SAMUDRA

INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS

MONOGRAPH

FISHING LEGISLATION AND GEAR CONFLICTS IN ASIAN COUNTRIES

Nº 1 - JANUARY 1990

Fishing legislation and gear conflicts in coastal waters A case study of selected Asian countries

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SUMMARY

The editorial board wishes to thank Jeremy Herklots for sub-editing this SAMUDRA-MONOGRAPH.

(Cover : Artisanal fishing boats in the Catbalogan harbour (Samar - Philippines) /Photo François Bellec)

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Registration : D. 1990. 5.694 .3 *Imprimerie MEDIASCREEN - Bouge*

FISHING LEGISLATION AND GEAR CONFLICTS IN ASIAN COUNTRIES

Sebastian Mathew

A C K N O W L E D G E M E N T S

I am extremely thankful to Dr. Francis T. Christy Jr. who helped me greatly in selecting the countries for the study and in facilitating contact with various fishery administrators and researchers. The discussions I had with him in Rome and the materials he provided were considerably useful in formulating the study and honing my perception. Above all, I would like to express gratitude for his useful comments on an earlier draft of this study.

Discussions with Mr. Rolf Willmann of FAO were useful in formulating questions on conflict management. Prof. Jean Ph. Platteau of Namur University, Belgium, helped me organise the framework of my inquiry.

In the countries I visited, the extensive network of the International Collective in Support of Fishworkers (ICSF) facilitated contact with the small-scale fisherpeople. This enabled me to gather information on the awareness and implementation of fishing legislation.

In Japan, Prof. Hisahi Nakamura of Ryukoku University, Kyoto was extremely kind in providing interpreters, fixing up appointments with the fishery authorities and in sparing time for discussions. I thank him and his family. Ms. Junko Yamaka of Pacific Asia Resources Centre (PARC) organised discussions with various people working on Japanese fishery and accompanied me to these discussions. I am thankful to her. Mr. Masaki Yamada, a student of Tokyo University accompanied me on most of my interviews as an interpreter. Without his invaluable help it would have been impossible to move around in Tokyo. I would also like to thank Prof. Hirasawa Yutaka, formerly of Tokyo Fisheries University for clarifying issues and providing an

insight into Japanese fishing history. Dr. Kenneth Ruddle of National Museum of Ethnology, Osaka was extremely useful in supplying ideas and source material on the Japanese fisheries management.

In the Philippines, I would like to thank the fishermen of Perez Island, Lamon Bay, particularly Mr. Reynaldo Alpay and Mr. Raymondo Asia; the animators of Asian Social Institute, Manila; Dr. Max Aguero of International Centre for Living Aquatic Resources Management (ICLARM), Manila; Mr. Reuben Genaden, Mr. Santos and Mr. Gamilla of Bureau of Fisheries and Aquatic Resources (BFAR); Commander Quevas of the Philippine Coastguards; and my friend, Attorney Antonio Oposa Jr. Thanks also to Fr. Desmond D'Souza of Organisation for Human Development (OHD) for allow-ing me to use the facilities at his office.

In Indonesia, various officials at the Office of the Director General of Fisheries (DGF); scientists of Research Institute for Marine Fisheries, Jakarta, and the Fishing Technology Development Centre, Semarang; Mr. Yoshibumi Kihara, Consultant Fishing Technologist and other friends spared considerable amount of their time for discussions and provided useful insights into the fisheries situation.

In Malaysia, Mr. V.C. Mohan of Sahabat Alam Malaysia (SAM), Penang, arranged all my contacts and interpreters. Mr. Mathew George, Ms. Halima and Mr. Sul of SAM also extended considerable assistance. Ms. Chee Yoke Ling, Secretary of Sam provided an overview of the legal system of Malaysia. I am grateful to all of them for their help especially for allowing me access to library and office facilities. I am also thankful to Dr. Ishak Shari of National University of Malaysia (UKM); Dr. Jahara Yahaya of University of Malaya, Kuala Lumpur; Mr. Alip Rahim of USM, Penang and various officials of the Department of Fisheries for the discussions we had.

In Thailand, Ms. Amporn Sugandhavanij, of Kasetsart University and member of the ICSF, took me to fishing villages, arranged contacts and found time for discussions. Mr. Vernon Pietersz of FAO Regional Office helped me to meet Government officials. Mr. Manu Pottaros, Inspector General of Fisheries provided me with details of enforcement. I am thankful to all of them.

Numerous discussions with Mr. John Kurien of the Centre for Develop-ment Studies, Trivandrum, India, proved particularly useful for the field visits

and in writing up the report. Ms. Nalini Nayak, Mr. K.G. Kumar, Mr. Mihir Shah, Mr. Chandan Mukherjee and Mr. C.R. Reddy read a previous draft of this report and gave valuable comments. To all of them, my deep gratitude.

I am thankful to Mr. V. Vivekanandan, Chief Executive of South Indian Federation of Fishermen' Societies (SIFFS), Trivandrum, for making available the computer facilities at his office. In the computer work Mr. Satish Babu, Executive (Systems & Management), SIFFS, helped me immensely. Mr. P.K. Krishnan and Mr. C.R. Aravindan did an excellent job in preparing the typescript. I am grateful to them.

I must also thank the many fishermen who, although they could not converse with me, shared their experiences through interpreters and helped me to improve my understanding of inter-gear conflicts.

Much more pronounced than all this is the feeling of gratitude I have towards the ICSF for entrusting the study to me. Not only was it thoroughly, enjoyable and rewarding, it also led me into grounds I had never 'trawled' before! For this, a special piece of thankful appreciation to Mr. Pierre Gillet, Secretary, ICSF.

Needless to add, all responsibility for any error or omission is entirely mine.

«We must not make a scarecrow of the law,
Setting it up to fear the birds of prey,
And let it keep one shape till custom make it
Their perch, and not their terror.»

Shakespeare,
Act Two, Scene 1
Measure for Measure

About the Author

SEBASTIAN MATHEW was born in Trivandrum, Kerala, India in 1957. After obtaining an M.A. in Economics from Kerala University, he undertook a joint study on technological changes in fishing and impact on small-scale fishermen in India. He also co-authored a study on the impact of pollution on fishing villages. Later, he obtained an M. Phil. in Applied Economics from the Centre for Development Studies, Trivandrum. His dissertation work for this course was on the structure of the frozen prawn export industry in Kerala. His interest in environmental issues has led him to campaign against destruction of evergreen forests and helped to set up an eco-restoration project in a tribal area in the Western Ghats of Kerala.

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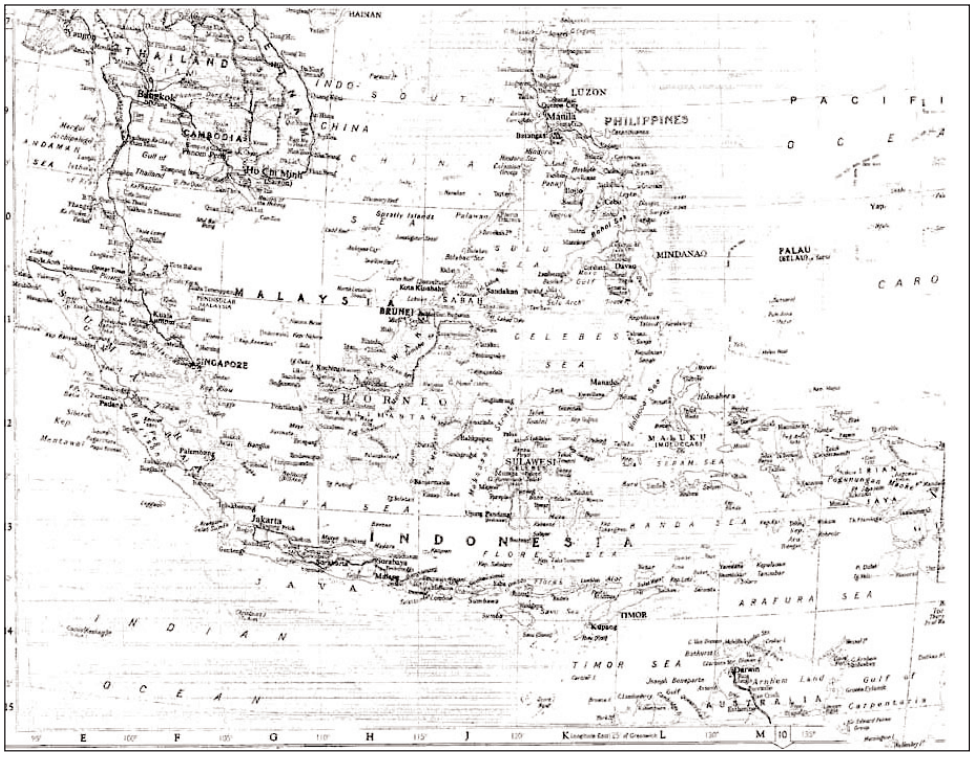
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INTRODUCTION

As part of the triennial programme of research of the International Collective in Support of Fishworkers, I was assigned a study on the role of legislation in mitigating or resolving inshore conflicts among fishermen in Asian countries which have adopted a zoning system. The main foci of the study, according to the letter of assignment, are

— to examine the history of fishing regulations and the genesis of conflicts over fishing space and resources.
— to study the effectiveness of fishing regulations in resolving these conflicts.
— to evaluate the cost-effectiveness of administering fishing regulations to protect the interests of the small-scale fishermen and,
— to assess the extent of awareness of fishing legislation among the artisanal fishermen.

In consultation with Dr. Francis T. Christy Jr. (formerly Senior Fishery Planning Officer, Fishery Development Planning Service, Fishery Policy and Planning Division, Food and Agriculture Organization, Rome) and Mr. Rolf Willmann, (Fishery Planning Analyst, Fishery Policy and Planning Division, FAO, Rome), five countries in the Asian region were chosen for the study. These were Indonesia, Malaysia, the Philippines, Thailand and Japan.

Both Indonesia and Malaysia witnessed violent conflicts in the inshore waters between trawlers and traditional gear groups leading to destruction of fishing unit and loss of life in the 1970's. As result of these conflicts, which also had other ramifications, Indonesia and Malaysia introduced a zoning arrangement to safeguard the interests of small fishermen. In addition, Indonesia also banned trawling in the waters west of 120 degrees E longitude.

In the Philippines, although there were no violent conflicts between trawlers and traditional gear groups, there has always been discernible tension between the two. A series of legislative measures were drawn up. Principal among them was the legislation reserving the coastal waters for non-trawl/non purse-seine gear groups. Moreover, in the Philippines the rights of subsistence fishermen to the preferential use of marine resources are guaranteed by the Constitution.

Thailand has one of the earliest set of laws to conserve its fishery resources. However, inter-gear conflicts have not taken place on a significant scale although the desertification of the Gulf of Thailand is an ongoing process ever since otter-board trawling was introduced in 1961.

Japan has an efficient system for the management of coastal waters which has its origin in its feudal period from 1603 to 1867 A.D. Almost all intra-sectoral conflicts are resolved within its unique co-operative structure and only inter-sectoral conflicts are referred to the judiciary. In spite of the system's efficiency and viability, Japan has not been able to overcome two problems common to almost all the commercial fisheries of the world, viz., over capitalisation of the fishery and overfishing of resources.

With these illustrations, methods of conflict management will be discussed in the following chapters. In addition to the examination of origin/nature of conflicts, the role of legislation and the status of enforcement, the study will also discuss the economic, political and social specificities in these countries that constitute the texture of the conflict and its mitigation.

The study is based on an extensive visit to all these countries. Discussions were held with fishermen, marine biologists, economists, anthropologists, administrators, politicians, lawyers and social activists. The visit occurred between the first week of November 1988 and the middle of February 1989. The attempt was to talk to as wide a spectrum of people as possible. In addition, secondary material in the form of legislation, research papers, newspaper clippings and other relevant publications were collected from the respective countries.

The following libraries were consulted for the study:

— University of Tromsø, Tromsø, Norway;
— FAO Fisheries Division, Rome, Italy;

— Institute for Developing Economies, Tokyo, Japan;
— National Museum of Ethnology, Osaka, Japan;
— International Centre for Living Aquatic Resources Management (ICLARM), Manila, the Philippines;
— Director General of Fisheries, Jakarta, Indonesia:
— Research Institute for Marine Fisheries, Jakarta, Indonesia;
— Fishing Technique Development Centre, Semarang, Indonesia;
— Kasetsart University, Bangkok, Thailand;
— Southeast Asian Fisheries Development Centre (SEAFDEC), Bangkok, Thailand;
— Sahabat Alam Malaysia (SAM), Penang, Malaysia; and
— INFOFISH Library, Kuala Lumpur.

The nature of conflicts and their magnitude are different in different countries. They depend very much on historical situations and the prevailing conditions. The focus of this study hence has to adjust to these changes.

In Indonesia, we will consider in detail the «success» of the trawling ban in terms of its objectives. The motives behind the ban will also be discussed.

Various adjustments made in the zoning system and their role in the amelioration of conflicts between trawlers and inshore gill-net fishermen will be the focus in Malaysia.

The diffused nature of perception, poor awareness of legislation and total lack of implementation of various provisions will be discussed in the context of the Philippines.

The tradition of legislation, particularly for ensuring conservation of aquatic resources and its poor implementation, will be the focus of Thailand since there is very little evidence of conflicts between small fishermen and other fishery operators.

And finally, in the case of Japan, we will discuss the evolution of fishermen's co-operatives and the viability of a system, which resolves conflicts within its framework, without resorting to the State machinery.

Limitation of language was a problem in gaining access to all the relevant material for the study and visiting all the fishing villages one would have liked to. Constraint on time was another limitation. The cost-aspects of enforcement also could not be obtained either because of confidentiality or lack of availability. Thailand was the only exception.


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Pacific Ocean
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SUMATRA
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INDONESIA

Indonesia is an archipelago of over 13,000 islands located strategically between the Indian and Pacific Oceans. Total fish production in 1986 amounted to 2.5 million tones valued at US$ 1700 million with the marine sector accounting for 75 percent of production and 60 percent of gross value. The fisheries sector accounted for 4 percent of the total Indonesian agricultural production by value and contributed to one per cent of the GDP in 1986. Fisheries exports accounted for only 1.3 percent of total Indonesian exports in 1985 and 4.3 percent of non-petroleum exports. In quantity terms, this is only about 3 percent of the total production. Thus the fisheries production is primarily oriented towards the domestic market. According to an ADB Study the per capita consumption of fish is about 41 kg (as against the official figure of 14 kg.)

There are over 3 million fishermen in Indonesia, 43 percent of whom are in the marine sector; another 43 percent in aquaculture and the remaining 14 percent in inland capture fisheries. The marine fishermen comprise equally of full-time and part-time fishermen and of the 700,000 full-time fishermen, over 50 percent are in the Malacca Straits and the Java sea. These areas account for about 50 percent of the total production.

There is no coherent definition of different sub-sectors but there is a nominal one according to which all gear operated without the use of a craft and all boats powered by sail or outboard motors constitute the small-scale sector. All boats with inboard engines belong to either the medium-scale or large-scale sectors. Although there is no clear distinction between the two, the quantum of investment is used to distinguish between the two

sub-sectors. According to Bailey et al (1987) the large, medium and small-scale sub-sectors contributed to roughly 2 percent, 43 percent and 55 percent respectively of the total catch in 1982.

Artisanal fishermen operated 219,000 non-powered craft in 1986, about half of which were dug-out canoes. This is about 70 percent of the total number of craft in Indonesia. These craft operate a wide variety of gear including gill-nets, cast-nets, trapsseines and hook-and-line. Artisanal fishing has a low productivity (about 1400 kilograms/fisherman/year) and takes place in a narrow band around the coast. More than 60 percent of the fishermen live below the national poverty threshold.

The number of powered vessels has increased rapidly in recent years from 32,000 in 1979 to 99,000 in 1986. About 65 percent are powered by outboard motors. Of those with inboard engines 80 percent are less than 5 GT (gross tonnage). The increase in both forms of motorization is particularly significant after the trawling ban of 1980.

The medium and large-scale operations comprise purse-seiners, pole and line vessels and trawlers. Prior to the imposition of the ban on trawling, 3,000 trawlers located mainly in the Malacca Straits, northern Java and Kalimantan took about 57 percent of the total demersal catch i.e., 10 percent of the total catch of all marine fish. After the ban their catch has come down to 0.5 percent of the total. This is because trawling is still permitted in the waters east of 120 degrees E longitude i.e., in the Arafura Sea.

The catch of purse-seiners has increased from 10 percent of total marine catch in 1979 to 15 percent in 1986. These vessels operate mainly in the Malacca Straits and the Java sea in areas quite distant from the shore.

Purse-seining and trawl fishing were introduced around the same time in Indonesia. In the late-1960s, purse-seine was introduced under the auspices of the government in the northern coast of Java. Trawling developed fully on private initiative unlike in countries like the Philippines and Thailand. It was introduced by the ethnic Chinese in an area called Bagansiapi-api in Malacca Straits, from the western coast of Malaysia in 1966 (Yamamoto, 1977).

The development of purse-seine fishery did not lead to any significant conflict with the small fishermen primarily because the area of operation is away from the shore. Trawlers,

on the other hand, confined their operations to the inshore waters. The development of the trawl fishery, therefore, led to serious conflicts between trawlers and gill-net fishermen in Malacca Straits and northern Java. More than a competition for resources, this is believed to be a result of destruction of craft and gear by trawlers harvesting prawns within 12 miles from the shore, the usual fishing ground of small fishermen.

Background of the trawl ban

Before we begin our discussion on the impact of trawling and the implications of the trawl ban in Indonesia, certain points have to be kept in mind. Firstly, more than 80 percent of the otter trawlers in Indonesia were confined to Java and Sumatra, particularly to the Malacca Straits and northern Java. Secondly, Malacca Straits and Java have the largest concentration of fishermen's population. Together they account for over 50 percent of the total full-time fishermen. Thirdly, more than 50 percent of the total marine production and 60 percent of exportable prawns come from these areas. Fourthly, most of the trawler/purse-seine owners and traders in Indonesia are of Chinese origin.

The ethnic factor plays a very important role in the economy of Indonesia. This is so in the fishing sector as well. This is very important for understanding the conflict between the trawlers and small fishermen and this has been completely overlooked in all the major studies on the trawl-ban (Chong, Kee-Chai *et al* 1987; Bailey *et al* 1987; Naamin 1984; Darmoredjo. S 1983) perhaps because of the highly sensitive nature of ethnic politics in Indonesia (See May. B. 1978.

The sea around Kalimantan is also an important prawn fishing ground but interestingly this area did not witness any conflicts between trawlers and small-scale fishermen, perhaps because the operators in the small-scale as well as large-scale sectors are both predominantly Chinese.

Unlike in Malaysia where the conflicts between trawlers and gill-net fishermen erupted in the same year that trawling was commercially introduced, in Indonesia it was only by the mind-1970's- a decade after their introduction-that these tensions started surfacing in the form of clashes in the sea. The early conflicts in Malaysia are documented but in Indonesia there is hardly any such documentation. They broke out for

the first time in the Malacca Straits and were presumably a spill-over of Malaysian conflicts. The common nature of the «problem» in the Malacca Straits combined with similar ethnic characteristics — with almost all the trawler owners being Chinese and traditional fishermen being predomi-nantly Malay or Indonesian — gave the conflicts a similar form in both the countries. From the Malacca Straits the conflicts spread to northern Java.

As mentioned earlier, Malacca Straits and northern Java, where there were conflicts, are the areas with the largest concentration of fishermen and the largest production. The conflicts arose mainly because of competition for space, leading to destruction of craft and gear, particularly of gill-net fishermen operating in the narrow confines of the coastal waters. Since the commercially valuable species are largely confined to the inshore waters, trawlers operated very close to the coast. According to Dr. Naamin of Fisheries Research Institute, Jakarta, these trawlers — called « Cung-King» (1) — were mostly operating in the 5-40 meters depth zone (Naamin, N. 1984) and sometimes in depths as shallow as 2 meters.

Though the overall production of the traditional sector did not suffer as a result of trawling, the aggregate annual output of the gill-net fishermen did decline. Their production in both the Malacca Straits and northern Java dropped to 80,000 tonnes in 1980 from 120,000 tonnes in 1976. This subsequently doubled — presumably as a result of the trawling ban—to 160,000 tonnes in 1986. Thus the unequal competition for space not only led to destruction of craft and gear but also affected the harvest of the traditional gill-net fishermen.

The various measures aimed at managing the fisheries sector particularly trawl fishing, should be seen in this backdrop.

History of fishing legislation

Before the advent of conflicts between trawlers and gill-net fishermen, the fishing legislation in Indonesia was primarily colonial in origin. The main focus of the early legislation of 1927 and 1939 — which reserved all marine fisheries to local citizens and prohibited foreigners from fishing

(1)Interestingly, Cung-King is also the name of a port in S W China, in Szechwan province at the confluence of the Yangtze and Chialing rivers. It is a major trade centre for W China and was the wartime capital of China between 1938 and 1945.

operations without special permission — was on security (Bailey *et al ibid*.). The fisheries law was basically a ploy by the Dutch to check encroachments of other colonial interests into Indonesian archipelago. The first efforts at the formulation of new fisheries legislation were attempted after the eruption of inter-gear conflicts in the mid-1970s. The new measures had the twin objectives of conservation of resources and elimination of conflicts.

The first significant measure was taken by the government in 1975 when Decree 1 was issued. This limited fishing effort through regulation of the fishing season, of the type, size and number of boats in a particular area and of the mesh size (Bailey *et al ibid.*). An area-specific quota system was also established by the Decree. Subsequently in 1976, Ministerial Decree 607 was issued with the specific purpose of controll-

Table I

Zones of Operation for Fishing Boats Established by the Minister of Agriculture's Decree 607 in 1976.

Zone	Distance from shore	Closed to
I.	0-3 nautical miles	1. Boats with inboard engines displacing over 5 GT; 2. Boats with inboard engines over 10 HP; 3. All types of trawl gear; 4. All purse-seines; 5. Encircling gillnets and drifting gillnets for tuna; 6. Seines not longer than 120 meters.
II.	3-7 nautical miles	1. Boats with inboard engines displacing over 25 GT; 2. Boats with inboard engines over 50 HP; 3. Otter trawls with head ropes longer than 12 M; 4. Midwater trawls and pair trawls; 5. Purse-seines longer than 300 M
III.	7-12 nautical miles	1. Boats with inboard engines displacing over 100 GT; 2. Boats with inboard engines over 200 HP; 3. Demersal and midwater trawls using otter boards equipped with head ropes over 20 m in length; 4. Pair trawls; 5. Purse-Seines longer than 600 m;
IV.	Over 12 nautical miles	1. Pair trawl, except in the Indian Ocean where they are permitted.

Source: Bailey, C et al 1987. Indonesian Marine Capture Fisheries

ing trawling operations. According to this Decree, which is still in force, the sea was divided into four zones with the main purpose of preventing physical conflict and social friction between the traditional and trawling sectors (Naamin, N. *op. cit*.). This zoning is, however, not applicable in fishing grounds in the Arafura sea and adjacent waters where, allegedly, there are no traditional fishermen (Darmoredjo, S. *op. cit.*)(1).

The table I gives details of the zoning arrangement.

Soon after the issuance of Decree 607 Decree 609 was brought out restricting the operation of trawlers to the area for which they were licensed. Attempts were made to implement both these Decrees. However, effective enforcement was impossible, particularly in Malacca Straits because of inherent difficulties. Many illegal trawlers were already in operation and in the absence of a strong enforcement machinery the efforts to limit the number of trawlers resulted in thousands of trawlers beginning to operate without licences.

This further aggravated in inter-gear conflicts and by 1980 in situation became so bad that «not only were the resources impaired and fishing boats and gear sunk of burned and houses burned, but human lives were lost» (Chong, Kee-Chai *op. cit*). The President Soeharto for the first time stepped in and banned trawl fishing by virtue of Presidential Decree (P.D) 39/1980.

The ban initially covered waters off Java and Bali (1 Oct 1980) and three months later waters in the Malacca Straits off Sumatra were brought under the ban. But when trawlers started moving out of their existing base of operation to other regions, the ban was extended to the waters off Kalimantan and West Sulawesi as well from 1 July 1981. As it is now, trawling operations are completely banned to the west of 120 degrees E longitude. Trawling is allowed in waters to the east of 120 degrees E longitude, provided the vessels are equipped with a by-catch excluder device (BED). These are the waters monopolised by the Japanese fishing interests (2).

Objectives of the trawl ban

According to Chong, Kee Chai *et*

(1) But, according to *Fisheries Statistics* of Indonesia for the year 1980, 20 percent of the total population of active fishermen are in sulawesi and Irian Jaya.

