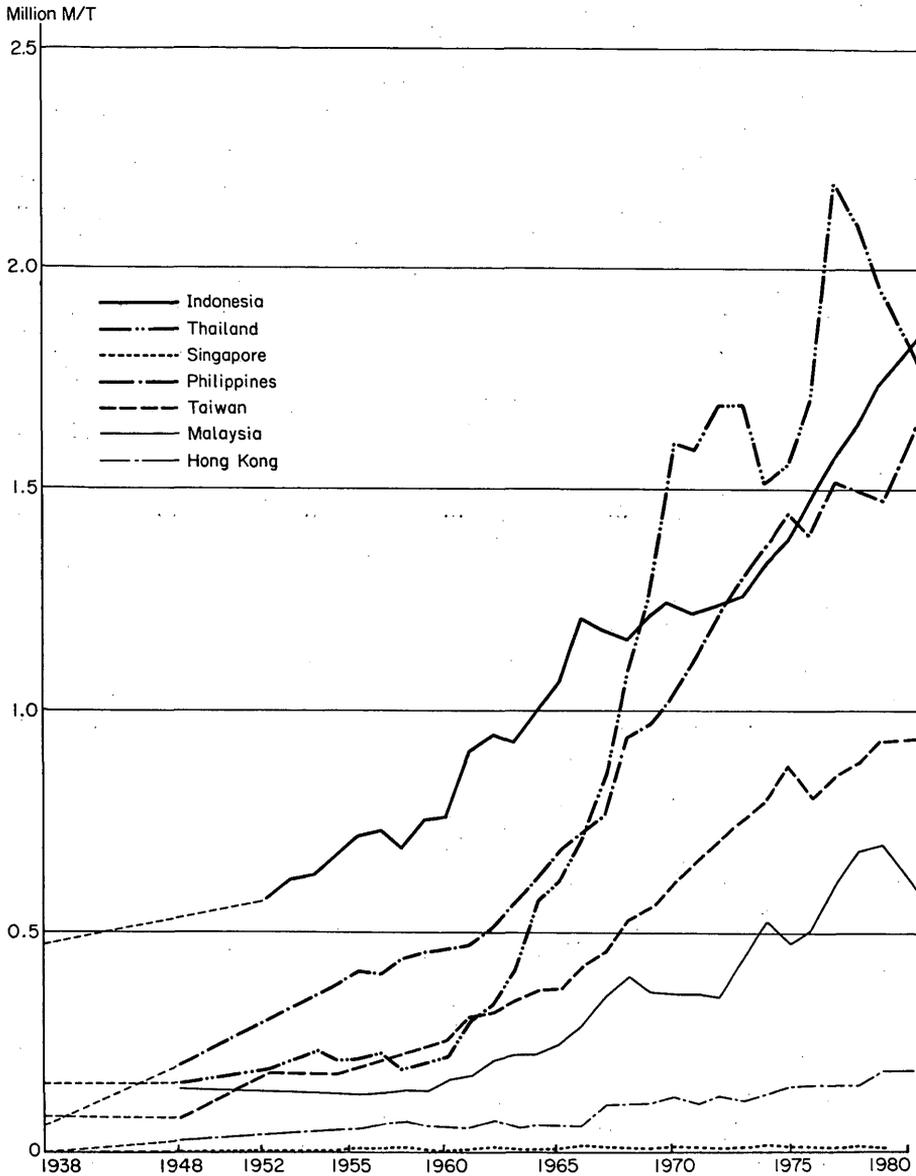


Figure 1. Nominal Fisheries Catches, 1938-1980

Sources: [FAO, *Yearbook of Fishery Statistics 1954-55* and subsequent annual issues; Southeast Asian Fisheries Development Center (SEAFDEC), *Fishery Statistical Bulletin for South China Sea Area 1980*]

Table 1. Marine Catch (Metric Tons) by Vessel Size

Country, sub-area	Year	Total	Marine Fishery (capture only)			
			Sub-total	Small-scale	Large-scale	
Total	0	1978	7,163,454 ¹⁾	5,877,187 ¹⁾	1,952,468	3,757,976
Brunei	1	1978	2,745	2,552	2,662	...
Hong Kong	3	1978	162,498	155,943
Indonesia ²⁾	4	1978	1,647,664	1,227,386	765,889	461,497
Kampuchea	5	1978	84,700	10,800
Malaysia	6		634,945	626,912	157,223	469,689
Pen. Malaysia ³⁾	7	1978	565,833	509,300	111,647	397,653
Sabah	8	1978	41,600	40,100	20,503	19,597
Sarawak	9	1978	77,512	77,512	25,073	52,439
Philippines	10	1978	1,580,404	1,281,772	775,932	505,840
Singapore	11	1978	16,173	15,635	5,439	10,196
Taiwan	2	1978	885,044	718,270	29,600	688,670
Thailand	12	1978	2,099,281	1,837,807	215,723	1,622,084
Vietnam	13

Table Notes: 1) Includes oyster culture.