(2) «Indonesia's fleet of large fishing vessels was heavily concentrated in Maluku and Irian Jaya in 1980; 121 of the 161 fishing vessels over 50 gt were based in these provinces and virtually all of these were refrigerated shrimp trawlers of the Japanese joint venture companies«». (ADB, IBRD. 1983).

al (*ibid*.) the ban on trawling «is the most bold or courageous and innovative fisheries management step which the country has so far undertaken» and it «represents an important reaffirmation of small-scale fisheries development as a national priority» (Bailey *et al ibid*.). According to the then Director General of Fisheries, Sardjono, P.D.39 was clearly a «political decision» intended at protecting the interests of the traditional fishermen and the «philosophical and moral rationale» for the P.D., according to Bailey *et al*, are the priorities mentioned in the Five Year Plan of Indonesia which primarily aim at «the distribution of development benefits among the widest possible number of Indonesians» (Bailey *et al ibid*). The same authors also hold that the ban is « the most recent in a series of management policy measures designed to protect coastal fisheries resources» though overfishing due to trawling is established only in Malacca Straits and northern Java (personal discussion with Purwito Martosubroto, Director of Fisheries Management, Indonesia)

Thus the ban apparently has three objectives:
1) to facilitate better resource management;
2) to ensure the development of the traditional sector; and
3) to prevent open conflicts.

Along with the declaration of the ban on trawling, P.D.No.39 also created the biggest credit programme for fisheries in Indonesia under the Government Agricultural Credit Scheme (BIMAS), a credit programme established in 1965 primarily for the agricultural sector. The programme aimed mainly at assisting fishermen affected by the prohibition on trawling. It was to enable them to convert to another type of fishing or to brackish-water fish culture.

Out of the total allocation of RP 238 billion (US$ 245 million), 20 percent was for the conversion of 2,300 trawlers into other gear, 9 percent was for the promotion of non-trawl fishing methods and 71 percent was for (a) the intensification of shrimp culture on 100,000 ha in existing ponds, (b) creation of 30,000 ha of new ponds and (c) for construction of shrimp hatcheries. Under this programme the maximum amount obtainable was RP 5 million. The loan period was five years with a one year grace period and credit could be used for both working capital and investment. No collateral was required (ADB, IBRD. 1983).

In other words, the main focus of the credit programme was the inten-

sification of aquaculture to offset the potential loss of prawn production as a result of the ban. The credit programme's objective was certainly not enhancement of the productive potential of the traditional sector so that it could exploit the prawn resources that were now free from competition from an incompatible gear.

Under the scheme only trawlers built within five years of P.D.39 and in good condition would qualify for conversion. Owners of eligible boats were given the option of selling their boats to the government, which would then be converted for use with other gear and sold to crewmen under the BIMAS programme (Bailey *et al op. cit.*). Though the total credit covered both investment and working capital requirements, the investment component was specifically for modification of the hull (under ALTERNATIF I & II); modification of hull and fishing gear (ALTERNATIF III) and purchase of ex-trawl vessels, modification of hull and fishing gear (under ALTERNATIF IV). The amount disbursed under ALTERNATIF IV was through the co-operatives (KUD) and the entire amount disbursed under ALTERNATIF I, II & III was given directly to the applicant (from discussion with Bank Rayat Indonesia).

Trawl ban: an analysis

Too much panegyric has been poured on the Indonesian government for its «bold» and «innovative» fisheries management strategy in banning trawling. This measure has been hailed all over the world and the whole world is closely watching the strides Indonesia is making in its implementation.

The ban is definitely innovative because this is perhaps the only country in the world where a total ban has been resorted to for defusing tension and developing traditional fisheries. But the important question is whether a unilateral ban can necessarily lead to the desired fulfillment of objectives like proper resource management and development of traditional sector.

In other words, how is it to attribute all the «evils» affecting traditional fishermen to the trawling sector? Is it not an over simplification of an otherwise complex set of causal factors responsible for the indigence of a large number of fishermen in Indonesia? In the following section we will discuss in detail the implications of the ban and its effect in achieving the stated objectives. We will also try to examine the real motives for its implementation.

Two facts should be borne in mind: only 3 percent of the total expenditure of the Director General of Fisheries (DGF) is targeted for fisheries resource management and environmental protection (out of US $ 490 million) during REPELITA IV (the fourth five year development plan 1984-89) (Bailey et al ibid.); secondly in the Indonesian Navy — the regulatory enforcement authority — «has duties extending far beyond regulation of fisheries» and «has neither the resources nor the incen-tive to become involved in regula-tions of national fisheries» (Min of Agri., DGF & ADB, 1988). Consequently, it is a matter of great convenience that a total ban was effected. This effectively makes it easier for implementation and according to a top official of the Department of Fisheries, the fishermen themselves will ensure the enforcement of the ban.

According to Naamin (*ibid.*) over 3,500 vessels were affected by the trawl ban. About 44,000 workers lost their jobs (this includes trawler crew, employees of cold storages, ice plants, fuel/food suppliers, etc.). The figure, 3,500 probably includes in illegal trawlers because according to the DGF's Fisheries Statistics of Indonesia for 1980, there were only 3,100 trawlers in 1980 which includes the trawlers operating from the Arafura sea also. The total number of trawlers operating in the area affected by the ban was only about 2,500.

Impact on owners

How did the ban effectively affect the owners of trawlers? According to Chong, Kee-Chai et al (*op.cit.*), at an annual depreciation of US$ 6,200, the salvage value of the trawlers was almost zero since many of them were over twenty years old. The owners had already recovered their capital investments. This is perhaps why very few trawling units benefited from the credit programme under BIMAS. According to the above authors, out of the 600 trawlers operating from the northern coast of Java more than 50 percent were either tied up at their operation bases or their fate was unknown. Naamin (1982) reported that of the 1,040 trawlers, which were operated from the major fishing ports of Java & Sumatra, 45 percent were inactive in the middle of 1981.

According to the Department of Fisheries, Indonesia, US$48 million was earmarked for the conversion of 2,300 trawlers into purse-seiners, gill-netters, tuna long liners, etc. But according to the Bank Rayat Indonesia (BRI), the principal credit agency of

the government, only 15 per cent of the total amount was distributed for rehabilitation of ex-trawlers. Only one instalment was released and the programme was dropped in 1980 itself because of the fear of poor repayment (from per-sonal dis-cussion with the Bank authorities).

This credit programme was meant to cover both the owner and the crew of trawlers. About 480 units benefited from it. Of these, 44 percent were from the Malacca Straits, 22 percent from Kalimantan and the rest were from Java. Only about 20 percent of the total number of intended beneficiaries benefited from this scheme. The joint ownership of ex-trawlers combined with the nature of credit distribution seem to have badly undermined the intended benefits of this programme. There are success stories, but according to FAO extension workers in Semarang, these are the ones operating on kin-ship lines. In most cases, however, the programme failed miserably. As on 1st August 1988 51 percent of the loans advanced remained outstanding.

In addition to ineffective management, there were other problems. In many cases, inappropriate gear was supplied (Bailey *et al op. cit.*). This problem arose because the distribution of the credit was not in the form of direct payment to the applicants. The Bank, according to the recommendation of the local authority from the fisheries depart-ment, would release the credit to the supplier of gear and engine. As a result, the joint owners did not have the freedom to choose the gear they wanted. And of course, there were problems of corruption with collusion between the trader and the local fishery authority.

Secondly, the cost of the fishing gear and engine provided under the BIMAS loan programme was higher than the prevailing market price, sometimes by as much as 30 percent (ibid.). The failure of the BIMAS credit programme was also highlighted by the leaders of the All Indonesian Fishermen's Organisation (HNSI) who attributed the failure to corruption among government officials (from personal discussion).

What happened to trawlers which decided to convert to other forms of fishing or non-fishing operations? There has been no effort on the part of the Department of Fisheries to monitor their perform-ance. However, from our discussions with fisheries scientists, extension workers etc. it appears their performance has been quite mixed.

Some of the trawlers completely wound up fishing operations and moved into the movement of goods

and people between islands. Of those who shifted to other forms of fishing, the trawlers from Cilacap (on the southern coast of Java) moved into gill-net and trammel-net fishing. There are 35 GT boats operating trammel-nets in Cilacap. Almost all the trawlers from northern Java diversified into purse-seine fishery. Similarly most of the converted ones in Sumatra moved into purse-seining and a few became tuna-long liners. According to some of our sources the trawlers which converted to purse-seines are doing well in northern Sumatra (where there are rich pelagic grounds), whereas those operating from northern Java are not doing particularly well because of intense exploitation in the coastal waters. The fishing ground there, is now at a distance of three days cruise (1988). Many of these converted vessels are winding up their operations. Those converted to gill-net operations are finding the cost of operation exorbitant because of the high costs of operating a large engine (Bailey *et al op. cit.*). Among the ones that are doing well are those operated on kinship lines.

According to a study quoted by Bailey et al on Aceh province in Sumatra, « of the 69 ex-trawlers converted in 1981 through BIMAS loan totaling RP 1.3 billion, nine of these boats had since sunk and most of the rest were not in operation due to accumulated losses» (*ibid*.).

One factor, which has been overlooked by all the studies on the trawl ban, is the fact that the total number of otter trawlers in operation was showing a stagnation from 1978 onwards — even before the ban. But the number of purse-seiners more than trebled in the period 1975-1980 (See table II).

Table II

Number and Type of Indonesian Fishing Gear 1975-1982

Type of fishing Gear	Number of Gear by Year							
	1975	1976	1977	1978	1979	1980	1981	1982
Otter trawl	2202	2692	3266	2511	2570	2476	666	453
Purse-seiner	1144	1481	1706	2137	2838	3700	3572	4933

Source: Bailey *et al* (1987)

This would mean that there was already a redistribution of fishing effort from trawling towards purse-seining even before the ban was declared. In other words capital had already started moving out of the trawling sector, particularly in the intensively fished area like Malacca Straits and northern Java, into other forms of fishing where the returns were much higher. The ban perhaps speeded up the movement. This suggests that the owners of trawlers were not all that affected by the ban. If at all it has affected some, they must be owners without adequate financial clout to undertake new investments. In other words, any management measure presumably taken for the benefit of disadvantaged fishermen does not imply that the privileged group (of trawler owners in this case) will have to pay a price. If alternate channels of investment are open which ensure an equal if not a higher return, and if the expected mark-up is ensured, capital will move. For most of the owners who are ethnic Chinese, trawling was only one of many avenues of investment. They did not have any difficulty in diversifying into other activities.

Impact on workers

We have mentioned earlier that over 44,000 workers were affected by the ban, including over 20,000 crew men. Out of these only about 2,500 benefited from the BIMAS programme (about 15 percent). As in the case of ex-trawl vessels, there has been no monitoring of the well-being of these workers after the ban. Therefore, we had to rely on our informal sources to get an idea about their situation after the ban.

Among the ex-trawl workers, apparently the ones most affected were the workers who came from non-fishing communities. They were basically peasants from the mountains. After the ban they could not acquire the requisite skills to operate gill-nets/trawl-nets, purse-seines, etc. As a result they had to leave the fishing sector for work in the informal sector where their earning capacity is much lower vis-à-vis income from trawling operations. Though the condition of the workers who joined the purse-seine sector was better, the economic returns were lower compared to that in the trawling sector since the returns to labour had to be shared among a large number of workers (the crew size of a trawler was about a quarter of the crew size of a purse-seiner). As Chong, Kee-Chai *et al* (*op. cit.*) observe:

> «In general, ex-trawl crew fishermen collectively have not benefited in a

positive manner from the Ban in terms of improved and sustained incomes. For those ex-trawl crew fishermen who have been able to hang on to their newly acquired boats/nets through the credit programme, their incomes have reportedly improved somewhat. However, the number of such fishermen reporting improved incomes is limited».

The discussion of the fate of the ex-trawl workers will not be complete unless we discuss the allocation and utilization of credit under BIMAS for the intensification of shrimp culture. Though RP 168 billion (US $ 171 million) was to be earmarked for this purpose according to P.D. 39/80, only 30 percent was finally allocated. This scheme was supposed to benefit ex-trawl workers also but our discussions with BRI and other sources revealed that there were very few recipients from the ex-trawl workers and of the 28,000 people who were advanced loans, most of them were from non-trawl fishing operations or from the aquaculture sector. The scheme was also dropped after the release of the first instalment because of poor repayment. Only nine percent of the RP 53 billion advanced under the scheme was repaid as on 1 Aug 1988.

Impact on traditional sector

So far we have been discussing the impact of the ban on trawling on the owners and the workers. From our discussion it can be seen that the ex-trawl crew men are the worst affected by the ban. The credit programme intended to rehabilitate them does not seem to have resulted in any desirable improvement in their level of income or earning capacity.

As we have mentioned before, the main objectives on the ban included the development of the traditional sector and better resource management. Now let us see to what extent these objectives were achieved.

One of the main problems in discussing how the benefits of the ban accrued to the traditional fishermen arises from the way traditional and modern sectors are defined in Indonesia. The definition is craft-specific viz. all vessels with or without outboard motors are viewed as forming the traditional or small-scale sector whereas all craft with inboard engines from the modern sector. This definition does not help us get an idea about the benefits accruing to the small-scale sector because the marine fishery produc-tion figures are given by type of fishing gear in the annual statistics published by the Director General of Fisheries (DGF).

Gear have a protracted use and both small-scale and modern sectors use similar gear. Since we do not have craft-gear specific production figures, it is difficult to establish the benefit accruing to the small fisher-men as a result of the ban. Gear-wise production figures would have been tentatively sufficient if different types of gear were sub-classified according to their size. Unfortunately, this is also not done. At the most, we have only general indicators like an increase in the number of trammel-nets, shrimp gill-nets or increase in the rate of motorization.

Of course, there are figures to show the production of prawns but these figures indicate only the non-trawl catch. In other words, though «the trawl ban effectively redistributes fishing effort away from the trawl operation to the other fisheries» (Chong, Kee-Chai *et al ibid.*) it does not presuppose «a reallocation of the resources... in favour of small-scale fishermen» as contended by the above authors. There is no data to understand the distribution of fishing effort within the non-trawl sector between artisanal and commercial operators. Therefore, increase in productive capacity, or production does not mean that the small-scale sector is benefiting from the ban. However, we will examine these to get a general idea about the impact of the ban on the non-trawl gear-groups, assuming that part of the benefit would be accruing to the subsistence fishermen too.

Since the total marine fish produc-

Table III

Total Output by Gill-Net
(in 1000 tonnes)

Area/Year	1976	1980	1986
Aggregate production	223	315	477
1. Malacca Straits	38	34	53
2. Northern Java	80	48	103
Total (1+2)	118	82	156
Total marine production	483	850	923

Source: *Annual Fisheries Statistics of Indonesia* 1976, 1980, 1986 DGF Jakarta.

tion was growing at an annual rate of 5 percent between 1981-86 we are taking certain specific indicators to assess the benefit to the non-trawl sector. These are the (a) total gill-net production figures (b) the total output of tiger, banana and endeavour prawns, and (c) the in-crease in productivity. In our analysis we are including only Malacca Straits, northern Java — the areas where there were rampant conflicts between trawlers and gill-netters.

Though the total marine production almost doubled from 483,000 tonnes to 850,000 between 1976 and 1980 there seems to have been a decline in the aggregate production of all gill-net units in the Malacca Straits and northern Java.

The figures for Malacca Straits and northern Java are particularly significant because, while during the

Table IV

Marine production of Prawns (In Tonnes)

	Malacca Straits	Northern Java	Total	Kilimantan	Irian Jaya & Moluccas	Total	Total for the Country
	1	2	1+2	3	4	1–4	
Tiger Prawn							
1976	5,100	300	5,400	1,100	2,000	8,500	9,300
1980	7,000	400	7,400	1,500	1,200	10,100	11,000
1986	5,100	200	5,300	7,100	1,000	13,400	14,100
Banana Prawn							
1976	4,000	5,000	9,000	2,900	3, 000	14,900	19,000
1980	10,000	5,500	15,500	10,400	5, 000	30,900	38,700
1986	4,700	7,600	12,300	8,500	4, 100	24,900	33,000
Endeavour Prawn							
1976	6,600	1,700	8,300	1,500	500	10,300	12,600
1980	2,900	2,300	5,200	2,700	2,500	10,400	14,000
1986	4,800	2,600	7,400	4,400	1,200	13,000	16,500
Total							
1976	15,700	7,000	22,700	5,500	5,500	33,700	40,900
1980	19,900	8,200	28,100	14,600	8,700	51,400	63,700
1986	14,600	10,400	25,000	20,000	6,300	51,300	63,600

Compiled from *Annual Fisheries Statistics* (1976, 1980, 1986), DGF Indonesia.

period 1976-1980 total gill-net production for the whole country had increased by 30 percent the total production in Malacca Straits and northern Java actually declined by 30 percent. The recovery after the ban in these two areas is also significant. When the aggregate output of gill-netters increased by 34 percent between 1980-1986, in these two areas it increased by 48 percent. These figures unequivocally estab-lish the positive impact of the ban on gill-net fishermen, thus highlighting the economic rationale behind the earlier conflicts.

Since tiger prawn, banana prawn and endeavour prawn are the commercially most valuable species of prawns, we have included only their production (from Malacca Straits and northern Java) to see the extent to which the gill-net sector could replace the productive capacity of the trawlers.

Indonesia seems to have come back to the pre-trawl ban levels of production by 1986 in the case of commercially most valuable species of prawns. Three factors are worth noticing in Table IV. Firstly, total production has recovered. The production of prawns in northern Java in 1986 surpassed the 1980 level and that in Malacca Strait was just a little below the 1980 catch. Secondly, the increase in total production is primarily due to an im-pressive increase in production from Kalimantan which registered a more than 30 percent increase in output between 1980 and 1986. This in-crease is perhaps because of an in-crease in fishing effort following mig-ration of fishermen into these areas (See MOA, DGF & ADB 1988). Thirdly, the total production in Molluccas-Irian Jaya seems to be declining — though the production in these areas is attributed to trawlers – giving credence to the fear of overfishing in Arafura sea which is the preserve of joint-venture companies with Japan.

Considering the fact that all these prawns are harvested by non-trawl fishermen, it is quite significant that gear with low efficiency (just 20 percent of the trawl gear's productivity) are able to harvest commercially valuable species in all the areas where trawling is banned.

During the period 1980-86 there was a discernible increase in the motorization of traditional crafts and in the population of boats with inboard motors. The total number of OBMs increased by 130 percent and IBMs more than doubled. In the latter category the craft belonging to the <5 GT category increased by 150 percent between 1980 and 1986 exhibiting the highest rate of growth.

Table V

Total Number of Inboard & Outboard Motors and Shrimp Gill-Nets

	1976	1980	1986
No. of OBMs	8,000	27,000	63,000
No.of IBMs			
<5 GT	5,000	11,000	28,000
<5<30	4,000	7,000	8,000
>30<100	200	300	400
>100	100	100	100
Total	17,300	45,400	99,500
Shrimp Gill-Nets (including trammel-nets)	17,000	25,000	50,000

Source: *Annual Fisheries Statistics*, DGF, Indonesia.

Most of these vessels (belonging to both categories) are operating from Malacca Straits and northern Java, which as we have mentioned in the beginning, are the most important fishing grounds in Indonesia with the largest concentration of fisher people's population. The total number of shrimp gill-nets (including trammel-nets) also doubled between 1980 and 1986 (See table V).

The increase in outboard motorization, inboard engine-powered vessels and shrimp gill-nets need not necessarily be a consequence of the ban on trawling though the ban must have provided a definite incentive for moving in this direction. This is because, even in the years prior to the ban these variable were showing an increase in numbers (See table V).

The higher incidence of motorisation and the increase in shrimp gill-nets after the trawl-ban only indicate the restructuring of fishing effort resulting in the availability of viable opportunities for relatively less efficient gear. But this does not presume that the cake is redistributed in favour of poorer fishermen. What is perhaps happening in all likelihood is that the balance of power within the fishing sector (in the coastal region) is acquiring a new form with the owners of motorized boats becoming the domi-

nant force and the large number of unmotorized fishermen (over 70 percent of fishing craft in Indonesia are still unmotorized) remaining the deprived class. All the studies done so far on the trawl ban tend to hide the differentiation within the non-trawl/non-purse-seine sector and do not throw any light on the emergence of new contradic-tions within this sector.

Since the ownership of craft and gear is highly skewed in Indonesia (from personal discussions), even an increase in total number of outboard motors is not a sufficient indicator of an increase in the welfare of subsistence fishermen. In the light of the present ownership pattern, a decline in the total number of dugout boats (the predominant fishing craft in Indonesia) does not imply that more subsistence fishermen are acquiring outboard engines. Contrarily, it is likely to indicate that more fishermen are becoming dispossessed of craft and gear and becoming wage-earners. In Bakassi fish landing center, Jakarta, for example, I came across a large number of trammel-net operators who are actually employed by absentee owners from the eastern side of Java. But the value of labour share has appreciated in the trammel-net sector because of prawns. However, the actual picture is not very clear because the season for prawn in mainly for four months in a year (Dec - Mar). The trammel-net fishermen tend to concentrate on trammel-net operations even in off seasons without attempting a judicious shift to other gear. There is no idea about the opportunity cost of fishing effort in the lean months.

The picture that emerges from numerous discussions I had with persons working in the field of fisheries is that the trawling ban has not really benefited the vast majority of subsistence fishermen though it has benefited the trammel-net operators. In other words, we can say that after the ban trammel-net operators have come to be relatively better-off compared to other traditional gear operators. I was told a few success stories of how some owners have become very rich after the imposition of the ban. A few have amassed so much wealth that they have moved out of fishing into cultivation of cloves in the plantation sector, for example. But the general tendency apparently is to continue in fisheries by becoming absentee owners of the fishing units.

What was the fate of the credit programme under BIMAS for the traditional shrimp fishing with gear other than trawls? RP 22 billion was originally to be provided according to

the P.D. No.29/80 but only 40 percent of this was actually spent (in 1982-83). This programme was also dropped because of poor repayment. As on 1 Aug 1988 the total repayment amounted to only 10 percent of the outstanding loan (BRI sources).

On the whole, as Chong, Kee-Chai (*op.cit*.) have observed, in their tongue-in-cheek paper, «the small-scale fishermen have only benefited marginally if at all». Perhaps the people who benefited most from the ban are the local traders who procure prawns for the domestic and international markets. Since the total number of landing centers increased as a result of widely dispersed use of trammel-nets all over western Indonesia, procure-ment seems to have become less competitive and more rewarding for the traders.

Impact on resources

Even if we concede for convenience that the trawl ban has led to the recovery of resources in the Malacca Straits and northern Java, is banning of excessive effort a necessary and sufficient condition to ensure their sustainability? As the MOA, DGF, ADB study (1988) Observes

> «Although the banning of trawlers west of the 120 degrees E line of longitude gave a temporary respite to some fish supplies available to artisanal fishermen, the relief was temporary. The continuing environmental abuse of esturial food chain systems and the use of small mesh and other unauthorized gear continue to reduce supplies available».

Moreover, inherent contradictions in government policies also tend to undermine the resource-base, particularly that of prawns. Though the credit programme initiated under BIMAS was presumably for the rehabilitation of the ex-trawlers, as we mentioned before, the focus was mainly on aquaculture to promote prawns production. Even otherwise, the provincial governments in Indonesia are blatantly opening up mangrove forests for converting into *tambaks* (brackish culture ponds) to grow more prawn, particularly black tiger, which fetches the highest price in the international market. The rapid expansion and intensification of prawn culture has led to increased harvesting of fry and gravid females for the culture-farms. Thus, for example, the collection of fry in Java increased from a mere 3,000 (in no.) in 1980 to 80,000 in 1986 (*Annual Fisheries Statistics* DGF). To quote from the MOA, DGF, ADB study (*ibid.*) which clearly establishes the link bet-

tween marine production and aquaculture:

> «The rapid development of black tiger shrimp production has meant an equally accelerated effort to acquire gravid females from the wild for hatchery spawning and egg supply. A new set of acquiring and distributing organizations have developed to search out and market these females by the hundreds of thousands. Although some regions still have a reasonable volume and are able to supply other parts of the country some marine stocks have had their gravid female population heavily harvested.
>
> The advancement of tambak development for black tiger shrimp export has thus deprived the marine resource of a critical share of its breeding stock. Both the removal of the mangrove and the capture of gravid females will reduce the natural populations of all shrimp, and specifically the natural populations of tiger shrimp».

The consequences of overexploitation of gravid females have not yet started showing up in the marine production figures of prawns. However, it is only a matter of time before they surface.

Although sustainability of the resource base is an important requisite for the subsistence of fishermen, especially the unmotorised ones who are more dependent on the coastal waters, no efforts have been made to ensure its protection from conflicting user-groups. Regulation of access to resources like the trawl ban for example, would be translated into positive results in the long run only if complementary measures are taken to protect wetland areas needed for fish and crustacean breeding grounds. This in turn is further related to the nature and intensity of economic activities in the upstream regions.

Thus, as Yamamoto (*op. cit*.) points out, the main reason for the narrowing of the fishery in Bagansiapi-api, leading to forced migration of trawlers into northern Java, was the large discharge of mud into the sea following heavy logging along the coast of Rokan river in Sumatra. As the MOA, GF, ADB (*op. cit*) study points out, there is increasing pressure on coastal resources in densely populated areas like Java from expansion of urban areas, forestry practices in the upstream regions (1), industrialisation, modern methods of agriculture, intensification of aquaculture etc. that are all affecting both the quality and quantity of discharges from rivers and the quality of the coastal waters.

(1) « Deforestation will affect the coastal fisheries more slowly, but may ultimately be a more serious threat to the livelihood of Indonesian fishermen, particularly small-scale fishermen forced to operate near land» (*ibid*).

Although there is a ban on conversion of mangroves in the 200 metre greenbelt, it is not being observed (*ibid.*). Unless there is an integrated system for management that minimises conflicts between different user-groups of coastal resources, the long-term interests of the subsistence fishermen will be jeopardised irrespective of the ban on trawling.

At the level of management of resources and development of small-scale fishermen, we have tried to show how two of the main objectives of the trawling ban have not been successful. Our perusal of the credit policy of the government also reveals its bias towards aquaculture. The priorities of the government are still in the old groove of enhancement of production for the export market, reflected in the excessive importance attached to the development of tuna/skipjack fishery recently in Indonesia. Moreover, as we have mentioned elsewhere only 4 per cent of the total expenditure of the Department of Fisheries is meant for resource management. Though the ban could have been a very good beginning for the development of an integrated resource management system, nothing has happened after its imposition in the early-80s.

At the same time, it is really doubtful whether the ban was really intended to serve any management purpose because according to well-placed sources in the Fisheries Department, there was never any suggestion from their department for the imposition of the ban. (1) The department was mainly in favour of proper enforcement of the zoning system, which they had devised. The ban was a unilateral decision of the President of Indonesia and it the first Presidential intervention in Indonesian fisheries.

Contrary to what Bailey *et al* contend that «prior to Presidential Decree 39, President Soeharto consulted with the government's fisheries policy makers and scientists» and «they largely sup-ported the imposition of a trawl ban» (Bailey *et al op. cit*.), such consulta-tions do not seem to have taken place. Apparently, there were dis-cussions only with the leaders of the All Indonesian Fishermen's Organisa-tion (HNSI), a constituent of the ruling GOLKAR (2) under the tutelage of President Soeharto. After the imposition of the ban, the Depart-

(1) Interestingly and understandably, the fisheries officials and researchers revealed this information only when I asked them specifically whether it was they who made the suggestion to ban trawling to the President!
(2) «GOLKAR is an agglomeration of bodies representing at present over 2,000 occupational groupings ranging from civil servants and security personnel to women and fishermen». Its main function is to support government policies (See Thoolen, H. 1987).

ment of Fisheries was caught in a peculiar situation of having to defend the parenthood of a child who was not theirs! Hence the tongue-in-cheek nature of their studies on the ban. Moreover, because of the unique political atmosphere in Indonesia there is a certain hesitation to call a spade a spade. I do not know to what extent it is true, but according to one of my sources, the then Director General of Fisheries Mr. Sardjono lost his job because he showed the 'audacity' to defend the trawlers!

The motive behind the ban

If we look at macro indicators it can be seen that fisheries do not form a significant source of Indonesia's export earnings. They accounted for only 1.3 percent of total Indonesian exports in 1985 and 4.3 percent of non-petroleum exports. Its share is bound to have been lower in 1981 when the ban was imposed. Thus, although in absolute terms the country had to forego an annual average earnings of about US$ 200 million from 1981 to 1983, this may not have been substantial considering the active oil market in the early 1980s (1). Perhaps an intended economic objective for the ban was to redirect scarce capital from over-exploited shrimp resource grounds in certain areas to grossly under-exploited tuna/skipjack fisheries and *tambak* production of prawns.

But a plausible objective of the ban is the resolution of physical conflicts between trawlers and gill-net fisheries which were exacerbating from the mind 1970s leading to destruction of property, bloodshed and loss of lives. The government must have realized that the price in terms of export exchange earnings foregone is worthwhile, considering the social, economic and political price they would have had to pay otherwise.

The government seemed to have had an overt and a covert motive for banning trawling. Thus, according to HNSI, the legitimate mouthpiece of Indonesian fishermen (particularly of the non-Chinese fishermen) maintenance of law and order in the

(1) The losses suffered by the government have always been much more in terms of illegal exports and transfer pricing. As the MOA, DGF, ADB study (1988) contends «The bulk (of shrimp exports) is transferred at sea and transported directly to the Japanese market. Sets of Indonesian data on harvest and export of marine shrimp differ considerably from each other and from Japanese import data». Secondly, the f. o. b prices to Singapore (which accounts for 11 percent of Indonesian shrimp exports) are generally reported as only half of what they actually are. And thirdly, there are losses resulting from the re-export of Indonesian-processed shrimp from Japan, Hong Kong and Singapore.

archipelagic water is of paramount importance in Indonesia. The fishermen, according to the ruling GOLKAR, have to provide the effective communication-links bet-ween islands. Since the process of integrating all Indonesians into one nationality is still in progress, the waters separating these six thousand and odd inhabited islands (out of 13,700) have to be kept peaceful. Moreover, according to HNSI, the Govt. of Indonesia is trying to revoke the Dutch colonial policy, which tried to keep the islands separate from each other to exercise easy control. But the concept of nationality is still in its nascent stage for most Indonesians (1). Regarding this objective, the government was completely successful and there are no more stories of violence in the sea after the declaration of the ban.

The following section will discuss the covert motive behind the ban. Although the «political» aspect has been mentioned, its importance *vis-à-vis* other objectives has not been highlighted. Most of the writing on the ban is in the form of rhetoric to provide a semblance of «scientificity» to the decision. Moreover, the ethnic dimension to the entire conflict has not been discussed except for a passing mention (Chong, Chee-Chai *op. cit*.). This section is based on discussions with the leaders of All Indonesia Fishermen Organisation (HNSI), political activists, scientists and bureaucrats and field workers of the FAO Extension Programme.

The political factor

As anybody in the office of the Director General of Fisheries or for that matter, any scientist involved in research on demersal fisheries will tell you, the ban is a « political» decision. Even the then Director General of Fisheries called it a «political decision» (Sardjono, l. 1980). The implication of the word «political» is the covert objective of the ban.

As we have mentioned in the beginning, trawling was introduced for the first time in Indonesia by the Chinese entrepreneurs. Even in the later period almost all the trawlers in operation were of the 'Cung-King' type and built in Sumatra. Even today not only in trawl fishing, but in the

(1) «Depending on to whom he is speaking, an Indonesian will identify himself usually first by his village, then his ethnic group, and lastly when meeting a foreigner, his country.....the view that an Indonesian takes of his country is affected by the place of his ethnic group in the scheme of things. There are some 300 such groups, differing considerably in size» (Palmier, L 1985).

entire range of medium and large large scale operations, the people of Chinese ethnic origin control the fishery sector. This is so in the case of aquaculture too. Their involvement is rather fully inte-grated**:** the entire gamut of produc-tion, processing and marketing is controlled. According to one of my sources, their involvement is near total in Sumatra and Kalimantan and about fifty percent in the island of Java. In the traditional sector too, the Chinese are controlling the markets for fishing/ processing accessories, product and credit. Thus one can say that they control the entire fishing industry of Indonesia. Their operations are generally resented and considered to be highly exploitative in character.

The resentment within the fishing community, particularly of fishermen native in origin, against the Chinese has also a broader backdrop in the Indonesian economy. The Chinese (called '*peranakans*') though believed to number only about 4 million out of a total population of 155 million of so (1), control a major share of domestic capital in Indonesia. Perhaps because of their wealth and their attempts to maintain their own distinct identity, the Chinese are widely disliked by the *Pribomi* (autochthonous Indonesians). This is in spite of the government's attempts to assimilate the Chinese into the majority culture through various means. As Palmier observes (1985):

> «All this forced homogeneity does not so far seem to make much difference to the dislike in which the Chinese are held».

But one should also stress the point that the native dislike is directed more against the Chinese capitalists than against the peasants and workers of Chinese origin.

The decision taken to ban trawling is inextricably linked with the political atmosphere prevailing in Indonesia after Soeharto became the President in 1968. Two factors are relevant in the political milieu: firstly, the resentment among zealot Muslims, in Indonesia not being declared as an Islamic state (See Palmier, L. *ibid*.; May, B. *op. cit.*) and secondly, the anti-Chinese feelings in the mainstream society. Since the business involvements of Soeharto and his circle with Chinese *Cukongs* (financiers) are well established (See May. B *op. cit*.) and his apathy towards making Indonesia into an Islamic state is well known, the

(1) «No account has been taken of ethnic origin since the 1930 census» (Palmier. L ibid.).

resentment of political Muslims is also directed against Soeharto.

The conflicts that broke out on the fisheries front got the support of Muslim leaders and it was largely aimed at the Chinese. These conflicts should be seen as a protraction of ethnic riots within the mainstream society and these riots were increasing in frequency in the 1970s. There was a particularly bad anti-Chinese riot in Bandung, Western Java in 1973. According to some of my sources, more and more people from the non-fishing community were joining the struggle against trawlers mainly because of ethnic reasons and by the late-1970s it was threatening to acquire extremely grave dimensions. The Muslim zealots were also trying to use the issue to chastise Soeharto for his alleged support to Chinese capitalists.

The ban was a useful piece of strategy to gain political capital on the eve of 1982 elections with intresting ramifications. On the one hand, Soeharto could portray himself as a true friend of the *Pribomi* and the poor: to the extent the decision was aimed at (or affected) the Chinese owners it was pro-*Pribomi*; and to the extent it benefited the traditional fishermen it was pro-poor. Thus, in one shot the P.D. could be portrayed as a vehicle of his concern for the *Pribomi* as well as the impoverished. This aspect of the ban must have silenced his Muslim critics to some extent.

But it is interesting to observe that although the P.D. 'affected' the Chinese owners of trawlers, it ended up greatly benefiting the Chinese community as a whole. How did this happen?

The most crucial benefit of the ban was that the President prevented the inter-gear conflicts from acquiring larger dimensions at a time when the conflicts were threatening to aggravate racial tension. This, perhaps, would have led to nation-wide ethnic riots and would have been disastrous for the Chinese community because of their stake in the economy. The ban contributed towards the dilution of a major threat to their investments in Indonesia although it restricted their involve-ment in trawling. But compared to the quantum of domestic capital they control, the proportion tied up in trawling was insignificant. Moreover, trawling was one among many avenues of investment: the 'losses' resulting from the ban would have been insignificant compared to the benefits they obtained in the form of «protection» to their larger invest-ment in the rest of the economy.

Considering the nexus between the New Order and the Chinese capitalists (May, B. *op*. *cit*.; Palmier, L. *op. cit.*), the large benefits at the community level could not have just been incidental. (1) Thus, through a clever decision President Soeharto became at once a friend of *Pribomi,* of the poor and of the Chinese without threatening to upset the well established equation of power in the economy.

Conclusion

Indonesia is the only country in the world where trawling is proscribed in all areas where there is a preponderance of traditional fishermen. Not only is it the largest area-closure of trawl fishery, it also has in place the longest uninterrupted ban in the world. Thus, in waters west of 120 degrees E longitude trawling has been prohibited for the past nine years and it is unlikely to be lifted in the near future.

Though the professed objectives are facilitation of better management of resources, development of the traditional sector and prevention of open conflicts, only the last one has been seriously adhered to.

Although the trawling ban is a good beginning it has not led to further development in, or initiative towards better fisheries management. In the Arafura sea, for example, in spite of signs of overfishing of prawns, no worthwhile measures have been adopted for the conservation of prawn resources. Many Japanese trawlers are in the process of winding up their activity because of high costs of operation arising from lower production. Also no attempt was made to provide base-line information before the ban was imposed.

Other than the ban, precious little has been done to reorganize the fishery for sustainable harvesting of resources. Destruction of mangroves, removal of gravid females of prawns for aquaculture, pollution and conflicting interests of various sectors are seriously jeopardising the conservation of resources in Indonesia. This, in the long run, will have a serious

(1) As Palmier, L observes,
«Some of their richest entrepreneurs are in close concert with prominent figures in the New Order. As a group, the Chinese have undoubtedly benefited considerably from the measures of economic development taken by the government» (Palmier, L *op. cit*.).
As May observes,
«the ruling junta of today use selected Chinese and the Chinese use them to accumulate wealth» (May, B *op. cit*.).

bearing on the development of traditional fishermen.

The positive contributions of the ban are: the government could put an end to the bloody conflicts in the sea; the traditional fishermen could successfully replace trawling gear with trammel-nets and produce as much of prawns as was caught before the ban. As a result at least some of the traditional fishermen are now earning more. The ban also provided a jolt in the arm for the gill-net fishermen leading to rapid increase in motorisation and the expansion of gearbase. However there is no information on distributional justice within the traditional sector, considering the highly skewed ownership pattern of fishing units in Indonesia.

More than the welfare of the fishermen or conservation of resources the motive behind the ban was explicitly political because of the complexity of ethnic factors and the power structure in Indonesia. Consciously or unconsciously, various attempts have been made to erroneously highlight the ban as a progressive and bold step towards resource conservation without attempting an explanation of the motives (and under currents) behind the decision. The ban is fishery-related only to the extent of mitigation of open conflicts. In terms of other objectives, precious little has been attempted or achieved. If not for the sensitive nature of ethnic-politics, perhaps this decision would not have been taken by President Soeharto.


89.81
BURMA
Rangoon
Vientiane
LAOS
VIETNAM
THAILAND
Bangkok
CAMBODIA
Pnom Penh
HAINAN
South China
Sea
LUZON
PHILIPPINES
Manila
MINDORO
PALAWAN
NEGROS
MINDANAO
Kota Kinabalu
MALAYSIA
BRUNEI
SABAH
MALAYA
Kuala Lumpur
Kuching
SARAWAK
SINGAPORE
SUMATRA
BORNEO
(Kalimantan)
CELEBES
(Sulawesi)
INDONESIA
CARPRESS

MALAYSIA

With a coastline of over 1900 kms Peninsular Malaysia produced about 700,000 tonnes of fish in 1987. About 53 percent of this was contributed by trawlers, 22 percent by purse-seiners and over 25 percent traditional fisheries. Thus in Malaysia the contribution of the commercial sector (which includes only trawlers and purse-seiners) is significantly much higher than that of the traditional sector (which include all other gear). After Thailand, this is the country in the Southeast Asian region with the smallest contribution from the small-scale sector in marine fisheries.

The fisheries sector contributes to about 2.3 percent of GDP, accounts for 11 percent of total agricultural and forestry production and is second only to the Philippines in these respects (1986 figures). It is one of the sources of employment for the rural population, employing less than 2 percent of the total labour force in 1986. The sector contributes to a little less than 1.0 percent of total foreign exchange earnings (SEAFDEC 1986).

Fish constitutes about two-thirds of the animal protein supply and a little more than 50 percent of the total protein supply in the country.

Malaysia has the highest proportion of motorized fishing craft in the Southeast Asian region. Of the 22,000 vessels, only 4 percent the non-powered.

Unlike many of the Asian countries, Malaysia has a history of gradual development of fishing technology. In the first two decades of the twentieth century, fishing stakes were the most common fishing gear. With the introduction of restrictions on their use by the British, purse-seine — introduced into Malaya in the late nineteenth century by a

group of Chinese from Pakhoi in South China — became more popular, particularly so from the early 1930s. This was also influenced by the removal of duties on salted fish (Ling, Y.C. 1976). Purse-seine fishery further developed in the same decade because of political developments resulting from the Sino-Japanese war (1). Mechanization was also introduced around the same time in a gradual manner. Synthetic materials for fishing gear were introduced in the 1950s (Shari. I. 1985). Finally, in the mid 1960s trawling was introduced on the west coast of Malaysia from Thailand. This was in Pangkor by converting purse-seine boats into trawlers.

As Shari points out (*ibid*.), the development of fisheries technology, particularly that of trawling and purse seining, is the result of the fishermen's own initiative. This was adequately supported by the government through the development of infrastructure, improvement in productive capacity of small-scale fishermen, institutional improvement in pricing and marketing facilities, marine fisheries research etc. However, this support was primarily directed towards ethnic Malay fishermen to the east coast.

The advent of trawling

The introduction of purse-seining did not lead to any significant conflict. But trawling sailed into rough waters from the very year it was introduced. This is quite unique because in most of the countries where conflicts arose as a result of trawling there was a time lag between its introduction and the emergence of conflicts. The non-trawl, small-scale fishermen reacted violently to trawling, «charging that it was destroying their gear and would deplete their fishing grounds» (Gibbons, D, 1976). The Government postponed its decision to license trawlers and undertook a pilot study on the economic viability of trawling in waters beyond 12 miles from shore and more than 20 fathoms deep, i.e., away from the traditional fishing grounds (Gibbons. *Ibid.*).

In late 1965 the government decided to license trawlers through co-operative trawling societies while subjecting trawling to strict regulations. These regulations were design-

(1) The fresh fish market in the 1920-30 period was dominated by the Japanese fishermen operating *more ami* (bream net) resulting in local purse-seine fishermen unable to make any dent into their market share. However, with the Sino-Japanese war in the Far East, the local Chinese were reluctant to buy fish supplied by the Japanese. «There was a definite bias against Japanese fishermen because prices for fish landed by local fishermen improved during that year, while the prices for fish landed by the Japanese fishermen fell» (ibid). The Japanese fishermen were also denied licences to fish by the British authorities.

ed to ensure conservation of fishery resources and to improve the security atmosphere. As a result, licences for trawling would be issued only through registered co-operatives to boats of and above 50 tonnes capacity and fishing beyond 12 miles from the shore. These cooperatives, converted from existing autonomous (largely Chinese) co-operatives were also asked to ensure the participation of traditional fishermen, particularly Malay fishermen.

This programme did not have the desired impact because many fishermen continued to practise unlicensed trawling, particularly at night, leading to the destruction of inshore gear like bag-nets (*pompang*) and drift-nets (*hanyut*) (Gibbons, D. *ibid*). Enforcement was very weak largely due to inadequate enforcement capacity and corruption of the officials concerned. In addition, there were loopholes in the law and the fines were low.

The operation of trawlers also directly clashed with the catch potential of a traditional gear called *pukat payang* (boat –seine), thus adding to the animosity of traditional fishermen against trawlers. With the introduction of trawling, the catch of this gear is said to have dropped off dramatically.

The discontent and anger of traditional fishermen were precipitated by an incident in late 1965 when an illegal trawler rammed into an inshore boat leading to the destruction of the boat and drowning of the crew. Inshore fishermen attacked a trawler in the same area, murdering eight of the crew and burning the boat. In December 1966 about 1,000 inshore boats rallied to Weld Quay (Penang) with the objective of burning the office of the George Town Co-operative Trawling Society. They were dissuaded by the police.

In the meantime, the inshore fishermen formed a pressure-group, the United Fishermen's Organisation of West Malaysia (UFOWM), in early 1964 to air their grievances to the government, to mobilise public opinion in their support and to provide compensation for members whose gear had been destroyed by trawlers. It had branches in twenty six inshore fishing villages on the west-coast.

Government's response to trawling

Ironically enough, in spite of all the objections raised by the inshore fishermen and the open conflicts in the sea leading to destruction of property and loss of life in the early 1970s the government reduced the restric-

tion of trawling, increased the number of licences available for existing co-operatives and issued licenes to new co-operatives in Penang and Kedah. The regulation on trawling and related procedures were relaxed in three respects: the size of boat, fishing area and fishing time. The minimum tonnage of 50 was relaxed to include both medium sized trawlers (25-30 tonnes) and mini trawlers (< 10 GT). The minimum 12 mile limit was relaxed to 3 miles. A zoning arrangement was introduced dividing the trawlable grounds among the trawlers according to horse power. Thus, trawlers with engines of 60 HP and above had to fish in water beyond 12 miles; with 25 HP to 60 HP in water beyond 7 miles and those with engines less than 25 HP had to fish beyond 3 miles. The fishing time was extended for those with 50 GT and below from the diurnal hours to twenty four hours on all days except Sundays (Gibbons, *ibid.*).

The relaxation in government policy *vis-à-vis* trawling was presumably for facilitating the switch-over by inshore fishermen to trawling with the idea of eliminating conflicts. However, the participation of traditional fishermen remained insignificant because there was no government programme to finance or subsidize the purchase of trawler boats. The traditional fishermen were also very reluctant to become crew-members of trawlers because of fear of social sanctions from their fellow villagers. In addition, the incomes from trawlers (for the crew) were not significantly better than that from traditional gear (Gibbons, D. *ibid.*). As a result, the trawler owners — who are mostly Chinese — drew labour from non-fishermen, mostly from the Chinese community leading to a change in the ethnic composition of fishermen. The proportion of fishermen who were Chinese increased from 33 percent in 1959 to 43 percent in 1972. Thus, the government policy to ensure better participation of inshore fishermen, particularly Malays in trawling was a gross failure. As Gibbons observes,

> «Only a minority of traditional fishermen are participating in trawling and most of the economic surplus generated by this more productive gear has been extracted by former non-fishermen, especially business-men, who have provided the capital to finance trawling» (Gibbons, D. *ibid.*).

Similarly, enforcement of fishing regulations through the co-operative was also a failure. Contrary to the objective, the co-operatives seem to have encouraged the trawlers to violate the zoning arrangement because they were entitled for a 5

percent commission from the catch.

The co-operatives, the vehicle of government policies, were not above the structural limitation of the Malayan economy and society. Gibbons observes that these co-operatives are 'not co-operatives at all in any meaningful sense of the word', they are «cartels» (*ibid*.) of local political and economic elites. He further observes quite sharply:

> «Manipulation of trawler co-operatives by local elites for their own short-term benefit... has been a major reason for the ineffectiveness of these societies in goal attainment. Control of these cooperatives by local political and economic elites was made likely by the decision to open up membership to non-fishermen, i.e., local political and economic entrepreneurs and boat owners. Such people were likely to be elected to the committee... The chairman and/or secretary would be local UMNO leaders, often the chairman and secretary of the local UMNO Branch; the treasurer, a Chinese businessman, either a supplier of oil and/or ice to the society or a boat owner and fish dealer; and the rest of the committee would contain other local Malay notables often connected with UMNO… Absent from the committee or present in very small numbers would be active fishermen…» (Gibbons, D. *ibid.*)

The appropriation of co-operatives by vested interests, political interference in the issue of trawling licences and the difference of enforcement officials resulted in the worsening of conflicts in the 1970s. These became very violent and bloody.

As Teik, Goh Cheng observes:

> «Between 1964 and 1976, a total of 113 incidents involving 437 trawlers and 987 inshore vessels was recorded for the whole of west Malaysia. 45 vessels were destroyed; 62 vessels sunk and 34 lives lost.» (Teik, G.C. 1976)

The response of the government to the intensification of conflicts in the early 1970s is intriguing. In 1974 Fisheries (Maritime) (Amendment) Regulations, 1974 was legislated. These regulations further liberalised the terms and conditions of license for trawling. The inshore waters designated for the traditional fishermen remained the same. But the horsepower specifications for all the zones were relaxed. Thus boats of 60 HP and below could be operated in waters beyond 3 miles provided they were below 25 GT and vessels with 60 HP to 200 HP (25 GT-100 GT) in waters beyond 7 miles. And those with an HP of more than 200 (and 100 GT) in waters beyond 12 miles.

There was a further relaxation

for trawlers operating from the east coast. Between November and March (the fishing season), trawlers irrespective of size could operate at any distance from the east coast.

However, the new licensing policy did not have any uniformity across states. Since the maximum number of licences that can be issued was not specified, the respective states issued as many according to their discretion. The conflict was further worsened by the new legislation which resulted in the rapid fleet expansion of «mini» trawlers, (trawlers below 20 GT, but mostly below 10 GT). Enforcement continued to be very weak. In Perak, for example, there was only one boat to undertake enforcement. The Fisheries Department had to frequently resort to assistance from marine police.