2) Small-scale fisheries in Indonesia refers to those undertaken by households without a boat, with non-powered boats or out-board powered boats. Large-scale fisheries refer to all other types.

3) The figures for small-scale and large-scale fishery were estimated from the 1973 Fishery Census. Inland and freshwater aquaculture production is based on reported data only. (Compiled by author.)

3) the expansion of fishing grounds. These three factors are interdependent. For example, modern technological devices installed on a large fishing vessel, in turn require heavy capital investment from abroad. These devices then permit fishing over an extended area, expanding from coastal to offshore fishing, and more recently into long range activities. In large measure it is this modern sector which caused the rapid expansion of Southeast Asia's marine fisheries, as a result of technology and capital transfer from industrialized countries.

The mainstay of these modern fisheries is a large-scale trawl fishery. In this region the large-scale sector caught somewhat in excess of 3.8 t million in 1978; this compared with 1960 when the figure was nil (Table 1). Perhaps the most impressive example in this respect is the large-scale fishing sector of Thailand, which, in 1980 accounted for 1.2 t million of the total marine catch of 1.4 t million. In other words, 89 percent of the Thai marine catch was produced by the modern, large-scale sector whereas the traditional, small-scale sector accounted for only 11 percent in 1980. In 1960, on the other hand, the small-scale sector accounted for fully 100 percent of marine landings. More surprising is that some 74 percent of Thailand's large-scale sector consists of trawlers (otter and pair trawls together).

Malaysia has followed a similar path toward modernization of its fisheries and its traditional, small-scale sector now remains only on the east coast of Peninsular Malaysia. In the Philippines the pace of fisheries modernization has also been

significant, but owing to government control the traditional coastal fishery still accounts for about half of total marine production. In that country fisheries development has been based on the balanced growth of the municipal (coastal, small-scale) and commercial (large-scale, offshore) sectors, with the principal emphasis placed on brackish water aquaculture of milkfish (*Chanos chanos*). In Indonesia, the modern sector of marine fisheries is less developed than in the former three countries owing to the predominance of traditional, small-scale fishing activities scattered throughout its hundreds of islands. Indeed, the bulk of Indonesian fishing vessels are still hand- and sail-propelled whereas in the other countries some 50 percent of fishing boats are now motor-powered.³⁾

In socio-economic terms it is important to pinpoint the group principally responsible for the development of the modern fisheries. Commonly, and particularly in Thailand, fishermen of recent Chinese ancestry are the main promoters of fisheries modernization [SAKIYAMA 1983]. Conversely, those fishermen engaged in traditional, small-scale and coastal fisheries are either local Muslims or Muslims with a migratory background. In Thailand relatively harmonious religious and ethnic relationships have been maintained between local and immigrant Chinese fishermen, who have entered marine fishing with few conflicts resulting between them and local traditional fishermen, mostly ethnic Thais and Malays. Most of the Chinese fishermen who immigrated to Thailand were formerly fishermen in Fukien and Guangdong Provinces and in Hainan Island. It was these fishermen who aspired to adopt the modern trawl technology. They are also market-oriented and have gradually built-up sales networks as fish merchants (either as wholesalers or retailers), thereby tightly linking landing points to the major urban markets. Chinese fishermen, unlike their Muslim counterparts, have tight kinship links among close relatives for money-lending and mutual assistance. They also have wider relationships with institutional banking and relationships with immigrants from the Chinese province of origin. This has enabled them to adapt themselves rapidly to the modern, capitalistic trawling business [SAKIYAMA 1984a].

Demand-side factors are equally important in explaining fisheries development. Without the impetus of a strong foreign demand for marine products, especially prawns and shrimps, fisheries development would not have proceeded so rapidly in many Southeast Asian countries. As per capita income increased in the developed countries, so demand for such marine products grew sharply. This prompted fishery enterprises and traders from developed countries to enter into joint venture relationships with fish dealers in the major Southeast Asian producing countries.

Another demand factor impelling the expansion of marine production was that of local urban markets in which the purchasing power of the citizens was increasing. Coupled with improved transportation networks for highly perishable marine products, which were formerly marketable only in local provincial markets, consumer's

3) In comparison the percentages for Thailand, Malaysia and the Philippines are 87, 81 and 38, respectively.

within four or five days' journey away by refrigerated truck can now be supplied. In other words, marine fisheries products have now been transformed from provincial to national consumer goods, and from domestic to international commodities.

It should be stressed, however, that international demand is still much stronger than domestic demand for high value marine products. Prawns, especially *Penaeus monodon*, which were 10 Bhats/kg 15 years ago, now cost 200–300 Bhats/kg, a price far beyond the reach of most Thais. Most other high value fish have undergone similar price increases. However, since these commodities have largely disappeared from the coastal seas of Thailand and Peninsular Malaysia, owing to overfishing that was apparent by in the first half of 1960's, nobody profits from such high prices.

It is also important to note that these marine products are, by their very nature, of low supply flexibility to demand, whereas there is wide fluctuation in import demand which is subject to wide price fluctuation. This is often disadvantageous to the seller. The major Southeast Asian prawn exporting countries ship some 70–80 percent of their product to Japan, so the slightest fluctuation in Japanese demand is greatly amplified in the producing countries, whose exporters must bear a high risk and uncertainty for their product.

SOCIO-ECONOMIC OBSTACLES TO COOPERATIVE DEVELOPMENT

General Position of Fishermen

In each Southeast Asian country the socio-economic condition of most fishing households is below the average of the general populace. Not only are fishermen economically poorer than those in other sectors of the economy, but their basis of life is precarious, simply because fishing is mostly conditioned by fluctuations in natural environmental factors. To that must be added the handicaps of geographical isolation from the major economic and cultural centers of the countries or regions, which further depresses the social and educational levels of fishing communities [MIYAKE 1984a].

Those detriments partly explain why development of the fisheries sector in Southeast Asia has been relegated to a secondary priority by governments, if not in

Table 2. Changes in the Total Number of Fishermen Engaged in Marine Fishing (1,000)

Countries	Year	Total number of fishermen engaged in marine fishing
Indonesia	1953	392.7
	1970	883.4
	1978	832.0
Malaysia	1970	76.0
	1978	83.6
Thailand	1970	74.1
	1978	76.0

Source: [Compiled by author]

plan documents at least in practise, in comparison with agriculture. Only relatively recently have Southeast Asian central governments recognized the importance of fisheries. The main reasons for this changed awareness are that the marine product exports of each country have become important foreign exchange earners and that fish is an indispensable animal protein source as populations grow and as their levels of living continue to rise. Moreover, as policy-makers are now aware, fisheries are important absorbers of rural unemployed. As Table 2 shows for three countries, the total number of fishermen has increased despite fast developing mechanization and motorization. This may reflect the "disguised unemployed" who are being absorbed by this "marginal" sector.

As demonstrated above, many factors impede the raising of fisheries to become productive and integral sectors of national economies. To achieve high productivity and high living standards in this sector as a whole, and not just the capitalistic sub-sector alone, it is essential that governments as well as fishermen themselves strive to develop both physical and social infrastructures in fishing communities. The latter is particularly important and includes social, legal, administrative and financial institutions. Since the organization and management of various institutional forms requires several types of cadre, central governments, should, over the long-term, gradually implement development in tandem with a general improvement in the educational levels of fishing village children.

In general, fishing villages in developing countries are beset by at least two complex and deep-rooted problems. One is the influence of money-lenders on cooperative movements. In many cases they are among the leaders of the cooperative and use their position to strengthening their own vested interests. Another is the virtual absence of moral obligation or responsibility among cooperative members to repay loans, particularly when public institutional credit is extended. For this reason alone many rural development programs have collapsed. This is one strong reason why basic education, including that on social obligations, is important if villagers aspire to a better life.

Ecological Conditions and the Widening Gap in Fisheries

One should not be deluded about the nature of Southeast Asian fisheries development by the remarkable increases in catch size, since this expansion has had both positive and detrimental consequences. Thailand provides a good example of this disparity with the sharp dichotomy between traditional and modern sub-sectors that typify a dual economy [SAKIYAMA 1982a].

Vast amounts of money were invested by entrepreneurs in the modern sub-sector for more powerful and larger vessels, and consequently their trawlers returned to port fully loaded. They worked hard to repay high interest-bearing loans and to beat the competition. But under these conditions and in the absence of government control, over-fishing developed, first in the Inner Gulf of Thailand, then in entire Gulf and finally in the inshore waters of Peninsular Malaysia. The rapid depletion of the prawn stock had become evident by the mid-1960's in those seas, and a decade later

the same critical conditions were observed in the entire South China Sea and Andaman Sea. Concomitant with the decrease of shrimps and prawn catches the share of trash fish increased, thereby reducing the incomes of fishermen and boat-owners. Thus, paradoxically, while total production increased (*vide supra*), incomes decreased. If there was a real increase, it was, rather, in debt obligations, the volume of trash fish caught, increased fuel costs and higher levels of water pollution. Marine ecosystems in Southeast Asia have thus been grossly disturbed.

So far I have described conditions only in the modern sub-sector, leaving aside traditional, small-scale fisheries. As mentioned, the increasing share of the former in terms of fish catch as well as its contribution to foreign exchange earnings must be highly appreciated. The modern sub-sector also contributed in opening-up marketing networks that gave urban consumers access to marine products. At the same time, as we have seen earlier, trawling has far exceeded the Maximum Sustainable Yield (MSY). The first victims in this were prawns and shrimps followed by other demersal fish. Spiny lobsters and other crustaceans with high economic value were either nearly exhausted or greatly over-fished in all the territorial seas of ASEAN, except those of Indonesia's Irian Jaya Province.