Conflict management

A concerted effort was made to alleviate conflicts through the Fisheries (Amendment) Regulation of 1980 which restructured the existing zoning system. In addition, a new licensing policy called Fisheries comprehensive Licensing policy (FCLP) was introduced to limit the fishing effort (Abu Bakar H.S. & Looi, Ch'ng kim 1987).

According to the new zoning arrangement, the existing reservation of inshore waters up to three miles for traditional fishermen was further extended to 5 miles for 'artisanal, owner-operated vessels' (Yahaya, J. 1988). However, the horse power specification was removed and the designation of zones was made according to gross tonnage of the vessel. Thus, trawlers and purse-seiners below 40 GT and owner-operated are assigned 5-12 miles zone; those above 40 GT, wholly owned and operated by Malaysian fishermen, the 12-30 miles zone and those vessels above 70 GT under joint venture or foreign ownership, waters beyond 30 miles.

The zones 5-12 miles and 12-30 miles were specifically reserved for trawlers and purse-seiners but beyond 30 miles any vessel could operate.

The new arrangement thus allocates fishing grounds according to fishing gear, size of vessel and ownership status now.

In addition to the zoning arrangement and license limitation, mesh size regulations for the cod end of trawlnets were extended from 1 inch to 1.5 inches and beam trawlers were strictly prohibited. The issue of additional licences for trawlers within 12 miles

was frozen.

Finally, with the adoption of Malaysia's Exclusive Economic Zone, Parliament enacted the Fisheries Act of 1985. In addition to imposing heavy fines on poaching vessels from abroad, the Act also enhanced the fine on local trawlers and purse-seiners encroaching into prohibited waters. It was raised from $ 1000 (Malaysia) to $ 50,000 and/or two years of imprisonment. The enforcement officers were also given vast powers. The main objective of the Act according to the then Agricultural Minister Anwer Ibrahim is 'to protect inshore fishermen who have been complaining of irresponsible fishermen trespassing into their fishing grounds' (*Star* 24.4.1985).

Fishing legislation: an analysis

The fishing regulations during the colonial times were framed with the idea of resource conservation, as it was in the case of almost all the Asian countries. These regulations date back to restrictions on various types of fishing stakes (1909-1916 and the gradual prohibition of the most destructive types in Perak in the early 1920s (World Bank 1983). The legislation was in the form of ordinances, enactments or orders-in-council. A unified system of regulation was introduced in 1923 to co-ordinate and control fishing activities for the whole country.

After the independence of Malaysia in 1957, a new Fisheries Act of 1963 was introduced with the objectives:

> «to conserve a natural resource; to rationalise its utilisation of exploitation, to safeguard the interests of fishermen, to administer fishing activity by preventing or settling any disputes among fishermen, prices etc.» (Notes on the Fisheries Act (F.M. 8 of 1963)).

The act also delineated fisheries into federal or state concerns on geographical basis. Accordingly, maritime and estuarine fisheries became the Federal responsibility and riverine fisheries, the State's responsibility.

From the objective of the Act it is clear that conflict management was one of the important objectives. The Act also stressed the fact that

> «the question of legislation could never be separated from that of observance and enforcement…»

However, in this respect the Malaysian Fisheries Department has not yet been fully successful.

The role of regulation in ameliorating conflicts was further reiterated when the Fisheries Comprehensive Licensing Policy (FCLP) was introduced. This underlies the current programme of fisheries management in Malaysia. The objectives of FCLP included among others the following:

1. Elimination of competition and conflict between traditional and trawler fishermen in the inshore water;
2. Prevention of over-exploitation of the resources in the inshore waters and,
3. Equitable distribution of resources (Abu Baker, H.S. & Looi C.K. *op. cit*.).

Thus, right from 1963 the government had taken cognizance of conflicts in the fisheries sector and ever since trawling was introduced, efforts were made to contain them. Even the definition of traditional and commercial sector is according to the perception of disputes. Thus, commercial sector includes all trawlers and purse-seiners (irrespec-tive of craft size and gear, horse power and fishing ground) and the traditional sector all other gear. According to this definition, many of the capital- intensive gear like drift-nets, *bobu* traps, etc. are considered to be traditional.

In the Asian region, after Japan this is perhaps the first country where acute conflicts arose in the sea after the introduction of a more efficient gear like trawling. And in the history of world fisheries this is perhaps the most bloody conflict claiming numerous lives. For a period of almost fifteen years from 1965, there were frequent clashes, destruction of fishing craft and loss of lives.

The trawlers are mostly owned by the Chinese who are mostly fish dealers and/or businessmen and who do not go to the sea (called *towkays*). (1) However, the conflicts cannot be characterized as an ethnic conflict because many traditional Chinese fishermen are also involved in the fights with trawlers. According to Mr. Cheah Eng Kean, formerly the Head of Planning and Development Division, Fisheries Department, in one incident, 33 Chinese trawler workers were killed in Perak by the traditional Chinese fishermen from that region. At the same time, it cannot be said that ethnic factors have not played any role in the tensions. Like in Indonesia, in Malaysia too there is social tension between the Chinese and the indigenous groups. There are anti-Chinese feelings among the traditional fishermen, but at the same

(1) According to a survey conducted by Gibbons (1976) more than 90 percent of trawler owners in Kedah and Penang states were of Chinese origin.

time these are directed more against the absentee-owners of trawlers than against small fishermen from the Chinese community. Expectedly, in all the conflicts, none of the *towkays* lost their lives. Only trawler workers were killed.

Enforcement of fisheries regulations

The violation of inshore waters and destruction of fishing gear still continue (though of low frequency) in the west coast in spite of beefing up of enforcement and more comprehensive management policies. These are caused by pair trawlers mostly below 10 GT, popularly known as «Apollo» boats. However, the intensity of conflicts has been reducing over time in the 1980s. There are now no open conflicts, no destruction of boats and no loss of lives. Protest is expressed through demonstrations and petitions. Can the de-escalation of violence be attributed to improvement in enforcement?

Malaysia has a relatively long history of legislation for the purpose of eliminating conflicts (and their violation by fishermen!). The inadequacies of enforcement have been highlighted by many authors (Yahaya, S. and Yamamoto 1988; Yahaya S. 1988; Gibbons D. op. cit). Legislation, although undertaken with an under-standing of the situation, does not seem to have contributed sub-stantially to the present improvement.

According to Yahaya and Yamamoto (*op.cit*) there are three reasons for poor enforcement. Firstly, enforcement efforts are hampered by limited capabilities arising from shortage of operating funds, patrol vessels, personnel etc. Secondly, there are procedural difficulties arising from too many bureaucratic formalities in cases that involve the judicial machinery. Often there is political interference as well in the legal process. Thirdly, co-ordination among the various agencies responsible for enforcement is lacking.

As the Head of the Legislation Department observes in a joint paper,

> «Fisheries enforcement…, is not effective against the operation of illegal encroachment of trawlers into the A zone (0-5 miles) or in ensuring that the boats fish only in their authorized zones. Almost no enforcement occurs along the boundaries of the B and C zones. Although coordinated enforcement between the Fisheries Department and other enforcement agencies has been initiated…this has been effective only against illegal foreign vessels» (Abu Baker and Looi, C K, *op. cit.*).

Even the premises on which major decisions like FCLP are taken seem questionable. Imposing restriction on fishing effort presupposes reliable information on fisheries resources:

> «Existing data on stock abundance, recruitment and mortality rate, catch rates, types of species, etc are so meagre and fragmentary that they really cannot serve as the basis for arriving at any definite conclusion about the status of the fisheries resources» (Yahaya & Yamamoto *op. cit.*).

Since the basic information is unreliable, it is difficult to assess the extent of overfishing (if at all it is taking place as contended).

The results of resource surveys undertaken by the Fisheries Research Institute indicate that the MSY has been exceeded. However, these surveys, according to the above authors, are «merely indicative» and not «conclusive» of the status of the «fisheries resources»(*ibid*.). Thus, for example, average annual production for the decade 1971-1980 for the west coast had been 340,000 tonnes though the estimated annual MSY is only 250,000 tonnes! It has been consistently higher in the 1980s peaking at 500,000 tonnes in 1987. If the MSY estimate is to be believed, the resources on the west coast have been continuously overfished for the past seventeen years which is quite ridiculous. (1)

The status of information on fin fish, prawns and mollusks is also very meager. Fishery managers are therefore, unable to confidently determine the number of licences to be issued by types of fishery, gear and area (*ibid*). As a result, the fisheries officials have to «resort to intuitions and arbitrations» (*ibid*.) in deciding on certain regulatory measures. This often leads to criticism by fishermen, politicians and other government agencies.

Political factors in legislation

As in other countries, political factors are very crucial in the formulation and implementation of legislation in Malaysia. The socio-economic environment is manipulated by the elite hegemony (2) (for details see Gibbons *op. cit.*) to attain their political ends. This, in combination with the «subject political culture» — defined as «one in which a person has some

(1) Although the total catch has increased, Dr. Christy points out a significant shift in composition to lower valued species. He also observes that a price-weighted output index shows declining production.
(2) They belong to all ethnic groups, predominantly Malay.

knowledge about his political system, especially about the bureaucracy, but does not see any active role for himself in it» (*ibid*.) — has created extra-legal space within the law's boundaries. With the result there is a lot of tentativeness in enforcement.

Above every thing else, political intervention seems to be the most important reason for poor enforcement. Thus, for example, the government relented under pressure when trawler-operators agitated against the enhancement in fines (for the violation of zones) and the zoning arrangement. According to press reports, (*Star 12.5.85*) after a demonstration by trawlers in Kedah state, the government relaxed (informally) the closed area for trawlers from 5 miles to 3 miles from the shore. Similarly, the then Agriculture Minister Anwar Ibrahim guaranteed the trawler owners that they had been «misled» on the $ 50, 000 fine imposed on trawlers found fishing in prohibited waters. As Star quotes him (May 15, 1985):

> «This maximum fine will be imposed only on big fishing boats and foreign fishing boats which have encroached into Malaysian waters».

Obviously, the attempt is to pacify both traditional and commercial fishermen to soften the jagged points of conflict even if it leads to relaxation of legislation which is presumably designed to protect the interest of traditional fishermen. This is further evident from the following statement made by the same Minister in Kedah:

> «The enforcement of the zoning could not be totally called off but we would relax the enforcement a little to benefit them (meaning trawler operators). We will allow them to cross about as far as one mile into the prohibited zones» (*Star. ibid.*) (parenthesis added).

As a report of the working Group (1976) points out:

> «in the territorial waters the objective (of enforcement) is the maintenance of a peaceful balance of the interests of competing fishing activities» (parenthesis added) «whereas in the EEZ waters the objective is to conserve and protect the fisheries resources for the benefit of Malaysian fishermen» (P 33).

It is this maintenance of a «peaceful balance of interests» which has led to a certain degree of ambivalence in fisheries legislation. The criterion at the point of implementation is explicitly political, although at the level of legislation the objectives are lofty. The process of legislation and implementation in a sense summarise the relative political clout of both the Chinese and the Malay communities in a society where every

economic activity is influenced by the ethnic factor.

The ambivalence in legislation formulated with the main intention of resolving inter-gear conflicts is further reflected in the shroud of secrecy vis-à-vis the detailed provisions of these Acts and amendments. The logistical aspects and details of enforcement are confidential and inaccessible, presumably because of the sensitive nature of this information. Various criteria governing the nature of implementation is also a State secret. The detailed provisions are in the form of an Administrative Manual (in Malay) which again is a confidential document.

Both traditional and commercial fishermen have a lot of political clout and they have their spokesmen in Parliament. Since the government is a coalition of Malay, (Chinese and Indian communities (it is better to describe it as a coalition of the elites of these communities) the basic attitude is to keep the conflicting parties separate rather than to resolve the conflicts. At the peak of the tension between trawlers and traditional fishermen in the 1970s the function of the enforcement authorities was to keep the warring parties separate rather than enforcement *per se* (personal discussion with Mr. Cheah Eng Kean, formerly head of Planning & Development, Department of Fisheries, Kuala Lumpur).

Similarly, enhancement of the fine from $ 1000 to 50,000 is mainly a deterrent measure not meant to be actually implemented. According to the fisheries officials I talked to, there are no cases where the violators of zoning arrangement are fined, they are only warned if they are Malaysian nationals. Fining or prosecution is resorted to only in the case of foreign violators. (1)

What is quite interesting to observe in Malaysia is that in spite of the lackadaisical performance of the enforcement authorities, tension in the sea has considerably reduced during the 1980s. The burning cauldrons of Perak and Penang states have now cooled down significantly.

This must be related to the recent changes in the fisheries sector and economic development in Malaysia. Between 1980 and 1987 the marine

(1) As Dr. Christy has pointed out, fines have been levied in quite a few cases. According to the *Annual Fisheries* Statistics, 1987 almost 50 percent of the total fisheries revenue is from fines — the single largest source of revenue for the Department of Fisheries. But there is no break-up of the fine according to it's origin, therefore, we do not know the relative share of revenue arising from various violations. These fines contribute to 0.0014 percent of the total value of marine landings in 1987.

fishermen's population has declined by 30 percent from 90,000 to 60,000. In the same period, the total number of large scale gear (trawl and purse-seine) registered an increase from 18 to 29 percent and small scale gears (mostly gill/drift nets — about 64 percent — and gear like hook and line, portable traps, other seines etc.) decreased from 76 to 61 percent. When the total number of unpowered and outpowered units decreased from 37 to 33 percent, inboard units registered an increase from 63 to 67 percent. The data implicitly shows the mobility of fishermen from small-scale to large-scale operations. This must have considerably weakened the clout of the gill-net fishermen and perhaps this is one of the reasons for the de-escalation of conflicts.

The decline in the fishermen's population is due to inter-sectoral mobility arising from the development of industries in the coastal regions and the government-sponsored relocation programme of fishermen. This programme envisages the relocation of 10,500 fishermen under the Fifth Malaysia Plan (1986-1990) into agriculture, manufacturing, small scale business, aquaculture and off-shore fishing at an estimated cost of M$ 280 million. It has already relocated 1,400 fishermen between 1976 and 1984 (Hotta, M and Wang, L.T., 1985).

As Yamamoto and Yahaya (1988) have observed in their survey in Penang, youth are also able to find jobs in the growing industrial sector.

A decline in the number of fishermen seeking to exploit available resources seems to have contributed more to the reduction in tension than stringent legislation.

Awareness of legislation

What is the extent of awareness of fishing legislation among the fishermen? According to a survey conducted by Yamamoto and Yahaya (*op.cit*) in fishing villages in Penang state

> «nearly 78 percent of those interviewed said that they were very aware of the restricted licensing, 16.5 percent said they were aware and those not aware only 5.8 percent» (*ibid.*).

They further observe

> «It is interesting to note that the percentage reporting awareness of specific programmes was highest for those programmes which affect the fishermen directly, but declined with programmes which has not direct effect on them. For example, among the FOH (Fishing Operators' Households) with inboard powered boats, nearly 80

«percent of those interviewed said that they were very aware of the regulation banning trawling in the 0-5 mile waters, while only 52.5 percent reported that they were very aware of the minimum mesh size regulation meant for the trawler fishermen…»

Conclusion

Malaysia is perhaps the first country in the South and Southeast Asian region which introduced legislation for «eliminating» conflicts between different gear-groups and for reducing overfishing. The earliest Act in this regard (1963) also highlighted the importance of enforcement. Different measures were undertaken with self-defeating results leading to a strange situation where the government had to promote the spread of trawling technology to prevent disputes that arose from its introduction! Subsequently, different forms of zoning arrangements were brought into force, but to no avail. Finally, the Fisheries Comprehensive Licensing Policy (FCLP) was introduced in 1981 but it could not plug the loopholes in the system nor could it be implemented properly. Restrictions on size of the vessel, for example, are not matched with any on horsepower resulting in trawlers below 25 tonnes using up-to 270 HP engines! (1) (from personal dis-cussion with fishermen). Zoning violations by local fishermen are not punished, thus underscoring the redundancy of a steep enhancement in fines. But use of illegal gear is fined.

Of late, it is not the absence of a machinery but the ineffective use of it that is responsible for zoning violations within their EEZ. The Enforcement Branch has even got air surveillance facilities now but these are used only for detecting foreign vessels poaching in their waters. From my discussion with fishermen in Penang & Perak states and the study done by Yamamoto and Yahaya (*op.cit*) it is quite evident that the inshore fishermen, operating gill-nets/-drift-nets are aware of the law's provisions. At the same time they are also aware that these regulations are not implemented. Thus according to Yamamoto and Yahaya (*op. cit*) only about 9 percent of the respondents believed that the trawl ban within 5 miles is being very effective.

In spite of primacy of equity considerations and elimination of conflicts in the legislation, the measures devised seem to be largely 'used' according to the context by a govern-

(1) These are only for the illegal Apollo boats and they are used as a means of evading patrol vessels, which is perhaps an indication that enforcement is having at least some effect.

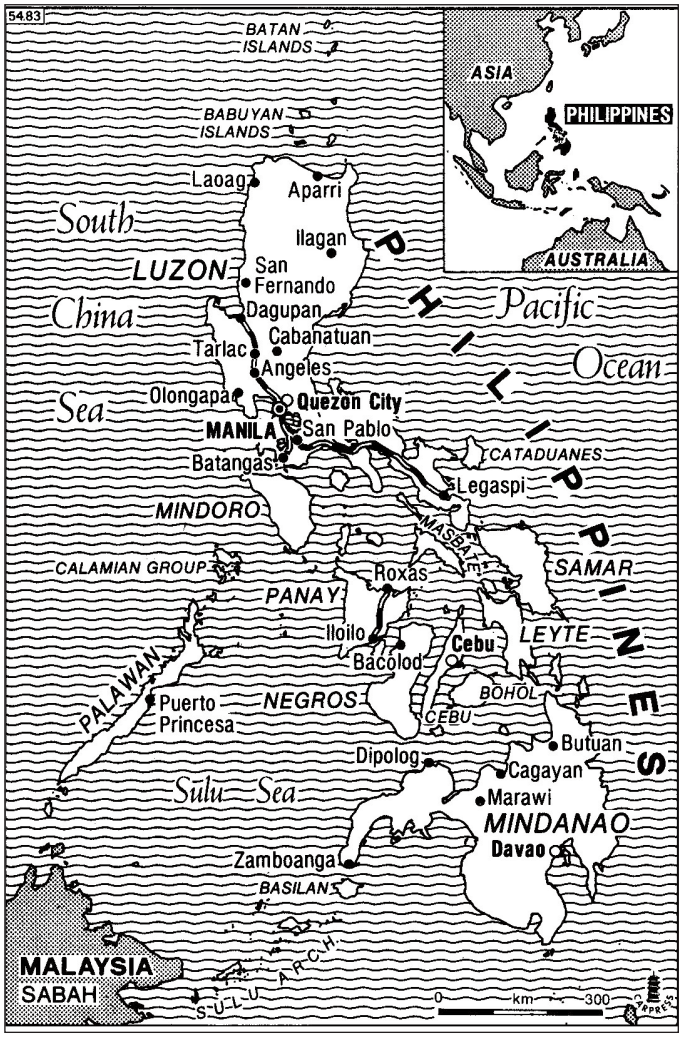
ment which is more interested in the maintenance of the hegemony of the elite irrespective of ethnicity (though with more stress on Malay) than in the achievement of professed objectives. Equity and other social considerations are subsumed under the political interest of the government which is an amalgamation of three distinct and incongruous ethnicities. Within the permissible limits of dissent and protest, conflicting parties are offered solutions depending on the degree of intensity of conflict and political convenience. Nevertheless, the point holds that Malaysia is the first developing country to attempt seriously to limit fishing effort in response to indications of overfishing.

The situation is also complicated by the nature or organisations of conflicting groups. Both the commercial and the traditional sectors are powerfully organised. What is more crucial is the fact that the government cannot do away with the support of either of the two. This is further complicated by the structure of the fishery. Trawlers and purse-seiners account for only 23 percent of the total number of gear units (1987) but they account for 42 percent of employment in the fisheries sector and for 75 percent of production. The main traditional gear (drift/gill-nets), though accounting for 54 percent of the total number of gear, contributes to only 6 percent of production (38 percent of employment). More than 75 percent of trawl-nets and 80 percent of drift/gill-nets in operation are on the west coast (1987 figures).

What seem essential in any process of legislation and its implementation is political will and general awareness. The efficacy of legislation viz., legitimacy, is also related to these two factors. But in a society where different social/economic groups have political leverage, it is highly unlikely that legislation will be permanently used to the detriment of a powerful group. It has only the role of a palliative. In a country where a common property resource viz., forests, are indiscriminately exploited, we cannot expect a genuine concern for another common property resource. As the Working Group (1979) contended, it is the «maintenance of a peaceful balance of the interests of competing fishing activities» that is attempted and not the elimination of conflict or the conservation of resources.

But then the situation seems to have improved in the 1980s. The frequency of conflicts has declined and they have lost their intensity. This is largely due to the growth in the economy, which allowed those who are not relocated to move into other

employment. The role of overall growth in the economy contributing to the resolution of inter-gear disputes has to be systematically looked into.



THE PHILIPPINES

From a fairly modest output of 300,000 tonnes in 1953 the total fishery production in the Philippines increased to two million tonnes in 1986, contributing to about 5.11 percent to the Gross National Product. The fishing industry comprises mainly of three sectors: municipal, commercial and aquaculture. The municipal sector, which comprises all fishing craft below 3 GT and those fishermen not using a craft, is the most important among the three. About 52 percent of total production (46 percent of value) was contributed by this sector in 1986. The commercial sector comprising all fishing crafts above 3 GT contributed to 26 percent of production and 25 percent of value.

About 700,000 people are fully or partially dependent on fishing as a source of livelihood. Nearly 90 percent of those engaged in fishing are in the municipal sector (Spoehr,A. 1984). These fishermen can be classified into three types:

a) Farmer-fishermen, those who farm their land and normally fish during the monsoon time,
b) Agriculture labourer-fishermen, those who complement their agricultural wages with income from fishing particularly during the monsoon and,
c) Full-time fishermen.

The ownership pattern of the means of production is skewed with a large number of fishermen not owning a craft (*ibid*). The distribution of fishermen across the Philippines is uneven with 40 percent of them located in Southern Tagalog, Bicol, and Central Visayas (Smith, I.R. *et al* 1980).

Brief history of the Philippine fisheries

The developments in Philippine fisheries can be broadly classified into pre-World War II and post-War phenomena. Most of the major changes in Philippine fishery are of post-War phenomenon. Before the War, fishery was mainly dominated by the Chinese and the Japanese. The Chinese introduced gill-nets, cast-nets and a large lever-net called S*alambaw* into the Philippines in the 18th century when Manila was a growing city. Trawling was introduced by the Japanese in the early 20th century when they operated beam trawls with sailing *sampans*. The establishment of a technological base in tandem with the development of a market in Manila led to the emergence of fishing towns in the 1900s. An entrepreneurial class of non-fishing owners rose up as a result and in the years soon after the War they adopted trawling / purse-seining to increase production (Spoehr, A. *op. cit*.).

The subsistence sector, mainly due to marketing bottlenecks, remained dormant during the pre-War period though they already had a repertoire of techniques in accor-dance with the diversity of species. But with the development of markets, technological improvements resulting from motorisation, use of synthetic fibres and change of boat size, there were changes in the municipal sector in the post-War years. However, the sector still remained one of low productivity, primarily because of overfishing in the narrow fishing grounds in the land-sea interface. But in spite of this, it has contributed the most to production and Gross National product.

It is quite interesting to notice that many of the problems beleaguering the Philippine fisheries today were already manifest from the 1930s when beam trawling became very popular. Thus, as early as 1940, there was the promulgation of an administrative order closing San Miguel Bay to trawl fishing for five months in a year. By 1950, Manila Bay, S.W. Samar and Regay Gulf were already overfished so much so that the fishery reached a point of commercial extinction resulting in trawlers switching to *basing* (bag-net), fish carriers, cargo movers, etc. Similarly, destructive fishing practices were also rampant. According to a source, the most important cause of fish depletion in the Visayas sea in the late 1950s was the rampant and wanton use of explosives.

Conflicts in the coastal waters

Though depletion of resources and over-capitalization of fisheries are mentioned, there is no reference to conflicts between trawlers and municipal fishermen in fisheries literature until the early 1980s. Perhaps, these conflicts were not given their due importance in spite of their existence in the 1970s. More over, these conflicts must have been seen as a price to be paid for enhancing production at a time when efficient technology was seen as the principal weapon for alleviating poverty. The perception of conflicts as arising from a clash between incompatible technologies gained ground only when these conflicts erupted into violence in some of the Southeast Asian countries like Malaysia and Indonesia.