Resource depletion was aggravated by the misuse of the coastal zone as well: the discharge of toxic and contaminating materials into rivers which in turn polluted the fertile brackish water estuarine zones, the disturbance of habitats and destruction of mangroves, among many other factors [RUDDLE 1981, 1982]. In the long-run it would appear that in Southeast Asia the maintenance of fisheries as an integral part of national economies and social welfare rests primarily on the small-scale fishermen and their communities. However meagre their livelihood and however low their productivity and income relative to the modern sector fishermen, many such communities retain a strong conservationist ethic. They know the level of exploitation beyond which fish resources will not produce a sustained yield, and they also realize that exceeding this will jeopardize future generations of their families. For example, scattered along the east coast of South Thailand are many fishing villages, where most fishermen are engaged in coastal fishing using small powered boats of 1-5 tons for gill netting or purse seining. Very little trawling is done.⁴⁾ Most fishermen in this region are the descendents of immigrant Malay fishermen. They are conscious of the logic of MSY by experience, and proud of their centuries-old profession.

At a time when offshore trawling is faced by the critical combination of high capital and operating costs and deteriorating fish resources, survival of the trawling sector requires a reduction in the number of boats,⁵⁾ limited days of operation per

4) In 1980 I made a brief survey of major fishing villages along the coast of South Thailand. One question I asked villagers was why they did not use trawlers which promise a quicker and higher income than gill netting. Their answer was clear and affirmative: "We may get more money by trawling but in a few years the fish will be all gone." Their answer proved true.

5) This has been practised in many developed countries since the new regime of the sea began in the late-1970's. Fishery cooperatives must take the initiative in this painstaking affair.

year and agreed limitations of operation by season, species and fish size, together with a strict compliance with government directives. Implementation of such regulations and agreements will be possible only when the fishing cooperatives and their membership fully understand the conditions that have necessitated them.

FISHERY COOPERATIVES IN SOUTHEAST ASIA

Evolution of Fishery Cooperatives in the Region

Owing to widely differing geographical, socio-cultural and historical backgrounds it is extremely difficult to generalize about fishery cooperatives in Southeast Asia. In most countries of the region governments have taken the initiative only recently to establish fishery cooperatives, fishery societies or fishery groups to improve socio-economic conditions through institution-building. To meet this objective, many governments have organized a fishery cooperative department or bureau of fisheries within a ministry of agriculture.

Throughout most of Southeast Asia fishery cooperatives (even in their rudimentary form of "fishery societies") did not exist prior to the 1960's. The earliest came into existence in Malaysia, where the *Cooperative Societies Ordinance* was legislated in 1948.

Although many Southeast Asian countries emphasize the importance of rural development, much such policy remains only on paper [MIYAKE 1984a]. In the fisheries sector the only tangible measure that has been widely implemented is credit financing for medium- and large-scale fishermen and their cooperatives, mainly to meet minimum requirements of fish landing, storage and marketing places. The main reasons for inadequate development of cooperative activities seem not to reside in an insufficiency of government policy measures, but rather in the lack of "governability" among fishermen [OECD 1982].⁶⁾ This characteristic has deep roots and is exacerbated by the inferior socio-economic status of most fishermen as well as an absence of fishing rights held by either them or by their communities.

HUMAN FACTORS

Low-Consciousness of Fishermen vis-à-vis Fishery Cooperatives

This difficulty generally reflects the high levels of poverty and illiteracy of the countries in the region. Where fishermen are still seasonally migrant their willingness to organize a cooperative may not be easily generated. As mentioned earlier, in the sheer absence of a sense of cooperative movement, its members are merely the recipients of government or institutional loans, the rate of repayment of which is extremely low. Creating an understanding of cooperative principles, through education, is the first step to be taken. In view of this weakness education and training

6) This term is used here to denote fishing villagers' appreciation and compliance with the intent of governmental directives.

are essential prerequisites to the organization of a cooperative [MIYAKE 1984b].

Personnel Deficiencies

Owing to geographical isolation and poor economic incentives, most countries in the region experience major problems in recruiting managers for cooperatives. In Malaysia government officials have therefore been recruited to fill the posts. But their training and experience in economic and trading management are often far from satisfactory for pragmatic village affairs. In some cases, such makeshift practises have led to political abuses by the officials while opening the way to fish dealer's to dominate the cooperative [DE SILVA 1982].

The Influence of Fish Merchants

In almost all Southeast Asian countries fish merchants, who are usually fish wholesalers-*cum*-money lenders, have penetrated deeply into the rural fishery economy. They rule production activities.