Conflicts as they are addressed in the Philippines like in many other marine contexts have essentially got to do with the co-existence of incompatible technologies in an environment of growing population pressure on a shrinking resource base. This is further aggravated by degradation of the coastal zone by pollution, destructive fishing prac-tices, destruction of mangrove forests and coral reefs. In a worsening resource environment it is quit logical that the relatively more efficient technology in use will be attacked.

Like in many other countries, the important trawling grounds are also the fishing grounds where traditional small-scale fishermen fish. For example, Manila Bay, San Miguel Bay Visayas, Leyte, Samar etc. are also areas where there is a large concentration of municipal fishermen.

What is quite special about technology-based conflicts in the Philippines is that unlike Malaysia or Indonesia the incidence of open, conflicts with trawlers is insignificant, in spite of a long history of struggle from the 1970s. The structure of conflicts is slowly changing. As a result of depletion of trawlable resources in the coastal waters, the trawlers are moving out in search of other species. There is relatively much less talk and concern expressed about trawling in the municipal waters now. This was confirmed by the fishermen I talked to at a national convention in Batangas City, organized by Asian Social Institute in December 1988. According to the fishermen, the main reason for trawlers moving out of municipal waters is dissipation of profit. The national regulations were least responsible for this phenomenon.

According to some, the techno-

logy-based conflicts now are between (i) *basnig* operators and small fishermen and (ii) purse-seine operators and fish aggregating devices' (FAD) operators. After much prodding, all fishermen, however, admitted that the problem with the utmost severity is destructive fishing practices by municipal fishermen themselves using dynamite (blast fishing) and cyanide (for drugging fish). Concern was also expressed against *muro-ami* fishing, a method introduced by Japanese to catch coral fish.

Though the magnitude of damage done by blast fishing and cyanide poisoning was obvious, the perception of this magnitude in terms of the actual situation was not so evident as the concern against trawling. In other words, even when a fisherman articulates the hierarchy of problems affecting his fishery and fishing ground, there is a refraction of the actual situation conditioned by his preferential use of information rather than by the actual situation. This information is mostly derived from outside sources mainly social activists. Or perhaps it is more convenient to blame trawling because of his low participation in this kind of fishing. Whereas, in destructive fishing practices almost all the small-fishermen are involved.

This attitude of fishermen speaks eloquently about the inherent limitations of any fishery management system. Certain practices like blast fishing and cyanide poisoning though they meet with disapproval at the state level, do not meet with social disapproval at the local level. The local community will not hold an act of this kind against its interests. In other words, these practices, or, for that matter, the use of fine mesh nets do not violate the professional ethics or the behavioural norms of the local community. At the same time, problems caused by trawling seem to evoke the entire support of the village in admonishing it, irrespective of the relatively smaller damage caused to the resource and the fishing ground by trawling vis a vis destructive fishing methods. The admonition is more so when it is a commercial trawler and not a 'baby' trawler (below 3 GT).

Though fishermen have been demanding a blanket ban on trawling we have not yet come across any study on whether or not any serious differences in attitude towards commercial and baby trawlers exists. Are the villagers soft on baby trawlers operating from the locality in the traditional fishing ground as against the port-based commercial trawlers violating their communal waters? If perceptible differences occur, to what

extent are they related to the power structure within the *barangay* or municipality controlling the trading outlets? Is the *suki* relationship — a patron-client relationship covering all the economic transactions of fishermen — in any way muffling the real voice of subsistence fishermen?

From the municipalities I visited in Lamon Bay these questions could not be answered because of absence of trawler owners in the area. Nevertheless, from hearsay evidence it can be said that there is a difference in attitude towards commercial vessels and municipal trawlers within a municipality. Therefore, one wonders whether the movement against commercial trawlers is manipulated by the local elite who want to ensure trawling rights for their own fleet. This they do by exploiting the sentiments of subsistence fisherfolk about resource-depletion and habitat destruction. This has to be looked into in more detail.

The organisations working among fishermen (which are by and large organised from above), perhaps as a tactical step, seem to be avoiding any threat to the established order. In a situation where the credibility of the executive and the judiciary is low, such an approach has only led to law-making (as a ritual) without any effort at enforcement. It remains a war of words without any scope for corrective measures being taken to salavage a deteriorating situation.

History of fishing legislation in the Philippines

The Philippines has a history of fishing legislation dating back to 1932. The distinction between 'municipal' and 'commercial' fisheries was made this year mainly with the purpose of licensing and taxing vessels in the commercial class (Spoehr, A. *op. cit.*). Jurisdiction of waters upto three nautical miles (5.5 km) from the coastline was granted to the municipality in the same year according to Commonwealth Act No.4003 (Smith. I.R. *et al* 1983).

After the introduction of trawling and its subsequent emergence as the dominant fishing gear for catching demersal species, many kinds of legislation were passed at sporadic intervals with the idea of protecting resources from over- exploitation. Regulations were also made to prevent the use of explosives and poisonous substances in fishing operations.

The thrust of the early legislation on conservation of resources and generation of revenue was maintained when a comprehensive fisheries

policy was formulated and introduced in the form of Presidential Decree No. 704 in 1975. A major shift from this tradition was observed only recently when the new Philippines constitution, ratified on 2 Feb 1987, talks about supporting and protecting the interests of subsistence fishermen.

According to the Constitution, Article XIII, Section 7:

> «The State shall protect the rights of subsistence fishermen, especially of local communities, to the preferential use of the communal marine and fish resources, both inland and offshore. It shall provide support to such fishermen through appropriate technology and research, adequate financial, production and marketing assistance and other services. The state shall also protect, develop and conserve such resources. The protection shall extend to offshore fishing grounds of subsistence fishermen against foreign intrusion. Fishworkers shall receive a just share from their labour in the utilization of marine and fishing resources.»

The Philippines is perhaps the only country where the rights of the subsistence fishermen to the preferential use of fish resources are guaranteed by the constitution.

However, the provisions of this article have not yet been implemented. The bills are still in the process of legislation, i.e., two years after ratification of the new constitution. The operational aspects of fishing and fisheries are regulated according to the Presidential Decree 704 and its various amendments even now.

The presidential Decree No. 704 was passed with the idea of consolidating all laws and decrees affecting fishing and fisheries. The main focus of the Decree was the revitalization of the production structure to increase supply to the domestic market; to achieve import substitution of fish and fishery products through wise utilization, proper conservation and integrated development.

According to this Decree, a licence, lease agreement or permit was made compulsory for all fishing vessels. Commercial fishing vessels about 3 GT and above are prohibited from operating in waters below 7 fathoms, ostensibly to ensure the rights of municipal fishermen (this is not spelt out in the Decree). The baby trawlers using fishing boats of 3GT or less, are however, allowed to operate in waters beyond 4 fathoms from the coast provided they are authorised to do so by existing municipal ordinances. Thus, by inference, trawling is completely prohibited up to 4 fathoms depth zone. However, through a subsequent amendment, P.D.No.1015 in 1976 provision was

made for banning trawling operations within a distance of 7 kilometers (3.78 nautical miles) from the shore line, if public interest so requires', thus passing an apparent reference to existing conflicts. For banning, the recommendation had to come from the Secretary of Fisheries (replaced by a Minister now).

According to the Decree No. 1015, Letter of Instruction No.480 was issued in the same year prohibiting trawling and purse-seining (commercial) within a distance of 7 kilometers from the shorelines of the provinces of Northern Leyte, Southern Leyte, Northern Samar, Eastern Samar, Western Samar and Sorsogon.

Subsequently, through a letter of Instruction No.1328 in 1983 the President of the Philippines prohibited commercial trawling and purse-seining (i.e. boats above 3 GT) within a marine area of 7 kilometers from the shoreline of all provinces of the Philippines. This letter of Instruction explicitly states as its objective, the urgency «to improve the standard of living in the rural fishing communities», to protect municipal fishery resources against the heavy exploitation of fish and aquatic resources on the entire marine water areas…, to provide municipal and small-scale fishermen a wider area within which to operate the fishing boats of three gross tonnes or less and to increase their catch per unit effort» (PLOI No.1328).

Thus, at the national level, restrictions on commercial vessels were in three stages.

Firstly, commercial operations within 7 fathoms depth zone from the shore were prohibited. Among the municipal fishing craft, restrictions were placed on baby trawlers in the sense that they could operate only in waters beyond 4 fathoms, provided municipal ordinances permitted it (otherwise, they also had to operate beyond 7 fathoms). Secondly, commercial fishing activities, specifically trawling and purse-seining were prohibited in selected areas within 7 kilometers from the coast line and, thirdly, operation of commercial trawling and purse-sening were banned within 7 kilometers all over the provinces of the Philippines.

The penalty for violation of closed areas, however, is quite nominal and it is clearly spelt out only for violations by trawlers. The penalty, as mentioned in P. D. 704 of 1975 is: 'a fine of not less than 1000 pesos (US $ 50) or imprisonment for a period of not exceeding one year, or both fine and imprisonment at the discretion of the court'. The task of enforcement is entrusted with Bureau of Fisheries

and Aquatic Resources (BFAR), Philippine Constabulary/Integrated National Police and Philippine Coastguard 'through close cooperation and systematic coordination of the personnel under their respective supervision' (Memorandum of Agreement on the Joint Implementation and Enforcement of All Fishery Laws, Decrees, Proclama-tions, Memorandum Circulars, General Orders, Letters of Instruc-tions and All Rules and Regulations promulgated thereunder, 1976).

Penalty for violation of closed areas within the municipal jurisdiction of 3 nautical miles from the shoreline is, however, vested with the municipal governments. The penalty would vary from municipality to municipality according to the provision made in the municipal ordinances.

Among the violations, the one attracting the heaviest punishment according to P.D.704, is gathering fish with the aid of explosives and obnoxious or poisonous substances or by the use of electricity. The penalty was originally 10 to 12 years if explosives were used, 12 to 20 years if injury to any person was caused and 20 years to life imprisonment or death in the case of loss of life. It was further increased through a Presidential Decree No. 1058 in 1976. According to this Decree mere possession of explosive with intention for illegal fishing could bring a penalty of imprisonment from 12 to 25 years and if the explosive is actually used it could be 25 years to life imprisonment. If the use of explosives resulted in loss of human life the penalty is life imprisonment to death.

The strong punitive measures perhaps reveal the widespread use of explosives in the Philippine archipelago. According to a position paper prepared by Bureau of Fisheries and Aquatic Resources (BFAR) on use of dynamite, other explosives and poisonous substances about 60 percent of the coral reefs of the Philippines have been destroyed by these illegal fishing methods (BFAR 1988).

Thus, we can see that the important problems faced by the Philippine fisheries are addressed in the legislation process. But to what extent have these regulations been successfully implemented?

Enforcement of fishing legislation

In order to get a clear idea about the process of enforcement I had discussions with the Director of Enforcement, Bureau of Fisheries and Aquatic Resources, Commander of

Philippines Coastguard, Mayors of three municipalities and the police belonging to Philippine Constabulary in the Lamon Bay.

Another important aspect in the implementation of law is its awareness among the fisherfolk. Regarding this I had discussions with fishermen at a National Convention of Small Fishermen, Batangas city, community organizers of the Asian Social Institute, and leaders of Pamalakaya, an organization of small fishermen and peasants.

The enforcement is at two levels. As I mentioned earlier, BFAR, Coastguards and Philippine Constabulary/Integrated National Police together are supposed to implement the law in all instances except in cases of transgression of commercial vessels into municipal waters. This is left to the municipal council to implement.

In spite of the 'Memorandum of Agreement' between various agencies entrusted with the task of implementing and enforcing provisions of Presidential Decrees which clearly spell out the role of respective agencies, the enforcement machinery is a gross failure in the Philippines.

Though five specific offences viz. (i) illegal fishing (ii) fishing with fine mesh nets (iii) trawl fishing in waters seven fathoms deep or less (iv) ban on exportation of *bangu* fry and (v) pollution of waters are mentioned in P.D.704, the only offence on which some action is taken is illegal fishing. As far as violation of the 7 km-ban is concerned, not a single case has been charged so far in the Philippines. In other words, section 35 of P.D.705, its subsequent amendments in P.D. No.1015, Letters of Instructions Nos. 480 and 1328 are not implemented at all. This was admitted by Commander Quevas of Coast guard and Mr. Gamilla, Director of Enforcement, BFAR.

Though the concerned departments are supposed to send a bimonthly report 'pinpointing the areas where illegal fishing is rampant and containing a list of persons apprehended for having violated the fishery laws, decrees, rules and regulations' (Memorandum of Agreement, 1976), these reports mention only apprehensions of illegal fishing activities. A Fisheries Administrative Order No.156 was further issued in 1986 specifically on the implementation of L.I.1328 prohibiting the operation of com-mercial purse-seine and trawl operations within 7 km, and it insisted on a monthly report from the imple-menting agencies on their accomplishments. This order also is not complied with.

In spite of the 'Memorandum of Agreement' it is quite clear that there is no effective co-ordination between the various agencies concerned. This was evident from the manner BFAR and the Coastguard expressed their misgivings about each other. According to Commander Quevas, BFAR is not really serious about implementation of various provisions. A similar view was also expressed by the Philippine Constabulary which mans the police stations in Perez Island.

Though the 'Memorandum' was drawn up there was no effort on the part of the government to strengthen the implementing machinery to undertake its task effectively. Thus, in real terms, precious little is done by the government to ensure the efficacy of legislation though sufficient number of «paper tigers» were created.

Reasons for poor enforcement

Commander Quevas briefed the practical difficulties they face. The Coastguard is to protect the interests of twenty departments, mostly mutually exclusive ones. Considering the vast waters of the Philippines and its archipelagic character, he said it is physically impossible to do a satisfactory job for all these departments. Moreover, among the duties they perform, the lowest priority is given to enforcement of fishing regulations. And among the regulations the one with the lowest priority is implementation of the seven km ban! In fact, not a single case has been charged by the Coastguard in this respect. Similarly, BFAR has also not charged a single violation of this prohibition. Regarding their inability to enforce fisheries laws BFAR has a host of reasons to give. These reasons are expressed, however, in the context of difficulty in apprehending violations under section 33 which deal with illegal fishing (meaning, mainly fishing with dynamite and cyanide) nevertheless, they can be valid in the enforcement of other regulations also.

To quote from their position paper on illegal fishing:

> «To be strict in the implementation of fishery laws is quite difficult because of possible retaliatory actions from violators and lawless elements. »

The enforcement officers are sometimes harassed, relieved of their duties and transferred to inconvenient places as a result of political interference.

The institutional problems spelt out by the paper are:

> «(a) Lack of support and sufficient resources exemplified by the absence of/or lack of operation/effectively functioning equipments of facilities which include the lack of firearms provided for active law enforcement, for personal defence or protection purposes against the violators/enemies
> (b)…(because of) existing low pay or funding support, despite the risk and danger in their assigned duties, law enforcement personnel could easily succumb to temptations which are simply graft and corruption.»

Lack of support from the judiciary is another factor mentioned in the paper, which was also corroborated by the municipal authorities and the Coastguard.

Lastly and most importantly, there are no safeguards and support extended to law enforcement officers against harassment and countercharges (on technical grounds). In such a situation, the mother agencies do not provide them with legal counsels or financial support. There are cases where the law enforcement officers get suspended. This functions as a clear disincentive to law enforcers in booking violators.

The local municipal governments are also quite lax in implementing the laws. Their approach is quite different from that of the national government. They would rather prefer to settle the violations/disputes informally at the municipal level itself. One of the reasons for this approach is the non co-operation from BFAR and the lack of credibility of the judicial machinery. And secondly, because of various insurgent movements in the Philippines they do not want to offend the violators fearing a reprisal later. Therefore, they opt for an amicable settlement by requesting the violators to pay a small amount (which is normally less than half the fine specified in the P.D.704) as compensation. Here again the municipal government takes cognizance of the violation only if the fishermen bring it to their notice.

In the municipalities of Perez, Alabat and Quezon Quezon that I visited, the main problems were dynamiting of fish, cyanide-poisoning of coral fish, encroachment of *basnigs* into the waters around traditional Fish Aggregating Devices (*boya* fishing) using powerful lights at night and the use of fine-mesh nets (called *hulbot* or *buli buli*, a variant of trawl-net introduced only three years ago).

In Perez during October-December about twenty *buli buli* operators were apprehended because of encroachment into municipal waters but they were not formally charged. They were allowed to go on payment of a nominal fine to the municipality. The approach of

the municipality would differ according to the nature of the violator. For example, if a citizen of the municipality is apprehended for illegal fishing using dynamite, a case will be formally charged and forwarded to the court whereas if the violator is a 'stranger' from a different island the issue is amicably settled.

The scenario in the other two municipalities I visited was different from Perez. In Alabat the P.D.704 of 1975 was ratified only in 1987! The 7 km ban is not yet ratified by the municipality. Even illegal fishing is not referred to the court because of apparent non co-operation of the BFAR and lack of credibility of the judiciary. Though there are seasonal encroachment (during Jan-Aug) into municipal waters by trawlers from Manila, Cavite, Lucina provinces no action is taken against them mainly out of fear. The trawlers are supposed to be armed to the teeth! Even municipal fishermen are afraid of these encroachers. As far as violations within the municipality are concerned, the mayors of Alabast and Quezon Quezon are more tactical because of political reasons. The political outcome of the election is quite dependent of the fishermen and if the mayor strictly implements the law against illegal fishing and use of fine-mesh nets, the majority of fishermen will have to be booked! In these municipalities with coral reefs and mangrove forests, dynamiting is an important method for catching fish and the mayor would not like to risk his political future for the sake of implementing fisheries regulations.

According to the organizers of Asian Social Institute, these are the municipalities where there is some semblance of implementation. If the situation is like this here, one can imagine what it would be like in other municipalities. Thus, at the national and local level the enforcement machinery is grossly inadequate and incapable of implementing the regulations, exposing the total fallacy of presidential decrees.

Even after the change of government and the ratification of a new constitution there is no discernible interest shown by the government in qualitatively improv-ing the situation prevailing on the enforcement front.

A classic example of lack of political will on the part of the government was quite evident in the case of San Miguel Bay as demonstrated by the ICLARM study (Smith *et al* 1983). According to the existing rules which disallow trawling within 4 fathom isobath, 55 percent of the Bay is inaccessible to trawling. In 30 percent of the Bay's surface area trawlers

below 3 GT could be permitted and only in 15 percent of the Bay can trawlers above 3 GT fish. In the Bay area only two out of the total twelve municipalities have passed resolutions legalizing trawling within 4 to 7 fathoms. However, in these particular municipalities the 4 fathom mark is beyond the municipal boundary (which is 3 nautical miles), thus making these ordinances superfluous. Therefore, in this Bay vessels below 3 GT can fish only in areas above 7 fathom isobath and this means only 15 percent of the waters are legally accessible to trawling! However, small trawlers indulged in indiscriminate trawling all over the Bay irrespective of this According to Smith, I, *et al*

> «…if only existing legislation were enforced, the problems of competition and conflict between small-scale and trawl gear could be avoided. Certainly, confinement of small trawlers to that 15 percent area of the Bay (San Miguel) where they can legally operate would do much to shift the distribution of catch and incomes from the large-scale trawl fishery in favour of the non-trawl fishery». (Smith *et al. ibid.*).

Awareness of legislation among fishermen

Regarding the awareness of various provisions of presidential decrees among the non-trawl municipal fishermen, it was quite shocking to notice that most of them (in Perez, Alabat & Quezon Quezon) became aware of these provisions only in 1987-88 as a result of the interaction with the community organizers of ASI, i.e., about five to twelve years after the decrees/letters of instructions were promulgated. Mr. Santos, Head of the Legal Division, dealing with municipal fisheries admitted that there were no mass-contact programmes organised by BFAR to disseminate the content of various decrees and LOI among fishermen.

Destructive fishing practices

The impression I got from the fishermen at the national convention and in the municipalities I visited is that the encroachment of trawlers into prohibited waters is decreasing over time. The reason given by the fishermen is that the municipal waters are not rich fishing grounds any more for trawlers. They are, therefore, moving into deep waters or using other gear. Some of the fishermen were very critical of destructive fishing using dynamite and cyanide. According to them, it is the problem which has

the gravest consequences for resources. But at the same time there is no disapproval of the practice at the local level. The fishermen from Tawi Tawi, the southern most islands in the Philippine archipelago, e.g., even defended dynamiting claiming that in spite of using dynamite as the principal fishing method from the 1940s there is no depletion of resources in their waters.

The practice of dynamiting/ cyanide poisoning or fish seems to be concomitant with farming activities. But this is largely a coral reef-specific activity. Two reasons are mainly attributed by fishermen for the use of dynamite. Firstly, it is cost-efficient: the cost of one day's operation is only equivalent to one US dollar. Secondly, it saves a lot of time, (little time need to be spent in preparing and repairing gear before and after the operation!). The second reason is particularly important because it facilitates fishing on a day they have to undertake farming activities. Destructive fishing practices, irrespective of the severe penalties which can go upto death sentence, are rampant all over the Philippines and, ironically, the main source of dynamite is the Army itself, followed by mining companies! Cyanide fishing is used for catching ornamental fish for aquaria and cyanide is supplied by agents of ornamental fish dealers in Hong Kong. The preference of part-time fishermen for destructive fishing practices have to be looked into in more detail, especially in archipelagic waters. This phenomenon was also observed in Indonesian archipelago.

It is also interesting to observe that farmer/agricultural labourer fishermen are also less militant compared to full-time fishermen. Even if the trawlers are violating prohibitions in municipal waters, right in front of their eyes, they do not, out of fear, try to mobilize the enforcement authority to apprehend the violators. The commercial fishermen are feared to be armed or members of the outlawed National People's Army (NPA).

Conclusion

The tensions between trawlers and traditional gear-groups are of relatively recent origin in the Philippines. Various regulatory measures had been taken, mainly with the purpose of conservation of resources and, until 1983 there was no mention of the conflicts in the municipal Waters.

As the situation is today, trawling is prohibited in waters below 7 fathoms isobath and trawlers and

purse-seiners above 3 GT are banned all over the Philippines in waters beyond 7 km from the shoreline. According to the new constitution, rights of the subsistence fishermen to the preferential use of fishery resources are also guaranteed, however little is done to ensure these rights to subsistence fishermen.

Social and political factors seem to determine the nature of articulation of protest. There seems to exist difference in attitude towards trawlers locally based and those coming from outside. This is influenced by the extent of integration of subsistence fishermen into the local power-structure. At the same time, the prevailing political atmosphere — resulting from insurgencies — also influences the nature of protest.

As in Malaysia, in spite of poor enforcement there is less tension in the 1980s. The fishermen attribute this to a decrease in frequency of transgressions into municipal waters. More than the efficacy of enforcement, this is because of resource depletion forcing commercial trawlers into deeper waters.

Nevertheless, tensions between fish aggregating device operators and purse-seine fishermen are severe. Destructive fishing practices are still continuing unabated. This is perhaps the worst problem affecting the Philippine fisheries.

However, the enforcement scene is very dismal. The awareness of various regulations also seem to be poor among the municipal fishermen.

The Philippines is a sad case of total lack of legitimacy for the legislative process, the enforcement authority and the judiciary. In this contest the decrees only become alibi for providing a semblance of equity. Moreover, the regulations/decrees do not take into consideration the geographical variations according to resource availability, organization and means of production, complexity of fishing ground etc.

In a situation like this it is impossible to have any meaningful implementation unless alternative means are used. At a Conference on Environmental Law Education and Practice, organized by the Haribon Foundation for the Conservation of National Resources on 15 December 1988, in Manila, the inadequacy of the judicial system was discussed. It was observed that law cannot be above the dominant interests of society. One of the participants suggested persuasive tactics outside the judicial system (which according to him is «unfair, corrupt sand unreliable») for settle-ment of disputes, thus advo-

cating promotion of arbitration without involving the judiciary.

Even if arbitration is carried out outside the ambit of judiciary, it is highly unlikely that the poor fishermen will be able to receive justice because of the inequality inbuilt into the Philippine society as a whole. Even if extra-judicial methods are resorted to, it is likely that these methods will also be appropriated by the 'better-offs' in the respective communities. Unless the opportunity cost of labour increases the situation in the fishing sector is difficult to change for the better.