As shown above, the poor economic condition of small-scale fishermen makes borrowing from these fish merchants imperative both in production and consumption, which in turn reduces the fishing households to full dependence on them. To receive a loan from the merchant requires that the catch be delivered to him. In this way, fisherman are enmeshed in a web of obligations. The fisherman is paid for his catch only after interest costs and boat and gear leases, among other charges, have been deducted. In some instances, paradoxically, fish merchants have obtained a powerful position in cooperatives, the objectives of which include liberation from the money lenders' high interest rates. It is also assumed, by the same token, that one reason why the pace of motorization of fishing boats is so slow in Indonesia is that the capital accumulation by small-scale fishermen has been retarded by the influence of the fish merchants.⁷⁾

ORGANIZATIONAL FACTORS

Administrative Organization

In many Southeast Asian countries a dual system of administration exists, with a Ministry (or Bureau) of Fishery Cooperatives and Ministry (or Bureau) of Fisheries. Usually the former functions for the registration and establishment of fishery cooperatives whereas the latter is responsible for the operation and management of existing cooperatives. This form of organization retards the integrated and comprehensive management of cooperative development by government. Effective and dynamic operations are also retarded when cooperative administration is under a Bureau of Cooperatives, in which the fishery sector has secondary position.

The Issue of Fishing Rights

From the cultural and legislative point of view, whether the fishermen have fishing

7) Admittedly this discussion of the fish merchant's role is biased on the negative side.

rights or not has profound implications for the development of the national fisheries sector as a whole as well as for the sound growth and development of fisheries cooperatives.

One of the great differences between Japan and Southeast Asia in the evolution of fishery cooperatives is that fishing villages in the former have been legally endowed with fishing rights since the Tokugawa Period [HIRASAWA 1981; see papers on Japan, this vol.].

Similar kinds of fishing rights are not found, at least in an overt legal sense, in Southeast Asia, although in some countries governments give fishing communities or cooperatives in freshwater bodies some priority to use aquatic resources. Under the conditions prevailing at present it is difficult to envisage coastal fishermen ever acquiring fishing rights in the face of the economic dominance of local fish merchants.

If directly winning fishing rights for cooperatives is far from realistic, an alternative would be to channel institutional investment loans to cooperatives from commercial and public banking institutions backed by governments. In this way, fisherman-merchant relationships would be lessened and in the course of time, when village education increases the awareness in the community for the sound formulation and management of cooperatives, it might become feasible to obtain fishing rights.

EVOLUTION AND DEVELOPMENT OF FISHING RIGHTS AND FISHERMEN'S COOPERATIVES

Fishery cooperative societies in Southeast Asia have evolved from different historical backgrounds, and are based on differing motives and objectives. Unlike the cooperative formation process that occurred in Europe and Japan, both dominated by feudal political systems that were concerned to maintain political stability and to ensure tax revenues, the Southeast Asian cooperative movement, particularly since the 1920s, appears to have originated from governmental aspirations to free small-scale fishermen from exploitation by middlemen, and to replace those conditions with a democratic system of cooperation [ELLISTON 1981].

In the absence of adequate basic information, most central governments in Southeast Asia hastily formulated, during the 1940s and 1950s, an idealistic structure for cooperative systems, mainly for agriculture. Substantive institutions (at least in outline) for fishermen were organized after the 1960s. Unlike the unique and independent evolution and development of fishermen's cooperatives in Japan, practically all those in Southeast Asia are derivatives of the agricultural cooperative system. A dual system of cooperative administration therefore exists in Thailand, and it was only in 1975 that Malaysia integrated its fishery administration by forming the Fisheries Development Authority Malaysia (MAJUIKAN).

In view of the widespread interest in the Japanese model of coastal fisheries organization and discussions about its potential for application elsewhere, the difference of historical backgrounds between Japan and Southeast Asian countries will be further elaborated here. In Japan, fishing rights were and still are the mainstay

of the coastal fishermen's cooperatives, from their initial stages [RUDDLE and AKIMICHI n.d.; see also papers this vol.]. Since the Tokugawa Period, these rights have virtually been the source of their unity. This was particularly true when both farmers and fishermen were strictly prohibited from leaving their clan territory. The Tokugawa authorities were sensitive about keeping the peace, maintaining the *status quo* and ensuring tax revenues from farmers and fishermen [KALLAND this vol.]. It can be reasonably interpreted in this context that the fishing rights authorized by the government were nothing but a fishing license plus a permanent "visa," and taxes were levied in exchange for these "favors" bestowed by the feudal government. Legacies of such favors still existed throughout the 19th and early-20th centuries, despite the introduction of a modern cooperative system. Only after W W II was a democratic cooperative system established, together with the political-economic environment to support such a transformation.

Another assumption of mine is that the communities of small-scale, boat-owning fishermen, in particular, had to be collectively organized psychologically and financially for their survival, despite their independent fisherman's ethos. Fishing rights may be therefore interpreted in two ways: as fetters to free movement and as a "fortress" that fishermen must defend against invasion by fishermen from other territories. In fact, "invaders" were rampant during the Tokugawa Period. Conflicts between neighboring fishing villages were frequent, and some led to bloodshed when mediation failed (see papers this vol.). In short, the lifestyle of Japanese fishermen has been the "unity" of work and mind for survival, and its underlying spirit is "mutual help." Since fishing rights were given to fishing communities, not to individual fishermen, punctual payment of public levies by the community in poor harvest years was a matter of life or death; should they fail, for whatever reason, the fishing rights were transferred to a neighboring community that had a history of paying up more straightforwardly.

There is no tangible evidence of such an exacting hierarchical system between ruler and ruled in any Southeast Asian country. I assume that there did not exist substantial targets for "exploitation" by rulers in the coastal zones of those countries, until recently made possible by such technological innovations as trawling.

The conditions under which coastal fishermen of Southeast Asia must seek a livelihood are shaky and inadequate, as a consequence of poor fishing gear and small and inefficient boats. In particular, the lack of basic harbor facilities makes it extremely difficult for fishermen to perform their operations efficiently. This is coupled with the vulnerability of their fishing to the slightest vagaries of weather, which in turn, affects the stability of their incomes.

Elaborating the Japanese case somewhat, two major criteria of decision-making exercised by the Tokugawa Government for dispute mediation can be distinguished. One was to respect traditional customs of the parties concerned [see MATSUDA and KANEDA this vol.]. This criterion continued to be applied during the Meiji and Taishō Periods (1868–1926), with some modifications. The other criterion was

that the party with the more loyal and honest tax-paying record won the dispute.

To sum up, fishing rights given to Japanese coastal fishing communities by the feudal state had two completely different dimensions. For the fishermen they provided a legal basis of survival, but their movement was strictly prohibited. In other words, fishermen exchanged their freedom to choose fishing grounds for a legally ensured fishing area. From the administrative perspective security was maintained by means of "enclosed fishing rights" that prevented farmers from invading coastal fishing areas and thereby creating trouble with the fishermen.

These measures were workable where the growth of rural population was relatively slow and spillover pressures from farming to fishing villages insignificant. This stands in great contrast with contemporary Southeast Asian countries, and particularly with Java. In the absence of regulations to check population inflow, fishing communities in Southeast Asia have been inundated with superfluous volunteer fishermen who lack both experience and skills in fishing. Consequently, boats are overloaded by 7 to 8 crew members although traditional operations could normally be performed by two persons. Operation at sea is therefore much less efficient than before owing to both overmanning and inadequate skills. Further, the wage share per crew member is now much less than under normal conditions.

The development of fishery cooperatives in Southeast Asia stands as a contrast to that underlying relationship between fishing rights and fishermen's cooperatives in Japan. First, at least for the ASEAN countries, there is no evidence of fishing rights as such that were either claimed by fishing communities or identified by governments. I assume that there must be or must have been some types of fishing rights, either explicitly stated in historical documents, or, if not documented, implicitly or explicitly perceived by the fishing communities' customary laws in terms of fishing grounds either for the community's common use or for the monopolistic use of powerful fishermen. This requires urgent and in-depth study.

The foregoing comparisons between Japan and Southeast Asia imply a different development process between marine fishing communities *with* fishing rights and those *without* them. It also reveals that historically Japan underwent a unique process of fishery development, born of a feudalistic tenure system. In such a cultural environment the role of fishery cooperatives was, above all, to manage various economic and social activities to safeguard fishing rights and the fishery management system based thereon. In other words, fishing rights and fishery cooperatives have been inseparable and mutually complementary in nature under given circumstances and in a specific historical context. It is therefore quite reasonable to surmise that the present mature stage of the Japanese fisheries cooperative system is an inevitable outcome of undergoing strife in the quest for internal unity and of a centuries-long struggle against external pressures, both of which were overcome by mutual assistance within fishing communities.

It is questionable whether the Japanese experience could serve as a model for the countries of Southeast Asia. For one thing, the cost of managing fishing rights has been tremendous both for the cooperative members and for government.

Returns were realized only in the medium- and long-term. On the other hand, invisible, non-monetary gains have also been tremendous. The spirit of mutual help was broadened and deepened by the members' own initiatives, and joint and commonly agreed welfare programs were generated with no particular leader initiating them. The principle of mutual help among cooperative members and their families gradually expanded from an initial struggle for basic needs to a higher level of cooperative programs such as various cultural clubs, scholarship funds for higher education, public halls for village meetings and recreational and art classes, among many other things. Such imaginative, welfare-oriented activities, mainly generated by ordinary housewives in fishing communities, are the outcome of a centuries-long perseverance in once poverty-stricken fishing communities.

Japan's process of cooperative development can hardly provide a transferrable paradigm, simply because fishery cooperatives in Japan evolved within the realm of enclosed feudalism under which no migration was permitted. On the other hand, most fishermen in Southeast Asia are quite individualistic and mobile, and abhor coercion and limits to their freedom [ELLISTON 1981].