In this situation unless the social condition of production and organisation change, legislation process will not have much relevance. But this transformation has to be aided by both intra and inter-sectoral factors. Thus, for example, there could, on the one hand, be a seaward expansion of the fishing grounds towards untapped areas and, on the other, there should be inter-sectoral mobility of labour leading to reduced pressure on the municipal waters. Generally speaking, only in a situation of improvement in economic conditions will an atmosphere for the efficacy of legislation develop. Otherwise, it should be a case where the national economy is capable of subsidising particular groups of fishermen because of growth in other sectors. (like in Norway, for example). In other words, the most meaningful resolution of conflicts within the fisheries sector really lies outside, not within.

New draft bills under discussion

After the ratification of the new constitution which lays special emphasis on the rights of subsistence fishermen, there has been a rethinking in political circles regarding the adequacy of P.D.704 in resolving problems of small fishermen. As a result, a new bill was introduced in the House of Representatives on the 18th May 1988 (House Bill No.9580) 'to promote... distributive justice and achieve genuine national economic development' with priority to subsistence fishermen and special emphasis on resource conservation. The bill envisages the setting up of Resource Management Councils at the municipal, provincial and national levels to manage communal waters (defined as waters within 25 fathom isobath from the shoreline), coastal waters (waters beyond the seaward boundary of communal waters to a distance of 30 nautical miles) and offshore water (waters beyond the coastal waters). The demarcation of the sea into three areas is also gear-

specific. Within the communal waters, only passive gear (including hook and line, fish pens / traps, gill-nets etc) are allowed and in the other two demarcated fisheries both active and passive gear can be used. Similarly, within the communal waters only vessels below 3 GT can be used. And in all the three fisheries only Filipinos can operate, thus precluding any foreign collaboration.

The users of communal waters are supposed to be subsistence fishermen who are directly involved in fishing activity (but do not undertake operation without active participation) with or without the assistance of fishworkers (defined as those who are employed by an operator or a fisherman). And the users of coastal and offshore waters according to the draft law will be fishery operators (defined as those who own and provide the means to engage in fisheries) registered with and licensed by the provincial government (for coastal areas) and with the Bureau of Fisheries and Aquatic Resources (BFAR) (for offshore waters). They should have a minimum experience of three to five years in the respective fisheries.

The draft bill aims at devolution of power to the RMCs for the Management and control of the Philippine waters and fishery resources. It also makes provisions for arbitrating disputes at the coastal, provincial and national levels through the RMCs thus minimizing the dependence on the judicial machinery.

If implemented, this will be a radical measure for managing the fisheries sector with minimum involvement of the government machinery. According to a senior official in the BFAR, this is far too radical and therefore they have submitted another bill to remove the 'revolutionary' content of House Bill 9580. This Draft Bill (No.18422), submitted by BFAR, is very similar to the P.D.704 in essence except for the declaration of policy objectives and the definition of municipal waters.


43.83
Chiang Rai
Chiang Mai
Nan
LAOS
VIETNAM
VIENTIANE
Mekong
Lampang
BURMA
Nong Kai
Udon Thani
Nakhon Phanom
Tak
Phitsanulok
Udorn
Nam Phong
Chao
Khon Kaen
Moulmein
THAILAND
Nakhon Sawan
Takli
Phya
Korat
Ubon
Surin
Ubon Ratchathani
Ayutthaya
Nakhon Ratchasima
BANGKOK
Aranyaprateth
CAMBODIA
(KAMPUCHEA)
Sattahip
Battambang
PHNOM PENH
Gulf of Siam
Nakhon Si Thammarat
Kan-Tang
Songkhla
Hat Yai
Sungai Kolok
Railway
0 km 300
MALAYSIA

THAILAND

With a coastline of 2614 kms Thailand accounted for 2 million tonnes of marine catch in the year 1986 — the highest in the Southeast Asian region. About 70 percent of the total catch is trash and under-sized fish and is converted into fishmeal which accounts for the highest volume of marine products exports from Thailand.

The marine fisheries sector is largely export-oriented with over 70 percent of production moving into fishmeal, canning and frozen food industries (in the order of importance). In 1987 Thailand earned an estimated US$ 1.2 billion from her fish exports, out-earning rice, the country's one-time top export (Teresa Sofia, 1988). Export earnings from marine products accounted for 11 percent of the total export earnings of the country. (SEAFDEC 1988).

The fisheries sector contributed to 1.6 percent of the country's GDP and accounted for 9 percent of agricultural GDP in 1986 (*ibid*.). Fishery products constitute an important source of protein for the Thai people. The per-capita consumption of fish is approximately 22.5 kg.

According to the latest Marine Fishery Census (1985) there are about 140,000 fishermen and 60,000 fishery establishments in Thailand. About 8,000 fishermen are in the subsistence sector, 100,000 in the small-scale and 13,000 in the commercial sector (1).

(1) According to the National Statistical Office (NSO) all fishing establishments with powered vessels of and below 10 GT belong to the small-scale sector and all establishments without boats belong to the subsistence sector. All establishments with inboard-powered vessels of 10 GT and above are large-scale operators. (Teresa Sofia. *ibid.*) Fishery establishment 'refers to an economic unit which was engaged in marine capture fishery/coastal aquaculture during the past one year' (1985 *Marine Fishery Census of Thailand*, NSO and Department of Fisheries, Ministry of Agriculture and Co-ops 1987).

Nearly half of the total number of fishermen are fully dependent on fishing as the only source of income. Of the three sectors mentioned above, the largest share to the total production is from the commercial sector (almost ninety percent). The contribution of the small-scale sector is 8 percent and that of the subsistence sector is negligible. Thus, less than 10 percent of the total number of fishermen account for 90 percent of production.

History and development of Thai fisheries

Traditionally, fish is the most important source of protein for the Thai population who are predominantly *hinayana* Buddhists. 'There is rice in the fields, fish in the water' is the way people used to express their livelihood (Insor, D. 1966) from time immemorial. Until the early decades of this century, this taste for fish was largely confined to the rivers and lakes of Thailand. Inland fisheries was second only to agriculture as the main occupation of the Thais. It was the chief employer of coastwise population and a large revenue earner for the State (Smith, H.M. 1925). Access to the fishery was not open and it depended on the capacity of the individual to pay taxes which were rather heavy (almost 7 percent of the total value of production) (1).

Infrastructural facilities were good for the market to absorb fresh fish. Ice also was used in the 1920s for preservation. As a result, large quantities of fish moved within the domestic market particularly from the head of the Gulf of Siam by rail and steamer to Bangkok. Inland fish resources were subjected to a lot of stress leading to overfishing and farmers were forced to eat marine fish.

Although the contribution of the marine sector was not significant in the domestic market, there was a broad-based group of gear. Most important among them was the bamboo stake trap used in the estuaries. A variety of seines and gill-nets was also used in addition to troll-lines and set-lines. The marine sector also catered to the export market. Large quantities of small fish were caught even then and were used for feeding domestic animals and fertilizing land (Smith, H.M *ibid.*). The fishing units in the marine sector were also subject to taxation and this effectively took away the «open access» status of fishery in Thailand, enjoyed by almost all the other countries of the world.

(1) Calculated from Smith, H.M. *ibid*..

The shortage on inland fish coupled with the development of infrastructural facilities must have triggered interest in marine fisheries in a bigger way. Two new gear — the Chinese purse-seine and Japanese trawl — were introduced in 1925 and 1930. In 1960, on the eve of the introduction of the otter-board-trawl from West Germany, the total marine production had already outstripped the inland fish production by over 30 per cent.

From 1961 onwards, as result of the introduction of otter-board-trawling from West Germany there was a rapid expansion of fishing effort and investment by the commercial sector. Many factors seem to have contributed to the development of commercial fishery in Thailand. Firstly, the 1950s and 1960s were the decades when Thailand experienced an economic boom with capital being injected into all sections of the primary industry (Hinton, P. 1985). The Government subsidised loans at low interests which were available for investors in the commercial sector (Panayotou & Jetanovanich 1987).

Secondly, the demand-side factors were favourable to the development of fisheries. With the increase in per capita income in the West there was a strong impetus to international demand for marine products, particularly prawns and shrimps (Sakiyama, T 1984.). The local urban markets were also able to offer better prices because of the increasing purchasing power of the citizens consequent upon the economic «boom».

And, thirdly, to exploit the market potential there were immigrant Chinese fishermen from Fukien, Guangdong provinces and Hainan Island of China who integrated operations of fishing (particularly trawling) and marketing through kinship links (Sakiyama *ibid*.). They were also adept at maintaining good relationships with institutional banking.

Since infrastructural facilities were already being built into the economy, the transition from a largely localized industry into one organized on a national and international level was fairly quick. What is significant about this transition is that it did not result in any discernible conflicts. Unlike in neighbouring Malaysia where the introduction of trawling was met with immediate reaction from the traditional sector, there were no such conflicts in Thailand in the nascent stages of the introduction of trawling.

As sakiyama observes:

> «In Thailand relatively harmonious religious and ethnic relationship 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».
>
> (Sakiyama *ibid*)

The main reason for the absence of conflicts seem to be related, firstly, to the lack of an organized traditional marine fishery and secondly, to its diminutive size. The most important gear in the marine sector, as we have mentioned before, was the bamboo stake trap operated by lessees who paid taxes to the government. Since commercial operations were contingent on one's capacity to pay tax, fisheries may not have been a worthwhile occupation for the marginal population to follow. Secondly, the population-land ratio in Thailand earlier was quite low. So there was no pressure to move from farming to fishing as the principal occupation. And thirdly, the development of commercial marine fishery coincided with an impressive growth in the Thai economy. The 7 percent growth in national income in the 1960s opened up avenues for employment outside fishing. This is an important difference between Thailand and other Southeast Asian countries during the initial stages of the introduction of trawling.

The above factors do not imply that there were only a few households catching fish from the sea. As Nagalaksana points out.

> «Almost without exception, every adult rural inhabitant regardless of sex knows by life-time experience how to catch fish». (Nagalaksana, C. 1987).

For a large proportion of the coastal population, particularly in north Thailand, fishing perhaps was a supplementary activity to rice farming and horticulture, and met consumption requirements rather than being directed towards the market. Large tracts of mangroves and indented coastline must have facilitated easy access to fish.

The situation in south Thailand seems to have been different. According to some of my informants, in the south there are a large number of fishermen eking out subsistence from fishing. Most of these fishermen are descendants of immigrant Malay fishermen. They share the concern for resources expressed by their counterparts in Malaysia and resent trawling technology (Sakiyama, *ibid.*) (1) According to Sakiyama (*ibid.*). most fishermen on the east coast of south Thailand are engaged in gill-

(1) But according to Fraser, T.M (1966) resentment is mainly because of their inability to raise capital to compete on an equal footing.

netting or purse seining using craft of the size 1-5 GT. According to Thomas (1975) as reported in Hinton (1985), violent clashes took place between coastal villagers and crews of large fishing vessels in south Thailand in the early 1970s.

There seems to be a difference in perception of the trawling problem between the north and the south. This seems to be related to the degree of dependence on fishing as the principal source of livelihood. The northerners are perhaps less dependent on fishing compared to the southerners. Or is it that communal factors account for this difference in perception — that Buddhists are more tolerant of 'injustice' than there Muslim counterparts? The regional differences in perception, regarding commercialisation of fisheries and factors responsible for it will make an interesting study.

There is only very rudimentary evidence on the existence of conflicts between commercial and small fishermen in the northern waters of the Gulf of Thailand. (1) The nature of the conflict itself, particularly of trawlers with operators of traditional gear is not properly discussed anywhere. The problem is also made difficult by the definition of the small-scale sector. The definition of the small-scale sector according to National Statistical Office (NSO) (See footnote 1 - p. 75) is different from that of the Department of Fisheries, which has a gear-based definition (2). These definitions do not seem to do justice to the perception of 'conflicts' as articulated by the fishermen. Thus, for example, according to a fisherman of Trat (who is also a community organizer), the major conflict in their waters is actually between 'small' and 'big' trawlers, and the traditional fishermen (operating gill-nets, crab-nets, hook & line and squid traps) support the 'small' trawlers. These small-sized trawlers are from the locality and there seems to be little tension between the traditional fishermen and these trawlers.

Within the locality the focus is more on avoidance of conflicts between trawlers and traditional gear. Thus, e.g., as Teresa Sofia observes from another part of the east coast, the gill-net operators and the trawlers in the locality operate at different times to avoid conflicts (Teresa, S. *op. cit*.). In these two areas the conflicts seems to be determined by the village ethos which seem to accommodate

(1) Even in the south there is no literature for the situation in the 1980s.
(2)All gear excluding trawl, purse-seine, Spanish mackerel gill-net, mackerel encircling gill-net, bamboo stake-trap are defined as small-scale gear. According to this definition, 80 per cent of total production is from the large-scale sector.

incompatible technologies provided they are locally based. But the factors determining the social consent of these technologies have to be studied.

However, in the fishing villages I visited in Trat province there are conflicts within the traditional gear base: between gill-nets and crab-nets; hook & line and dynamite/ cyanide; squid trap and crab-net/gill-net and finally push-nets and oyster fishermen. In the first type of conflicts, the gear gets entangled leading to fights; in the second, hook & line fishermen are concerned about the wanton destruction of fish by dynamiting/ cyanide poisoning. In the third, traps get entangled with the crab and gill-nets. Oyster fishermen fight push-nets because of indiscriminate killing of cockles.

These conflicts sometimes lead to open fights but there is no resort to judiciary for their resolution. The conflicts are seen as part of the risk they have to undertake while fishing. Interestingly, almost all the fishermen have a combination of these gear (except dynamiting and cyanide poisoning). Therefore, these conflicts are purely circumstantial. There is no division of labour according to gear. But all these fishermen unite to fight against granting ownership rights of mangrove forests to individuals for conversion into prawn culture ponds.

Conflicts involving trawlers are largely inter-regional. Inter-gear conflicts are circumstantial and localised, i.e., within the traditional users of the inshore waters. Incursion of commercial interests into the province, in the form of investment in prawn culture, at the same time, is strongly opposed.

History of fisheries legislation

Thailand is one of the first countries in the world to introduce an Act to manage its fishery. Thus, in 1864 the Water Duty Act was introduced primarily with the objective of managing the inland waters. The Act divided the fishing grounds into a sanctuary area and a reserved area (Isvilanoda, S. *et. al, in press*). Fishing was prohibited in the sanctuary area, which was defined as the area close to monasteries or places of worship. Similarly, the law also prohibited fishing during the spawning season that coincides with the monsoon and the use of toxic substances for killing fish. The reserved area was that designated for persons who paid duty depending on the nature and the area of the fishing ground and the gear used. The Minister of Finance had the authority to determine and

collect the duties and the Minister of Lands and Agriculture to look after the conservation of fishery.

But as Dr. Smith points out,

> «Those (regulations) that are strictly protective or conservative, as distinguished from those that pertain to the imposing of taxes, the raising of revenue,…, constitute an insignificant part and are not very impressive effective or adequate…» (Smith, H.M. *op. cit.*) (parenthesis added)

and,

> «that Ministry (Lands and Agriculture) has no powers or authority for the promulgation or enforcement of conservancy and regulative measures» (*ibid.*) (parenthesis added).

However, due credit should be given to the fact that the need to conserve fishery resources was recognised by the Thais as early as the 1860s.

Dr. Smith, in his seminal review of the fisheries situation in the erstwhile Siam in the 1920s after studying the fishing practices and the priorities of the government made an impassionate plea for proper conservation of fishing resources to cater to the food requirements of the population:

> «There must be a thorough revision of the entire body of fishery regulations that are now in operation, and there must be formulated new regulations, applicable to the country at large and drawn primarily with a view to the preservation of the industry» (Smith, H.M. *ibid.*).

Perhaps as a result of Dr. Smith becoming the first Director of Fisheries in Thailand, increased attention was paid to conservation of resources, particularly in the inland waters in the 1930s.

The Fisheries Act of 1947

Although various fisheries tax laws were enacted between 1901 and 1938, the first comprehensive fisheries act was enacted only in 1947. Like in the case of previous laws this Act also covered both inland and marine fisheries. As Moore observes:

> «Having been drawn up in 1947 before the development of marine fisheries, the Act is drafted primarily with inland fisheries in mind» (Moore, G.1978).

On an area basis the fisheries sector was divided into four categories. These were:

i) Preservation fisheries
ii) Leasable fisheries
iii) Reserved fisheries and

(iv) Public fisheries (1)

Preservation fisheries refer to fishing grounds in the precincts of a monastery or a place of worship similar to the sanctuary area according to the 1864 Water Duty Act.

Leasable fisheries are fishing grounds leased out on the basis of an auction for a period of one year, ensuring exclusive right to the designated area. However, subsistence fishing was permitted in this area.

Reserved fisheries are sites licensed out on the basis of fixed fee, according to the size of the stationary gear.

All waters excluding the three mentioned above were public fisheries.

The Act empowered the Minister to issue notices regarding registration of fishing gear and fishermen, licensing of fishing implements (meaning fishing gear) and specifica-tion of fisheries tax for the operation of licensed implements.

The Minister also had the power to impose conservation controls like mesh size regulation, closed season, quota restriction, minimum size of species and restriction on the nature of the fishing implements.

The Act provided the legal basis for the management of fisheries. However, its main focus was on revenue generation like in all the previous fisheries tax law. It prohibited the operation of stationary gear in public waters. Access to public waters was open but registration was mandatory.

Moore (*op. cit*.) finds this Act anachronistic considering the fact the Thailand has a multi-million dollar industry based on marine fisheries. He further opines,

> «The changes in the law of the sea, the adoption of a policy of limiting entry into certain sectors of Thai fisheries, and the negotiation of foreign fishing agreements indicate a substantial redirection of policies, policies which it is suggested cannot be properly implemented through the existing legislation». (Moore, *ibid.*).

Rather than any amendments to the existing Act which «will serve only to pull further apart the fabric of a law that was intended only as the framework for the control of small scale inland fisheries» (*ibid*.) he advocated a general revision of the Act to serve as a basis for the management and regulation of Thai fisheries.

(1) We did not come across any material on the division of the fishing ground according to this classification.

Fisheries Acts (No.2) 1953 & (No.3) 1985

Despite Moore's recommendations, there were no attempts to undertake a general revision of the fisheries laws. There were two amendments, the second being the more important one. Even these amendments did not take into consideration the current requirements of the fishery sector. The principal task of these amendments particularly of the Fisheries Act of 1985, was to enhance the fines for violations rather than to undertake a general revision.

From a careful reading of the *Fisheries Act of 1947* and its subsequent amendments in 1953 and 1985 it is evident that within its framework it is possible to resolve many of the management problems of the fisheries. Even though there is 'open access' to '*public waters*' it is regulated by various provisions of the Act. Thus even in '*public waters*' fishermen have to respect various regulations pertaining to conservation, and without registration nobody could enter any fishery. But none of the provisions for conservation seem to be evoked in any meaningful manner so that the regulations can at least function as a deterrent.

Under the aegis of these Acts various regulatory schemes were devised from 1952 onwards to conserve stocks of various groups of species. Almost all these regulations emphasized the need to control fishing effort. Thus the Ministry of Agriculture and Co-operatives through a decree in 1972 proscribed trawl and powered push-nets in waters upto 3 km from the shore and within 400m from other located fishing gear. What is quite special about the regulation on trawl gear is that unlike in the Philippines, Malaysia and Indonesia in the Southeast Asian region the prohibition in Thailand is for protecting the nursery and breeding grounds rather than to resolve conflicts between incompatible gear-groups (personal discussion with Inspector General of Fisheries, Thailand). On being specifically asked whether small fishermen have made any formal plea for banning trawling, the officials of the enforcement department and the Inspector General of Fisheries replied in the negative.

Reasons for poor management

In spite of the fact that the government was cognizant of the need for conservation, the Gulf of Thailand has been described as «potentially a marine desert» (Sakiyama *op. cit.*) or

an «underwater desert» (Bangkok Bank, 1977, quoted in Hinton, P. *op cit*.). The resource depletion and the pre-ponderance of trash fish and undersized fish underscore the failure of the management schemes. This is quite evident from the fact that only 0.2 percent of the total value of marine catch is expended on enforcement (from the Inspector General of Fisheries, Bangkok). The vicious circle of overcapitalization of the fishery and over fishing along with the clout of trawler fishermen, lack of political will and the declaration of the Exclusive Economic Zone by other countries in the 1970s seem to have aggravated the predicament of Thai fisheries so much so that the lament of Dr. Smith remains as valid today as in 1925.

As we have mentioned in the beginning, the Thai marine fishery is basically an export-oriented one. It is also designed to be operated in the rich waters off the coasts of other countries in the South China Sea and the Indian Ocean. Before the declaration of the EEZ in South and Southeast Asian countries almost one half of the total Thai trawl catches was believed to have originated from international waters. As a result of the declaration of EEZ by the neighbouring countries, Thailand lost about 780,000 sq. km of distant water fishing grounds (Panayotou & Jetanovanich 1987) and was the country most affected by the declaration in this region. This led to an intensification of fishing in their territorial waters (Thailand was the last country to declare its EEZ in the Southeast Asian region, in 1981).

It is difficult to control the expansion of fishing effort in the territorial waters. Firstly, the rich fishermen are politically very powerful. The Fishermen's Co-operative Society (FCS), Fishermen's Group and the Fishermen's Associa-tion are controlled, particularly by owners or skippers of trawlers and/or purse-seiners. Not only are they able to fish where they wish but are also capable of obtaining a steady supply of reasonably priced fuel and scarce credit (Sakiyama *op. cit*.).

In 1980 the government tried to stop the registration of trawlers and push-nets to control fishing effort but the move was thwarted because the Fishermen's Association did not agree with the proposed restrictions. In 1983, because of resource depletion, the government decided to close the fishing ground in the Gulf around Prachuab, Chumpon and Surat. Trawling and purse-seining were prohibited for a period of two months. However, these fishermen refused to accept the prohibition and the restric-

tions had to be relaxed by the government. Two factors are revealed by the above examples. Firstly, the big operators do not believe in the conservation of the fishery for regeneration and Secondly, the government, either because of a lack of political will or the clout of trawler/purse-seine operators was unable to implement the management measures (Isvilanoda *et. al. op. cit*).

Officials of the enforcement department in a discussion with me agreed that the enforcement of fishing regulations is very sloppy. However, they say, they are trying to improve the efficacy of enforcement. According to them there are basically four difficulties. Firstly, the indented nature of the coastline and size of the fishing ground make enforcement very difficult. Secondly, the villagers by and large do not co-operate with them in apprehending the violators. Thirdly, there are budgetary and personnel con-straints. And finally, the judiciary does not cooperate with the officials. Most of the violations changed by the officials are dismissed by the court.

The following list was provided by the enforcement department on the number of violations recorded between 1986 and 1988.

Table I

Number of Prosecutions for the Violation of Fishery Regulations (1986-1988)

Sl. No.	Gear	Years 1986	1987	1988	Nature of violation
1.	Pair trawling	10	11	43	Closed season and 3 km ban
2.	Other trawling	10	20	31	-do-
3.	Purse-seines	11	25	32	Closed season
4.	Push-net	31	25	21	3 km ban
5.	Bag-net	441	398	228	Not known

Source: Enforcement Section, Department of Fisheries, Bangkok.

Considering the fact that there are over 7,000 trawlers, 1,000 purse-seiners and 1,500 push-nets it is difficult to believe that a more 0.03 percent of trawlers and purse-seiners and 0.01 percent of push-net

operators violated regulations. The higher incidence of apprehension (10 percent) or bag-net operators is perhaps because regulations on this gear have been in operation since the early-20th century.

What Teresa Sofia opines on the basis of field work in Ao Cho in Trat province reiterates the poor enforcement of regulations:

> «Perhaps the most important problem with marine fisheries policies in Thailand is not the lack of measures of proposals, but the enforcement of these measures» (Teresa Sofia *op. cit.*)

She further observes:

> It is highly unlikely that the marine police is able to effectively enforce any of the measures mentioned, there is simply not enough patrol boats and personnel, there are numerous security problems and many officers (themselves local people) sympathize with the fishermen's view point and turn a blind eye over the matter» (*ibid.*).

Conclusion

Unlike in the other Southeast Asian countries of our study, the incidence of conflicts following the use of incompatible technologies seems to be low in Thailand. This is perhaps related to the diminutive size of the traditional sector and its weak political clout, which stands in sharp contrast with the power, and influence of the trawler lobby in Thailand.

Because of economic and social specificities, the trajectory of fisheries development in Thailand was different from other countries in the region. The rapid industrialisation of a modest fishery into one of the largest in the world was achieved at the cost of killing the 'golden goose' of rich fishing grounds. In spite of legislation that is reasonably sufficient to check this tendency very little has been done.