COUNTRY REVIEW⁸⁾

Malaysia

During colonial times fisheries were of low priority, at least until the late-1920s. Marine fisheries development in Malaysia was therefore slow during the period of colonial rule; adequate staff were scarce and few funds available for the promotion of a fisheries cooperative movement.

One of the success stories of cooperative-building in the ASEAN countries occurred in Malaysia, among the Chinese Henghua fishermen of Malacca. The Henghua are the descendants of Southern Chinese coastal fisherman. They migrated to Malacca with their own large boats, and settled on the coast of Malacca at the turn of this century. Their joint work system is traditional to the community, in which kinship is tight. The Henghua fishing community formed the first Western-style cooperative in the 1930s, and reformed it in 1956. With the status of a fishery cooperative it enjoyed group discounts on fuel, nets, engines, spare parts and boat hulls. Moreover, it built its own ice factory at a discount rate, bought two trucks to carry fish and acted as a wholesaler for its members' fish, for a 5 percent commission. In that such a cooperative organization was promoted on the fishermen's own initiative for and by themselves, it provides a local example that should be studied more comprehensively.

A substantive start at establishing a fishery cooperative was made in 1971, when the *Fishermen's Association Act* was legislated, although the *Cooperative Societies Ordinance* of 1948 had provided the impetus for some cooperative activities on the east coast of peninsular Malaysia.

8) This section is heavily dependent on Miyake [1984b].

In 1971, the Fisheries Development Authority of Malaysia (MAJUIKAN) was inaugurated and assigned functions of both administering existing fishermen's associations and registering and supervising new ones. The major duties of MAJUIKAN are the promotion of catching and selling; the financing of fishery production and ensuring the proper use of funds; the operation of its own fisheries activities; the promoting of Fishermen's Associations; the conducting of registration and supervision of Fishermen's Associations; and coordinating the above activities.

Principal among the authorities with which MAJUIKAN is empowered are those to regulate the marketing of fish by giving licenses to wholesalers, retailers, processors, exporters and importers; to regulate packaging, standardizing, measuring and storing of fish; and to establish wholesale markets and regulate their activities.

In the early 1980s the total membership of these two fishermen's organizations, *i.e.*, the Fishermen's Cooperative Society (begun in 1957) and the Fishermen's Association (started in 1971) was 38, 840 persons, or 42.5 percent of the fishermen in Malaysia. At some future time MAJUIKAN is expected integrate the former into the latter.

There is one principal source of weakness in the fisheries cooperative activities of Malaysia. Because most fishermen are not boat-owners they are mostly obliged to borrow money from middlemen. Since many middlemen (engaged in wholesaling, retailing and processing of fish in addition to possessing their own boats) are also cooperative members, they influence cooperative activities. It is therefore not difficult to see that the government and public financing directed for the growth of cooperative is being eroded and misused by some such powerful middlemen.

Thailand

The Fishermen's Cooperative Society (FCS) of Thailand was established in 1918 on the basis of the Cooperative Society. In 1981 there were 19 FCAs. This is relatively few compared with the 857 agricultural cooperatives (1980), the 327 savings cooperatives (1980) and the 198 consumers' cooperatives (1980). The FCS is under the control of the Cooperatives Promotion Bureau of the Ministry of Agriculture and Cooperatives.

Beside this system of fishermen's organization there is a unique system for fishermen, the Fishermen's Group. This was established in 1972 on the basis of the addition of Article 8 to the Law of 1969. This Group differs from the Fishermen's Cooperative in that its legal requirements are simpler and its geographical scope and membership smaller than the Fishermen's Cooperative. As of 1981 there were 109 Fishermen's Groups. Eventually they will be integrated into the Fishermen's Cooperative Society.

Apart from these two organizational systems Thailand has a Fishermen's Association. Its function is to coordinate the opinions and views of the members and represents their interests in the central political arena. This Association's voice

is tremendously strong owing to its economic power, since it is organized by entrepreneurial members, many of whom are large trawler owners.

The Fish Marketing Organization is a government-sponsored public corporation responsible mainly for providing loans and technical guidance for infrastructural facilities to the Fishermen's Cooperative and Fishermen's Groups. Its business is quite practical and is efficiently conducted.

By and large, many of Thai cooperative activities are practical and limit their functions mainly to obtaining a steady supply of reasonably priced fuel. Traditionally, officialdom or bureaucratic rules and controls are resented, but it appears that these two organizations are not serious enough in encouraging cooperatives to increase their savings, which is reflected in inadequate infrastructural facilities compared to their own highly developed trawling system.

Another outstanding characteristic of Thai fishermen's coops and groups is that most, if not all, members are owners or skippers of trawlers and/or purse seiners, hence they represent the richer fishermen. Inevitably, public financial resources have been directed almost exclusively to the better-off sector, leaving small-boat fishermen or boatless fisheries laborers beyond government assistance. This is particularly true for the South Thai fishermen, the cultural and linguistic heritage of whom is distinct.

The Philippines

The cooperative system in the Philippines dates back to 1915, when the *Rural Credit Law* was legislated. Its intention was to meet farmers' investment requirements by forming agricultural credit cooperatives. Through subsequent revisions and reforms a special law emerged covering sectors other than agriculture. Fisheries, however, remained administratively under agriculture.

With many defects and weakness, both on the government side and among the beneficiaries, a new cooperative movement was begun in 1973, when *Presidential Ordinance 175* was promulgated under the slogan of "Strengthening the Cooperative Movement." Its major objective was to promote cooperative formation and supervise the activities of cooperatives by consolidating previous laws into one systematic law, while also integrating into one the various government offices responsible for cooperatives.

The basic principles underlying this law can be summarized as follows:

1. The cooperative is an institutional means of attaining equitable income distribution for which the government extends privileges;
2. The cooperative is to be organized from below, not from the top down. This is in contrast with its predecessors. It takes time for sound growth, but educational activity will constitute the basis for development; and
3. The cooperative movement should be systematic, consequently it should eventually be extended nationwide.

After several trials and errors, the government decided to develop this movement via four carefully planned steps:

- 1a: A *Samahang Nayon* is formed as a preliminary cooperative. This is a rural unit of 20–200 farmers or fishermen. Its function is to tackle community or village problems with the participation of the villagers. During this stage, particularly in its initial period, cooperative members are to be educated on the major contents of agrarian reform, the functions of a cooperative society and about the *Samahang Nayon* movement. In principle, unless the education program is followed, the setting up of a *Samahang Nayon* is not authorized;
- 1b: The real activity of the *Samahang Nayon* begins only after 1a is completed. During 55 weeks its activities include training for cooperative management, training for the improvement of technology in agriculture and fisheries and the promotion of savings. These are still preparatory to reaching the capacity to organize a cooperative institution;
2. The second step is the establishment of a cooperative. This is when a real cooperative (*Kilusang Bayan*) is set-up and managed. At this stage members have all received education and training and have reached the targeted savings level during the training course period;
3. The third step is to set-up a consumers' cooperative. This stage is intended to open-up stable marketing channels for agricultural and fisheries products shipped by the members of the consumers' cooperatives. A special marketing center is established for the wholesaling of the members' produce. Already existing consumers' cooperatives will function as retailers for the central wholesale marketing center; and
4. The final step is the integration of the existing cooperative systems. At this final stage a nationwide system of cooperatives will have been established to cover both regional cooperatives and other functionally specialized ones. This nationwide system is called the National Cooperative Union of the Philippines, and will assume some roles hitherto performed by the central government.

In fisheries the *Asahang Nayon* system aims build the basis of the cooperative by emphasizing the education and savings of the members. To qualify for membership in a *Samahang Nayon* a person must belong to one of four categories (a) a person must be a wage earner on a boat or a catch percentage earner; (b) he must be a small-scale boat-owning fisherman, the length of the boat not exceeding 3 m; (c) he must be a fish farmer owning less than 1 ha or a person fish farming in a of pond of less than 3 ha; or (d) he must be a fish processor residing in the same area. A *Samahang Nayon* can form a fisheries cooperative by combining 10 SN. Two major types of cooperatives, *i.e.*, an Area Marketing Cooperative and the Cooperative Rural Bank, function in rural areas, each covering a few provinces or villages. Their members are accredited *Samahang Nayon* members.

CONCLUSIONS

The South China Sea, once one of the world's most fertile and productive seas, is now potentially a marine desert, the ruin of which was caused by overfishing through trawling. Further, this is a semi-enclosed sea, which means that its desertification will be aggravated and accelerated by pollution from industrialization in the surrounding littoral countries. This is exacerbated by emerging transnational issues.

Ultimately the marine resources of Southeast Asian nations will be defended by the small-scale fishermen. In the short-term, offshore and long distance fisheries will continue to be important foreign exchange earners, but to a lesser extent than before. In the long-term aquaculture and traditional small-boat fisheries will be the mainstay of the fishery economy. They will increasingly expand their position as an integral part of the important constituents of national economic development, mainly by supplying fresh fish to most of the nation. In view of the increased role and function of these national protein suppliers, governments should spend more for appropriate manpower education to build fishery cooperatives.

Virtually all the countries of Southeast Asia are emphasizing the importance of developing fisheries cooperatives. In some countries government is taking the initiative in promoting such developments (Malaysia and the Philippines) whereas the private sector is very strong in initiating fishermen's cooperatives in its own way for its own minimum requirements (Thailand). The Philippines, is exploring a unique policy perspective in which the process of the development of fishery cooperatives is taken step-by-step, in pace with social "maturity." Logically speaking, this is the soundest method for a joint effort by government and the fishermen.

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