In this context, an observation made by Dr. Smith in 1925 still makes sense:

> «The history of fisheries and fishery regulations everywhere has been that fishermen and governments are loathe to make even so small a concession to the requirements of nature, and the result is that we see fisheries languishing and resources gradually diminishing and proceeding to the point of commercial extinction, whereas, with very little restriction on fishing operations the same resources might have been preserved unimpaired for indefinite periods of time» (Smith, H.M. *op. cit.*).

To use an analogy, what is happening in the Gulf of Thailand is akin to slaughter tapping of rubber trees

once their commercial life is over. Lack of enforcement is the key factor promoting over-exploitation. At the same time, it is linked up with the political milieu of the State and the clout of the offenders. Irrespective of the nature of destruction, if revenue is forthcoming especially from exports, the State has a tendency to swap foreign exchange for long-term sustenance of the fishery.


25.87
U.S.S.R.
MONGOLIA
MANCHURIA
SACHALIN
KURILS
CHINA
NORTH KOREA
SOUTH KOREA
JAPAN
Pacific Ocean
RYUKYU
OKINAWA
TAIWAN
OGASAWARA (BONIN)
KAZAN (VOLCANO)
Asahikawa
HOKKAIDO
Sapporo
Kushiro
Hakodate
Aomori
Akita
Morioka
Sendai
Niigata
Iwaki
Sea of Japan
SOUTH KOREA
Kanazawa
Nagano
Utsunomiya
TOKYO
Yokohama
Nagoya
Shizuoka
Hamamatsu
Himeji
Okayama
Hiroshima
Kyoto
Kobe
Osaka
Wakayama
Shimonoseki
Kitakyushu
Takamatsu
Matsuyama
Kochi
Fukuoka
Oita
Nagasaki
Kumamoto
SHIKOKU
KYUSHU
Kagoshima
HONSHU
Pacific Ocean
High-speed rail
0 km 300

JAPAN

Japan is the biggest producer and consumer of fish in the world. In 1986 Japan harvested 12 million tonnes of fish. The per capita consumption of fish is approximately 70 kg accounting for one half of the dietary supply of protein. But only 0.4 percent of the total population of 120 million is actively involved in fishing.

For the sake of fisheries management, Japanese marine fishery is divided into Coastal fishery, Off-shore fishery and Distant-water fishery. These sub-divisions are not legally defined but there is an operational distinction.

Coastal fishery refers to operations (including mariculture) within the 12-mile territorial waters using powered vessels of less than 10 gross tones. These are mostly family enterprise engaged in a variety of single day operations.

Offshore fishery refers to operations beyond 12 miles using powered vessels above 10 GT. Medium and small enterprises are engaged in this operation. The fishing trip may extend from one day to a week.

Distant-water fishery is in waters beyond the Japanese EEZ and off those of various coastal nations around the world.

About 80 percent of the labour force comprises family members engaged in coastal fisheries. The remaining 20 percent is engaged in distant-water and off-shore fisheries. Although coastal fisheries account for only 27.2 percent of the total production, they account for 48 percent of the total value which is the highest contribution in terms of value among all the three sub-sectors. This is because of the concentration on capture and culture of high-value species.

The focus of this chapter is mainly on the historical evolution of Japanese coastal fishery management.

The feudal period

The traditional concepts of fishing rights found their way into the codified laws of the nation states from the Tokugawa period in Japan (1603 to 1867 AD). Village-based fishing territories were established and developed by the feudal lords between 1560 and 1808. The sea was regarded as an integral part of the feudal domain and considered to be an extension of the land.

The fishing rights were granted ostensibly for two reasons. Firstly, for *Kako* (corvee labour) and secondly, for taxes. The foremost duties as defined by the feudal fiefs were the provision of *Kako* and payment of taxes in cash and kind. *Kako* was mainly for naval defence and guarding the coast, transportation for the rulers and for rescuing ships in distress. There seems to be a third reason for granting fishing rights to the coastal villages viz. administrative. Since the entire coastal waters were apportioned among coastal villages, it served the security interests of the fiefs. The rights were almost like an invisible fortification of the sea and the fishermen did not enjoy freedom of movement from one village to another.

Thus it was a reciprocal arrangement (though unequal in content) between the feudal lords and the fishermen. In return for the taxes and services that the latter provided, they were given fishing rights and trading privileges. A salient feature of this arrangement, which exists even today in Japanese coastal fisheries, is that the responsibility (for labour and taxes) was delegated to the village and not to individuals. Secondly, relations between a village and the outside world were regulated by the authorities. But within the village, matters were left to the villagers.

However, the formation of village-based fishing territories was uneven because of unequal development of the market, varying geographical and topographical circumstances and differing produc-tive capacities of the fisheries. By 1650s most exclusive fishing terri-tories had been firmly established.

The establishment of exclusive fishing territories does not mean that this is the only type of fishing rights. «To make an otherwise rigid system of exclusive territories, flexible and workable» (Culland, A.1984), com-

mon fishing territories were also demarcated where fishermen from more than one village could fish subject to prescriptive and mutual agreements. Thus there was a dual system of exclusive and common fishing territories which continue to be so even now. As Culland remarks, «the system of sea tenure was thus a patchwork of criss-crossing rights that had developed through prescriptive and mutual agreements» (*ibid*.).

Within the exclusive-rights area and the common fishing territory, fishing operations were subject to a licensing system which was largely specific to the gear and the species. The granting of licences in the case of small-scale gear like gill-nets, set-nets, drift-nets and traps was vested with the village leadership. This practice continues even today. The only difference is that the village leadership is now vested with the Fisheries Co-operative Association (FCA). But no licences were required for simple technologies like hook and line, seaweed and shell collection.

A third type of rights was also given, but only to the affluent net owners by the feudal authorities. This was mainly species-specific. Whales, tuna, and sardines could be caught under this system of prescriptive rights which was perhaps the most rewarding source of revenue for the authorities. These rights could be sold, mortgaged or inherited.

Though the feudal authorities tried to divide fishing rights between affluent net owners and small fishermen, the territorial rights system had very little egalitarian content. Within the village a fraction of villagers monopolised the fishing grounds in return for payment of taxes. The establishment of a public fund in 1762 (in Fukuoka) with the idea of providing cheap credit to small fishermen was mainly for strengthening their clout vis-à-vis the interests of large owners. At the same time, the licensing scheme was very strictly imposed on the large gear operators to discourage monopolisa-tion of fisheries by a few owners (*ibid*.). In other words, there were some efforts on the part of the feudal authorities to balance the power between different gear-groups (but, significantly, not between the rich and the poor). Since there is no critical analysis of the feudal strategies vis-à-vis allocation of rights, we are unable to say anything more about the priorities of the authorities — whether it is due to administrative reasons or financial reasons or for securing corvee labour.

Though exclusive fishing territories were established, there was no indication on how borders should be defined on land (regarding access

to sandy beaches) and at sea (demarcating different fishing territories). This, in addition to the privatisation of fishing grounds and monopolisation of gear, led to various disputes. These disputes were either between villages or between different gear-groups. The former were largely over boundaries, the rights to common fishing, and licensing of large nets. The latter were because of labour shortage, gear destruction and impact on shoal movement.

Poaching was another inter-village problem undertaken probably with the intention of acquiring prescriptive rights to common fishing in the water of the neighbouring villages. Concern was also expressed regarding resource depletion caused by larger gear.

Implicit in the above discussion are three factors. Firstly, the development of the market in Japan, particularly its uniform development across the country. Secondly, the existence of rich resources and thirdly, the existence of technology and skill to capture and supply fish to the market.

The post feudal period

In 1876, fiefs were abolished and all fisheries reverted to the central government. A new system of operation was introduced under which the individual fisherman had to pay a use tax. But because of heavy opposition from the fishermen this system was replaced by fisheries co-operatives in 1887 «to co-ordinate the use of coastal fishing grounds» (Ruddle, K. 1987).

The first national fisheries law was enacted in 1901 and it was mainly with the idea of maintaining peace and order in the fishing villages (*ibid*.). The law was based on traditional practices without any effort to remove the inequities during the feudal period. The feudal rights were supplemented and formally categorised into those for capture fisheries, beach-seines, set-nets and mariculture. The fishing village guilds, of which fishermen were members during the feudal times, were made the nucleus under the new law and designated as Fisheries Associations (FAs). Their functions were more or less the same till 1910 viz. granting of fisheries rights and the issuance of licences within the territorial limits of the villages. But in 1910 the law was amended and FAs were permitted to engage in economic activities, including co-operative marketing. However, the principal function remained the former.

The 1901 Fisheries Law also did

precious little to alleviate small-scale fishermen from exploitation by middlemen and fish wholesalers. This situation was made worse by motorization and gear modernization which began in the 1920s, resulting in efficient offshore vessels fishing in coastal waters. The recession in the 1930s aggravated their distress even further. The Meiji government reorganised the FAs to improve their condition. One Association per village was established. The joint fishing rights areas were extended further offshore to protect them from offshore fishermen. Attempts were made to break the grip of the middlemen by encouraging co-operative marketing by the FAs. According to Ruddle:

> «from the late 1930s, with the great decline in the number of middlemen, wholesalers and moneylenders, many of the residual elements of feudalism were essentially eliminated from Japanese fishing villages and fish landing ports. Henceforth, the fishermen themselves were the masters of the coastal fishing grounds and their communities…» (*ibid.*)

However, Zengyoren (National Federation of Fisheries Cooperative Association) is of a different view. According to their 'Fisheries Cooperatives in Japan' (Zengyoren nd.),

> «During the pre-War years, many fishing villages were dominated by merchants, landlords, or absentee net masters, who lent out their fishing rights and lived off the commission they received. In many instances, such people were also the controlling officers of the village fishermen union (Fishermen Association). The actual fishermen merely rented land and house, and borrowed operating expenses from the people» (parenthesis added).

The truth must be somewhere between the rosy picture painted by Ruddle and the dismal picture by Zengyoren. One is likely to agree more with the latter view because under Meiji law the concept of fisherman was not defined. Therefore, all those who lived in the coastal village, irrespective of whether he was an absentee or actual fisherman, got membership in the FAs. The absentee fishermen in all likelihood must have maneuvered the Association to protect their interests that primarily lay in fixed net fishery. Furthermore, as Comitini (1967) remarks:

> «Even though the fishermen's association was the legal owner of the fishing right, it could not itself engage in fishing operations. Its importance lay primarily in its control over the fishermen. Thus, even though the fishermen fished independently, they were subject to regulation laid down by the association. The section of the law prohibiting the association from direct-

ly operation the «the fishing rights ensured that the large scale fixed-net rights remained in the hands of the «customary» users. These private right fisheries, pre-empting the best fishing grounds, were several times more productive than the common-right fisheries» (Comitini 1967).»

The post war administration of coastal fisheries

In an attempt to «democratize» the institutional structure of Japanese coastal fishery and to promote fishery productivity, a new fisheries law was enacted in 1949 by the Central Government with the assistance of the SCAP (Supreme Commander for the Allied Powers) authority. The most significant aspect of the new Law was that it granted fishery rights and licences only to fishermen or fishing enterprises actually engaged in fishing. It prohibited the transfer or leasing of fishing rights. This Law was complemented by the Fisheries Cooperative Association Law of 1948 which had the objective of improving the economic and social status of fishermen and fish processors in addition to increasing fishery productivity. The main intention behind the democratization process was to weed out the last vestiges of feudalism. Instead of displacing the 1901 law with a new one, what was attempted was a strengthening of conventional laws/customary practices by removing the non-democratic and exploitative content of the previous Law. The customary management principles were also formalised under the new system.

The present management of fisheries is in compliance with a dual system of rights and licences administered by the Ministry of Agriculture, Forestry and Fisheries according to the Fisheries Law of 1949. (see table 1) Most of the responsibilities for administering coastal waters are delegated to the prefectures. Fishing rights in the marine context refer to the coastal waters and cover those fisheries «that either employ fixed gear or that exploit a relatively immovable benthos» (Ruddle 87). All coastal waters where fishing is permitted are divided among FCAs. In contrast, the licences govern those fisheries that catch migratory or highly mobile species and are issued for coastal, offshore and distant water fishing.

Table I

The Structure of Japanese Fishing Rights and Licences

Rights	
Categories	**Granted to**
(1) *JOINT FISHERY RIGHTS* A. Gathering seaweed, shellfish and other benthos B. Specific to small-scale net fisheries C. Beach seines, unmotorized trawling, fish shelters	Exclusively to FCA's
(2) *DEMARCATED FISHERY RIGHTS* A. Special Demarcated Rights B. Demarcated Rights	Exclusively to FCA's private organizations and individuals
(3) *LARGE-SCALE SET-NET FISHERY RIGHTS*	-do
Licences	
(1) *LARGE-SCALE OPERATIONS IN DISTANT WATERS*	Mostly to private Organizations and individuals
(2) *MEDIUM-SCALE OPERATIONS IN DEEP WATERS*	-do-
(3) *SMALL-SCALE NEARSHORE OPERATIONS*	FCA's or individuals

(Source: Ruddle, K. 1987)

The fishery rights system protects coastal fisheries and fishermen against encroachments of other fisheries and other economic sectors by granting them property rights.

Joint rights are issued for the coordinated use of a fishing area and its resources by all members of an FCA. The allocation of fishing territory among the types of gear mentioned in the table and the fishermen to be engaged in their operation are internally decided by an FCA (*ibid*.).

Demarcated Rights are granted for aquaculture and are usually valid for five years. The *Special Demarcated Fishing Rights* are granted when many fishermen would want to engage in aquaculture in a large area of the sea. And *Demarcated Fishing Rights* are granted for pond aquaculture.

Rights for Large-Scale Set-Net fisheries are largely species-specific and are managed by the prefecture. When joint rights embrace the entire sea territory of an FCA, demarcated rights and those for set-nets are granted only for specific areas within the joint rights area. All fishermen belonging to a specific FCA are entitled to fish within its sea territory but only a limited number of fishermen are granted set-net and demarcated rights. An FCA is granted demarcated and set-net rights only if it has areas suitable for them within its territory.

Thus the tentativeness of Meiji fishing rights was removed and the rights were neatly categorized for capture and culture fisheries with reference to the species caught and the technology used. In other words, the species caught, technology used and the fishing ground became clear determinants of fishing rights. Therefore, there is no ambiguity about its definition.

Fishing licences

Licences for small-scale fisheries in coastal waters are granted by the prefecture to individual fishermen. They do not have the legal status of property rights. « In principle, licences are issued for fisheries not covered by fishing rights and in particular for migratory species taken from trawlers larger than 15 GT and purse-seiners over 40 GT». (*ibid*.)

Prior fishing experience is a precondition for applying for fisheries rights. To be considered as a fisherman 90 to 120 days must be spend actually fishing in the sea. It is also important that they must have not been found guilty of flagrant violations of the Fisheries Law or labour regulations and not in possession of other fishery rights.

Table II

Administration of Japanese Fisheries

Organ	Area of Jurisdiction	Function	Composition
Central Fishery Adjustment Council	National level Under the Min. of Agriculture, Forestry and Fishing	To deliberate Important matters relating to the enforcement of 1949 law	25 Commissioners 15-representatives of fishery operators & fishery employees 10-persons of learning and experience
Fishery Adjustment Commission	Prefectural	To carry on matters relating To the fisheries.	
a) Sea – Area Fishery Adjustment Commision	Every prefecture	Within the sphere of the sea-area in which it is set up	15 Commissioners 9 - elected by fishermen. 4- fishing specialists 2- representing public interests.
b) United Sea-Area Fishery Adjustment Commission	2 or more prefectures	Need based	

Source: Ruddle, K. 1987.

Allocation problems in the rights to large-scale set-net fisheries and in demarcated fisheries are pre-empted by granting top priority to the FCAs.

The management of coastal fisheries through this dual system of rights and licences is at three levels. At the national level there is the Central Fishery Adjustment Council and at the prefectural level, the Fishery Adjustment Commission. There are two types of FACs. One is the Sea-Area Fishery Adjustment Commission and the other, the United Sea-Area Fishery Adjust-ment Commission. The former — about 65 in number is formed in every prefecture, whereas the latter is established only when there is a need for it, e.g., to control the fisheries of seasonally migratory species which would require the coordinated effort of more than one prefecture. (See Table II). And lastly, there is Fisheries Co-operative Association, more than 3000 in number, established in every fishing village and entrusted with the duty of implementing the Law with the participation of fishermen.

The FCA plays the most central role in the management of coastal waters. Its principal functioning is «planning, management and sustained development of the sea territory for which the individual community has tenure» (*ibid*.). The near-shore waters are essentially self-managed by the FCAs and they form the vital link between individual fishermen and the central and prefectural government.

The national and prefectural agencies are established as per the Fisheries Law of 1949 and the FCAs as per the Fisheries Cooperative Associations Law of 1948. Thus, in Japan the co-operative movement is well integrated into the Fisheries Law and because of this, the law has great deal of legitimacy, unlike most of the fishing nations in the Asian region.

The efficacy of Japanese fisheries management is essentially because of its organisational structure which facilitates a proper integration of national management principles with the local customary practices. In other words, there is no «kink» in the legislation between the national and local levels. In addition, the regulations are flexible and contextually applicable according to the discretion of the FCAs because the responsibility to interpret the Law according to the specificities of the region is left to the local FCA. Thus, the room for positive manoeuvrability enables the viable functioning of a system in a country of multiple fisheries.

The social basis of its organisational structure is the behavioural norms of Japanese society where

«harmony together with community or group orientation still strongly influence... social behaviour » (*ibid*.). In other words, the relatively successful implementation of legislation and regulation through its organizational structure is because of specific value judgements of society that inspire belief in legitimacy. This is perhaps further linked with the spirit of nationalism or a national ideology which has given the State a great deal of legitimacy.

What is most interesting about the development of Japanese fishing industry is that the Fishery Law of 1949 could successfully achieve the twin goals of democratisation and enhancement in production by making these goals compatible with each other.

Two aspects of the 1949 Law are worth mentioning. Firstly, the Law successfully demarcates the fishing industry into coastal, offshore and distant water fishery and successfully prevents any conflicts between the three. This does not mean that there are no conflicts *within* these sectors. But for resolution of intra-sectoral conflicts there is no resort to judicial machinery because the organizational structure is such that these problems can be settled within the industry through the FCA or SAACs. Resort to the judicial machinery arises largely in the context of inter sectoral problems when there are issues of pollution and reclamation affecting the livelihood or the tenurial rights of the coastal fishermen.

The demarcation of the fishing industry into coastal, offshore and distant water is mainly with the objective of easing competition between different class interests (See Comitini *op. cit.).* According to Oka (quoted in Comitini, *op. cit.*) the implicit objectives of fishery control in Japan is to leave the high productivity fishing grounds (coastal waters) to low efficiency boats and the low productivity (offshore grounds) areas to high-efficiency boats since low-efficiency boats cannot exploit the off-shore grounds successfully. Again the rationale for management, according to Oka, is not the maintenance of balance between fishing effort and total yield but on the other hand, «a counter measure against a recession in the fishery business caused by fluctuations in the Japanese economy» (*ibid*.).

Management of conflicts

One of the salient aspects of conflicts in the fisheries sector of Japan is that, the conflicts are not between

coastal and offshore fisher-men. They are primarily between two sectors of the economy (i.e. between fisheries and industry), localized, inter-prefectural or intra-prefectural in nature and within the coastal region. As Ruddle points out, one of the major sources of fisheries conflict in Japan was the «differential rates at which different communities adopted new technologies» (Ruddle *op. cit..* The major disputes have stemmed from entry rights disputes, gear conflicts, illegal fishing, bound-ary jurisdictions, island ownership, etc. With the advancement of the economy the nature of conflicts also have changed in Japan.

During the feudal time the principal conflicts were over access to sandy beaches (for the operation of beach seines) and the demarcation of the boundary at sea. Therefore, the conflicts were either land or sea based. During the Meiji period the conflicts became largely technology-based because of the introduction of trawling and other efficient fishing technologies like purse-seining. Thus, for example, the conflicts between trawler fishermen, traditional anglers and longliners in the Essa strait following the introduction of trawling in 1919-21 period still continue.

With the rapid industrialization of Japan during the post-War period there was increasing pressure on the coastal waters. A series of govern-ment policies were formulated to generate the flow of labour to the industrial sector at the expense of agriculture and fisheries (Iwakiri, S. 1979). The policy of rapid indus-trialization and high economic growth led to large scale reclamation of coastal areas on the one hand and pollution of inshore waters on the other. According to the Environment Agency, in 1973, 21.2 per cent (5650 km) of the total length (26,539 km) of Japan's coast-line has been com-pletely reclaimed and closed to the people (*ibid.*). This was particularly severe in the Tokyo Bay area and the Seto Inland sea. Thus, as a result of new priorities the conflicts graduated from intra-sectoral to inter-sectoral in character.

What is quite interesting to observe in conflict management is that intra-sectoral problems are resolved with the assistance of various agencies which have a representational character and func-tioning within the sector. Whereas, inter-sectoral problems are largely referred to the adjudication of the court of law. In other words, traditional conflicts originating in the pre-War era are resolved within the sector and those which are a product of the post-War period are referred to the courts.

According to Ruddle, in inter-sectoral conflicts traditional methods of resolution are generally not useful because of clashing world-views of the parties concerned resulting in the recourse to judiciary to resolve disputes.

At the local level, customary techniques are employed to avoid or minimise interpersonal conflicts which include avoidance behavior (i.e. avoiding to fish at the favourite spot when there are other fishermen around, instead of fighting with them) and the acknowledgement of the rights of a first-corner to a particular fishing spot (Ruddle, *op. cit*.).

Prevalence of certain voluntary customary pratices do not preclude the occurrence of conflicts within an FCA. But unlike in many other societies there are social forces that balance and iron out disputes for the betterment of the village as a whole. According to Ruddle, consensus decision-making is very central to the functioning of FCAs. In other words, the decision-making process is structured in such a manner that every interest is represented/ reflected in the decision taken. We are not clear from his discussion how exactly an FCA takes care of hierarchy of power within a village in this consensus approach. Could it be that the important pressure groups are able to elicit desired response from less powerful groups within the FCA through covert means? At an informal level, intermediary and peer pressures are also used to resolve minor conflicts. The threat of social ostracization is the ultimate penalty in unyielding cases of conflicts, which facilitates conformity to the collective will in cases of outright theft or deliberate damage to another person's gear.

Formal resolution of conflict

While intra-village problems are informally resolved, inter-FCA, intra & inter prefectural problems are resolved at a formal level. Such conflicts could include violation of closed season, destructive fishing, poaching, illegal sale of tainted fish and problems arising from incompatibility of technologies like, for example, the conflicts between set-netters and gill-netters. These conflicts, if occurring within a prefecture, are resolved by the Sea Area Adjustment Commission and if inter-prefectural, by the United Sea Area Adjustment Commission. However, such incidents are not numerous in number, and according to the Zengyoren, the number of such violations are dwindling over time (personal discussion with the Chief Executive of Zengyoren).

Resolution of inter-sectoral problems

Inter-sectoral problems arise mainly out of the conflicting interests of industry and fisheries. As we have mentioned before, post-War Japan focused mainly on industrialisation and economic growth at the expense of the agriculture and fisheries sectors. This led to problems for the fishing communities particularly problems created by pollution and coastal reclamation. Until the end of 1960s these problems were considered to be a price to be collectively paid for economic progress. However, the desirability of industrial growth at the expense of citizen and community welfare and rights was challenged in the 1970s in the wake of «Big Four» pollution incidents (Mina-mata disease or mercury poisoning; Itai-itai disease or cadmium poisoning and various pulmonary disorders) (Ruddle *op. cit*.).

In the post-War period, inter-sectoral problems were mostly resolved with the help of the judicial machinery. The judiciary got involved mainly due to the refusal of the companies to own responsibility for damages done to life by pollution and due to the attitude of the government which often sided with the polluter. Thus the judiciary originally got involved on humanitarian grounds though later it also took up cases of inadequate compensation for the relinquishment of fisheries rights.

According to Ruddle there are three reasons for the use of judiciary by the fishermen.

Firstly, traditional processes of mediation were not trusted to render a just solution because of their abuse by polluting companies. Secondly, the growing realisation that the situation had become completely atypical and divorced from traditional precedents. And thirdly, the desire of fishermen to fix accountability on the perpetrators of destruction which was possible only through the judicial process.

The judicial process had an added legitimacy because of the widespread sympathy for fishermen as a result of the «Big Four» tragedy.

The redress for pollution and partial or total loss of fishing rights due to reclamation was mainly in the form of compensation. Thus, as Ruddly remarks,

> «reinforcement of that traditional right to compensation may perhaps have been the most important achievement of the post-war campaign against pollution» (*op.cit.*).

However, the distribution of compensation is very poor (*ibid*.) and according to Prof. Hirasawa there are malpractices in its distribution (personal discussion).

The current problems of Japanese coastal fishery

With rapid economic growth, improvement in welfare, and excellent opportunities for mobility of labour, fishermen in present day Japan, are increasingly becoming disinterested in fishing as an occupation. As a result, more and more FCAs are willing or wanting to sell their fishing rights for phenomenal compensation. Reliance on compen-satory payments has become a way of life for many local fishing communities. The amount paid as compensation partly finds its way back to the fishing sector and partly gets invested in real estate and small industrial enterprises. The reinvest-ment in the fishing sector has made it more capital-intensive (as somebody jokingly remarked, the modern Japanese fishing boat is like a battle ship!) implying an enhancement of productive capacity in fishing grounds already rendered fragile by degrada-tion and habitat destruction. (1)

In spite of a reasonably efficient management system, Japanese coastal fisheries are not free from problems. Two main problems still faced by the coastal fisheries are:

(i) decline of resources because of overfishing and the reduction of fishing grounds due to coastal land reclamation projects and marine pollution and

(ii) ageing of the fishery work force and the disinterest of youngsters to join fisheries (Zengyoren *op. cit*.).

Overfishing in the coastal waters is mainly because of mechanized gear, efficient fishing techniques and motorized vessels, combined with fishermen's «strong natural tendency to overfish» (*ibid.*). This has also led to over-capitalisation of the fisheries sector (Iwakiri *op. cit*.)

According to the *Seventh Fishery Census of Japan* (1983), about 60 percent of the individually owned

(1) However, Matsuda and Kaneda (1984) are of the view that the money is not invested in fisheries development. They observe:
«As the economic functions of Fisheries Co-operative Association (FCAs) increased so their administrative function began to be misused i.e., they took advantage of their administrative function only for the members' short-term economic welfare, but neglected both social welfare as well as long-term economic welfare».

fishery management units are headed by men over 50, 25 percent by men over 50, 25 percent by men over 60, and only 15 percent are controlled by men under 40. This is complemented by a shortage for brides in the coastal villages (arising from women migrating to urban centres and marrying from other com-munities). Many people expressed the fear that, over time, the coastal fishing sector will become less and less important. In addition to over-fishing and over-capitalisation Matsuda and Kaneda (op. cit.) also point out that,

> «the productivity of common fishery rights areas has not increased since 1952, regardless of high subsidies for coastal fisheries development, which have included nationwide ocean ranching programs and artificial reef projects» (ibid.)

The indifference or lack of interest of youngsters towards fishing as an occupation is further reflected in the activities of fisheries co-operatives. Members increasingly show no initiative to participate fully in the functioning of their FCA. The relationship between the co-operative and the memebers is degenerating in some places into a simple customer-supplier relationship (Zengyoren op. cit.). If the tendency continues, Zengyoren fears that,

> «the fisheries Co-operative will be in danger of becoming bureaucratised and having its democratic nature reduced to a mere formality» (*ibid.*)

Since the co-operatives are getting excessively involved in the abandonment of fishery rights for compensation, the fishermen have also gradually lost public support (Matsuda and Kaneda *op. cit.*) Because of this, and the inability of FCAs to accommodate recreational fisheries under the existing legal framework, Matsuda and Kaneda foresee a limited future for the FCAs. There are about 10-20 million recreational fishermen who have already begun to claim their rights in the common fishery rights areas. In addition, the general public is claiming rights to the beach. In the light of these new developments, combined with the inertia of the FCAs, it will be interesting to watch the coastal fisheries of Japan in future.

Conclusion

In spite of problems of over-capitalisation, overfishing, and other recent developments the success of coastal fisheries management in Japan is umatched anywhere else in the world. What are the factors that facilitated this success?

Japan is a classic case where many positive factors coexisted and complemented one another thereby facilitating the efficacy of the system. These factors are not confined only to the fisheries sector — they are vitally inter-sectoral in character. Japan, again, shows that the successful management of the fisheries sector becomes a concrete reality only when there is overall development of the economy. In other words, problems within the sector cannot be solved in isolation but only in conjunction with other sectors.

Historically speaking, granting of tenurial rights to fishermen in the sea, right from the Tokugawa period onwards provided a proper basis for the future development of coastal management. Our discussions show that these rights form the hub of the management system. This system is unique to Japan.

In a country where fish is the main source of protein, even in the olden days, development of markets for marine products took place rather early. Since the entire population is fish-eating, the size of the market was as incentive for enhanced production. This was further complemented by the settlement pattern of the population. The archipelagic nature of the country coupled with forested, mountainous hinterland resulted in the concentration of population in the coastal areas. Further there was no taboo attached to fish-eating (unlike the Balinese in Indonesia, for example, who were averse to eating fish because they considered the sea as a repository of filth!) (See Polunin 1984).

By inference, we can see that the required skill and technology were locally available. The sea was also very rich in resources. Availability of resources, skill and technology and tenurial rights in conjunction with an absorptive market provided a broader base for the development of the fisheries sector.

The successful democratization of the fishing sector, strengthening of the co-operative movement and the classification of the fishery into coastal, offshore and distant water, resulted in the betterment of fishermen. While improvement in the welfare of coastal fishermen was achieved by reserving the coastal waters through joint and demarcated rights, the objective of enhanced production was achieved by the successful seaward expansion of fishing fleets into the offshore and distant water areas. In other words, a neat division of fishing space between the small-scale and large-scale sector could be a reason for the success of the management system.

In this context, it is important to remember that big capital in Japan was able to successfully diversify in-to new areas and into new forms of technology. The investors were able to diversify the technology base to meet the national objective of higher production. Thus even when there were conflicts within the coastal waters, these were confined to the designated fishery. Of course, the technology-induced offshore and deep sea fishing ventures were supported by a rapidly growing economy which paid the highest per unit value for fish in the world. Therefore, the massive investment in these frontiers were not at the mercy of the vagaries of the world market, but, on the other hand, were adequately compensated by the national economy.

Even after the declaration of EEZ and the oil price rise in the 1970s which adversely affected Japanese distant water operations, the rapid growth achieved by the Japanese economy enabled the importation of fish products to meet domestic requirements. Concomitantly, culture-fishery was further strengthened in the coastal waters. In other words, the difficulties within the sector could be neutralised to a great extent by certain macro-developments in the economy as a whole.

Demographic factors also alleviated any increase in pressure on the limited fishing space within the joint rights jurisdiction. On the other extreme, there is a potential threat that the coastal fishery may have to wind up ! The total number of fishermen in Japan has come down from around 700,000 in the mid 1940s (source: Hirasawa, I. personal discussion) to around 200,000 in 1983 (The *Seventh Fishery Census of Japan* 1983) and it is dominated by fisherman in the age group 50-60. This gives credence to the hypothesis that, given a choice, a fisherman has a tendency to decide against fishing. In other words, among the primary producing sectors, fisheries is perhaps the last resort in a situation of unlimited supply of labour. When there are opportunities for inter-sectoral mobility there is an outward migration from the primary producing sectors, particularly from the fishing sector.

The «objective» factors we have mentioned above have definitely played a positive role in the reproduction of customary ethos without much dilution. The balancing of economic, social and political forces was such that it enabled the strengthening of the 'consent' content within the social fabric of relationships in favour of certain norms already established in the marine context. In other words, the

legitimacy of law has a certain strong economic basis and if this basis was weaker there would have been tremendous refraction between legislation, on the one hand, and its acceptance and enforceability on the other.

But at the same time, because of the changing economic environment in Japan, there are rapid changes in the fisheries sector too. The dwindling fishermen's population and the growing involvement of FCAs in for-saking fishing rights for compensation are portentous indicators to the future of the present framework of fisheries management. This is further complicated by the pressures exerted by recreational fishermen for fishing rights and the general public for rights to the beach.

C O N C L U S I O N

Conflicts in the coastal waters

The attention that conflicts between trawlers and traditional gear-groups has received in Asia tends to give an impression that emergence of tensions within the fisheries sector is a result of the introduction of trawling. However, historically there have been many kinds of tensions even between the traditional gear-groups. Thus, for example, access to sandy beach for the operation of beach-seine was an important form of conflict in Japan in the feudal period. In Sri Lanka there were conflicts between the local fishermen (using coir-made beach-seine) and the migrant fishermen from India (using cotton beach-seine) as far as back as in the 1860s. Similarly, in certain parts of Thailand, conflicts between gill-nets and crab-nets and squid-trap and crab-nets are common within the traditional sector even today.

Such tensions have been either land-based (over access to the beach) or sea-based. The latter could be territorial disputes in areas where there are tenurial rights to the coastal waters or they could be disputes over overlapping resource-space. Other factors have also contri-buted towards tension in coastal waters: mud discharge following deforestation, dumping of tailings after mining (e.g. Indonesia, Malaysia, the Philippines), industrial pollution, coastal reclama-tion, conversion of mangroves into aquaculture-ponds, etc.

Of course, introduction of technology vastly more efficient than what is in use gives the tensions a certain edge. This is so with the introduction of trawling, developed in response to interna-tional demand for prawns, which builds up to a classic

case of clash between incompatible technologies.

Often, the destruction of fishing gear and the falling share in the total production of the non-trawl fishermen are instrumental in the build-up of tension. This is further worsened by allegations of resource depletion and inequity from differences in efficiency.

Even here, tensions do not always lead to open conflicts. The experience of Southeast Asian countries shows that a unique combination of factors —- often specific to each country/society — influences the open manifestation of these tensions in the form of conflicts. Thus, in Indonesia and Malaysia, the ethnic factor in combination with destruction of gear and decline in the share of total catch of gill-net fishermen was responsible for the violent eruptions. In Thailand, however, the eruption of conflicts was relatively benign because of the dimunitive size of the traditional sector. Similarly, in certain pockets of the Philippines and Thailand there is no apparent incompatibility between trawlers and traditional gear-groups when they operate from the same locality. But there is tension if the trawlers come from outside.

The eruption of tension into conflicts also seems to be determined by other social factors. In villages marked by a strong patron-client relationship between the local fisherman and the village trader (e.g. *Suki* relationship in the Philppines), there seems to be fewer eruptions of conflicts if the trader is also a trawler-owner. Alternatively, if the fisherman belongs to a community, traditionally known for its militancy (the Buginese community in Indonesia, for example), the occurrence of conflicts are more frequent, often marked by violence. How the degree of militancy decides the nature of conflicts also seems to be influenced by the nature of involvement in fishing —- whether the fisherman is a full-time fisherman or one who combines fishing with farming operations. In the latter case, he seems to be less inclined to, or involved in, articulating protest. Conversely, in Indonesia and Malaysia — where the most intense conflicts broke out — the fishermen actively involved in open fights were mostly full-time fishermen. Thus, cultural factors and the extent of involvement in fishing can either subsume conflicts between incompatible technologies or exacerbate them in different societies.

The role of legislation in conflict management

The response of the State to these conflicts —- primarily between trawling

and traditional gear —- is through enactment of legislation. This gesture is more common when there is intense articulation of protest against trawling (e.g. Indonesia and Malaysia). Where the expression of protest is diffused and feeble, either the State does not step in (e.g. Thailand) or it intervenes in such a manner that the legislation, at best, remains an exercise in rhetoric (e.g. the Philippines).

But legislation in fisheries has not been restricted to conflict management. Historically, it aimed at conservation of resources. Particularly in the Southeast Asian countries, non-quantitative regulations like mesh restrictions, area/ seasonal closure and proscription of dynamiting/cyanide-fishing were in force, either in isolation or in combination, from the late nineteenth and early twentieth centuries. (1).

At present, with the exception of Thailand, all countries in this region claim that the twin-objectives of legislation are management of conflicts and resources. The principal method for the attainment of these objectives is the zoning arrangement, which grants exclusive use-rights to traditional gear-groups in the inshore waters.

Efficacy of legislation

However, the legislative process has never been comprehensive enough to make provisions that are truly efficacious. This is largely due to the absence of discussions with conflicting gear-groups at the formulation state and the lack of an attempt to disseminate the content of various provisions after enactment of the law. Whatever could be achieved by these laws is further limited by the confusion of the judiciary regarding their interpretation. This seems to arise from an inability to understand the specificities of the marine context (which are different from the agrarian scene), particularly it three-dimensional nature.

In any case, zoning is incapable of achieving intended goals if three is a preponderance of commercial species of prawns in the shallow waters (trawling is used in tropical waters mainly for catching prawns and is the most efficient method of

(1) An interesting difference between the West and the East is that, in the Northern Atlantic area, e.g., the main focus of early fisheries policies were the protection of fishermen's rights/interests and the maintenance of their fishing opportunities everywhere rather than the protection of fish (see Derham, P.J. 1987). However, in the Asian waters, earliest regulations were concerned with the conservation of resources (Japan excluded) — Thailand, e.g., had accepted principles of conservation from the nineteenth century onwards (Smith,*op. cit.*) - and not the protection of the fishermen.

harvesting them). In such instances, the temptation to violate laws is too great even at the risk of apprehension by the enforcement authorities. But legislation will be effective if the proscribed waters are so overfished that there is no worthwhile incentive to violate the zone. But in this case, the legislation, would have come too late to serve any real purpose.

Thus, considering the ineffectiveness of zoning, Indonesia has perhaps the best method for resolving the conflicts, viz., a total ban on trawlers in the waters dominated by gill-net groups. But there too exist stories of covert violations by trawlers under the aegis of corrupt army officials. And to what extent this decision is fishery-related is open to question. One should also note that the Indonesian experience since 1980 suggests that a ban on trawling by itself does not solve the problems of operators of traditional gear.

Is effective promotion of equitable exploitation of resources possible through legislation at all? Since the State represents a powerful coalition of interests which are «allied» with users of the more modern technology, legislation becomes more a form of conflict management aiming at peaceful balance of interests, as we have cited in the case of Malaysia, rather than a resolution *per se*. It may tantamount to only rhetoric to establish the State's apparent «sympathy» for the protestors.

Legislation is Janus-faced and seems to serve a dual purpose. What Aubert observed (1973) in the context of inadequate enforcement of the Law of Housemaids in Norway in 1948 is quite relevant to the intra-sectoral conflicts in fisheries too:

> «The law appears to yield to the demands from one side in the substantive clauses, while the other side is fairly well protected by the lack of effective enforcement. The law thus serves a symbolic function and ameliorates group conflicts»
>
> (Aubert, V. 1973)

The 'symbolic function' of law as elucidated by Aubert is the purpose served by legislation in the fisheries context too. The appearance 'to yield to the demands from one side' also has the subtle function to de-escalate conflicts into a manageable form. Concurrently, it also tries to prevent the escalation into totally undesirable realms. Thus, for example, in Malaysia and Indonesia, the government would not want the graduation of inter-gear conflicts into full-fledged ethnic-violence.

But at the same time, if the conflicts have already acquired certain threatening dimensions (this depends

on the perception of the State), the State does not hesitate to resort to radical measures (like the total ban in Indonesia). In such instances, the role of law rises above its 'symbolic function'. But then the decision is less fishery-related; it is more in response to the glaring ethnic dimensions of the conflict rather than to the need to develop the traditional sector and to prevent overfishing.

The question of legitimacy

Even if legislation had been enacted, the legitimacy of regulations is very central in determining its success. In most cases this is absent, whether in the case of zoning violations (e.g. Malaysia, Thailand) or in the case of destructive fishing. As Jentoft and Kristoffersen observe in their study on Lofoten Islands, Norway:

> «Regulations which the fishermen themselves consider illegitimate will be ineffective because, they will tend to be resisted and by-passed by the fishermen. Legitimacy is not just a result of the management decision itself, for instance, its distributive effects but also how it is reached».
>
> (Jentoft, S. and Kristoffersen, T. 1988-89)

As they rightly point out, the most important question is how legitimacy is arrived at. This depends so much on an understanding of different world-views and the realisation of the necessity to evolve codes of conduct that minimise costs to respective user-groups. But as we have mentioned before, in the absence of *ex ante* discussions or any attempt at disseminating the content of legislation, different gear-groups see legislation primarily as a transgression into their legitimate rights. Though legally they are in the wrong, morally they feel they are in the right vis-a-vis the violations. A classic example is the case of destructive fishing practices using dynamite and cyanide in the Philippines, Indonesia and Thailand. In these countries, perhaps in many others too, dynamiting and use of cyanide become destructive in their eyes only because of the intermediation of an outside perception — in this instance, the State's. Otherwise, these practices have local sanction.

Reasons for poor enforcement

Lack of legitimacy is also an important reason contributing towards the ineffective enforcement of regulations. As Derham observes:

> «They are often vociferous exponents and demanding of enforcement,

> provided of course it is directed elsewhere, and it is not unknown for fishermen to claim a «legitimate expectancy» of non-enforcement as a defense in this situation».
>
> (Derham, P.J. op. cit.)

Thus, for example, restrictions on trawling are found unjust by its operators but supported by non-trawl fishermen. At the same time those who use fine mesh-nets and indulge in destructive fishing among the tradi-tional gear-groups do not agree with the restrictions on these methods.

Corruption among enforcement officials and political interference also contribute towards poor enforcement in addition to other difficulties we have mentioned in the respective country reports.

The lack of legitimacy and the general inertness of enforcement are further compounded by the apathy of the judiciary. The disposition of the courts is to vindicate persons charged with the violation of fishing regulation s because of the difficulty in clearly establishing the case. As Derham observes:

> «There appears to be no immutable definition of «fishing» and prosecution cases have been lost because the prosecuting authority failed to convince the court that fishing per se had taken place even though the defendant vessel had her gear in the water and was towing it.»
>
> (Derham, P.J. op. cit.)

The violators of fishing regulations seem to be aware of the disposition of the court and, therefore, the regulations cannot even function as a deterrent. Contrarily, the deterrent influence seems to be replaced by an incentive (Scwartz, R and Orleans, S. 1973).

Considering the poor legitimacy of fisheries regulations, an efficacious implementation of these regulations is only possible through enhancement of the fear of apprehension and punishment. This would presuppose the beefing-up of the enforcement machinery. Considering the three-dimensional nature of the sea, the fluidity of the medium, the mobility of species, etc., an adequate enforcement machinery would mean phenomenal investment in men and material which few countries can afford. This situation is further complicated by the question of political will in the respective countries.

An alternative approach to conflict management

In the absence of concern for equity, the State is unlikely to ensure distributional justice. In such a predicament what is the way out?

Japan seems to offer a solution. Its fisheries management is structured in such a manner that intra-sectoral conflicts can be mediated within the sector. According to Ruddle:

> «In the Japanese case, at all levels, they involve much face-to-face contact and prolonged discussion, and they appear to be governed less by the rule of the inflexible law to which most westerners are accustomed».
>
> (Ruddle, K *op. cit.*)

In other words, there does not seem to be any insularity between different gear-groups and there seems to be enough room for dialogue. (Sri Lanka is another country where inter-gear conflicts are resolved through dialogue. (1) But the difference between Japan and Sri Lanka is that, in the latter it is the State that facilitates the dialogue as a last resort). Complementing this, is the nature of the Japanese fisheries laws (1901 and 1949) which are essentially a codification of local customs (Kada, Y. 1984) and, therefore, the fisheries law is kind of a «legitimation logic on a large formal level» (*ibid*.). This is the central difference between Japanese fisheries law and that of other Southeast Asian countries).(2) Further its final interpretation rests with the village-level co-operatives and not with the State.

As Ruddle points out, the viability of any formal corpus of legislation depends on the behavioural norms of each society. Law as legitimation logic is possible in Japan mainly because of the uniqueness of Japanese society. (3) The consensual decision making and obedience to law evolved over centuries. So too, integration of values and a certain degree of homogeneity.

Cultural traits vary from region to region and country to country. Thus, the case of Southeast Asia is in sharp contrast to that of Japan. There are sharp differences within each country particularly along communal or ethnic lines. The content of legislation exhibits certain ad- hocism and is more or less administrative in origin, thus contributing to its poor legitimacy.

Still, it may be worthwhile to organise the fishermen on the basis of different gear and to facilitate face-to-face dialogue for resolving (or avoiding) conflicts. As Matsuda and Kaneda observe:

(1) Personal communication with Dr. Christy.
(2) And, therefore, the connotation of 'law' itself is different in Japan vis- a- vis other countries in our study.
(3) According to Noda, Y (1976), the aim of law in the Far East is to prevent disputes, unlike the Roman law, the forbearer of all Western law which tries to resolve disputes. He quotes Confucius: « If I judge a dispute I cannot do other than what others do, but what I sincerely want is to do my best to see that there is no dispute».

> «Illegal conduct can be reduced when an agreement between or among interest groups results from thorough discussion about and a complete understanding of the issues. Open discussion is the key to success because it provides an early warning of conflicts or potential conflicts».
>
> (Matsuda and Kaneda, 1984)

Perhaps the State can take the initiative to bring different gear-groups with conflicting technologies and world-views to evolve a modus vivendi. However, care should be taken to ensure that dominant groups do not, subtly, force their interests upon others in connivance with the State machinery. In such for a aiming at a consensus to resolve conflicts, emphasis should also be placed on conservation of resources. An important point to remember here is that, in spite of evolving a *modus vivendi*, the state of marine resources in Japan is fragile because of little emphasis on conservation. Attempts at controlling fishing effort in Japan is mainly with the idea of regulating supply to the market, not necessarily for preventing overfishing. In fact this is a major lacuna of Japanese fisheries management. Considering the pressure of population on a shrinking resource-base, emphasis must be placed on conservation of resources, particularly in countries where such contingencies are already felt.

However, a viable management programme will not be easy as long as the opportunities of employment and income are limited. Only overall economic development will lessen the pressure on fisheries. This is already happening in some countries, e.g., Malaysia.

The state of conflicts in Southeast Asia is very different now. This is in spite of poor enforcement. The incidence of conflicts has subsided. There are no incidents of burning of boats or open fights leading to lose of life in Malaysia or Indonesia. This amelioration results from different causes in different countries: in Indonesia, the ban; in Malaysia, economic development and the relocation programme of fishermen; in the Philippines, depletion of coastal related and fishery-independent factors in the de-escalation of conflicts in these countries would make an interesting and useful study. In the final analysis, the most meaningful resolution of conflicts lies both within and without the fishing sector.

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THE INTERNATIONAL COLLECTIVE IN SUPPORT OF FISHWORKERS

The International Collective in Support of Fishworkers (ICSF) is an international network founded in India in 1986, with the objective of providing fishworkers (men, women and children) with a platform to make their voice heard at the international level so that the numerous problems they face both at land and at sea may be taken into consideration by their governments and the international organisations.

In its search for cooperation and solidarity, the Collective joins hands with fishworkers' organisations and unions. Its characteristic feature lays in its close cooperation between scientists and social workers on the one hand and fishworkers, both from Southern as well as from Northern countries, on the other.

The goals of the Collective can be considered as providing the basis of four longterm programs..

Montoring and research programs

This program will provide the basis for various development studies in close collabration with scientists and workers of the fishing profession.

Training and exchange programs

This program will undertake the essential task of exchanging experiences and culminated knowledge. This will include the sharing of findings on new and appropriate technologies, learning from new organisational structures and interaction between the scientiic community and workers, with the objective of demarginalising artisanal fisheries. the interaction is twofold: on the one hand the exchange between fishworkers and scientists and on the other hand the communication between fishworkers of various countries.

Action and campaigns

ICSF decided to support, at their request, fishworkers organisations facing troubles.

Communication

The collective has devised various means of communication: SAMUDRA Report SAMUDRA Dossier, SAMUDRA Monograph (*); a collection of video tapes, etc...

(*) The word «samudra« signifies «ocean» in many Asian languages and thus evokes the vastness of the problems that face the fishworkers

Fishermen village in Zummaraga island, The Philippines.
(photo François Bellec)

FISHING LEGISLATION AND GEAR CONFLICTS IN ASIAN COUNTRIES

The International Collective in Support of Fish-workers (ICSF) has an ongoing monitoring programme.This programme consists of studies undertaken to enhance our understanding of the status of the fishworkers, the dynamics of external assistance to the fisheries management schemes.

This study concentrates on the latter aspect. It examines the history and politics of fisheries management in five Asian countries. It attempts to show how the specific management measures came into being; what the techno-ecological and socio-politica factors were that influenced the conceptualisation and implementation of these measures; and how these measures are perceived by the fishworkers and the bearing it has on their livelihood.

The study was undertaken by Sebastian Mathew, a young freelance fisheries researcher from Kerala State, India, who is associated with the fishworkers' organisations in India. His earlier studies include assessments about the technological change in fishing and its impact on fishworkers.

The opinions and views expressed in the study are those of the author and do not represent the official position of the ICSF on these issues.

SAMUDRA Dossier n° 1