INTERCHANGE AND OUTCOME IN COASTAL FISHERIES MANAGEMENT

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1. Introduction

The coast line of Myanmar is about 2831.84 Km long. The continental shelf covers about 36000 square Km in Rakhine coast, 105000 square Km in Delta region and 84000 square Km in Tanithayi coast, totally 225000 Km^2 .

Since history could remember, Myanmar people, as other neighbouring Asian people, have traditionally and customarily taken fish as their esteemed food. In the past, the exploitation of our fishery resources was comparatively less due to our low population. Production was also limited only for local consumption. Fishery management was virtually unknown in the fishery sector. Now, Fisheries is one of the most important sector in the economy of Myanmar, providing protein food and employment to the people and earning foreign exchange through export on shrimp, fish and fishery products.

2. Structure of Fishery Management System

Ministry of livestock Breeding and Fisheries took the responsibilities for the development of fisheries in Myanmar. There are Three Departments are Enterprise and one Bookkeeping Division. Two department are directly concerned with fisheries. They are Department of Planning and Statistics, and Department of Fisheries.

The Department of Planning and Statistics is directly responsible to the minister, and co-ordinates, supervises, monitors and evaluates the manual performances of the departments and enterprises. This department also gives advises on formulation of projects and foreign economic relations. Department of Fisheries is responsible for the management of fisheries, conservation of resources, providing extension services, conducting research, and compilation of the national statistics in fisheries.

As the population is booming day by day the exploitation of aquatic resources is naturally getting interest as well. Moreover current high export demand for shrimp, prawns and certain species of fish is major course of pressure leading to over investment in fisheries.

In the future the demand for fish will exceed potential supplies creating over exploitation subject to this, effective appropriate management measures are required to promote the objective for optimum utilization of aquatic resources.

Management should be conceived and understood not as a constraint upon national exploitation, but as an essential tool for the sound, sustained development of fisheries. Hence, management of fisheries is an integral part of the development process. There is a need to introduce effective management mechanisms at all stages and particularly at the beginning of fisheries development rather than wait units the effect of overfishing have begun to be felt.

The setting of that objective should be based on assessment of the fishery resources available, existing technology, market to be served, social and economic conditions, the potential impact of other economic activities, and other relevant factors, including foreign operations, where applicable. The objective, it appears, is to provide a legislative framework for a fisheries management system, and to ensure, as far as possible, that both the fishery people and responsible authority concerned perform their roles within that frame work. Thus new impetus has come a new and broader view of the role of Law in fisheries management of all renewable natural aquatic resources.

The economy of the Union of Myanmar, under centrally planned economic system in the past, has been changed into a market oriented system since 1988. The Government had envisaged such policy objective as exploitation of abundant resources of the country with a view to catering to the needs of the nation in the first instance and exporting whatever surplus available. Furthermore the extension of Myanmar Jurisdiction to 200 nautical miles according to UN Convention on Law of the Sea also present a new and unprecedented opportunity to reap the full benefit of the living aquatic resources. At the same time attention has been drawn to the potential roles of inland water fisheries and aquaculture as food supplies within the overall socio-economic context of national development.

In this respect a reassessment of strategies and policies for fisheries development and management from time to time need to take full account of the present and potential contribution from marine fisheries as well as from inland water fisheries and aquaculture.

In order to fulfill the need, the DOF, playing major roles in fishery management, is conducing acquisition and analyzing of information implementation of fishery policy and design and exercising of management measures and the continuous evaluation of results of management activities.

Obviously, the DOF always conducts the management and conservation of aquatic resources, licensing, surveillance and enforcement of existing fisheries law as its main responsibilities. To render assistance and to support the efforts exerted by DOF on fishery management the government has promulgated four fisheries laws, namely: The law Relating to the Fishing Rights of Foreign Fishing Vessels, Myanmar Marine Fisheries Law, Freshwater Fisheries Law Relating to Aquaculture.

3. Fisheries Management Measures in Myanmar

To solve the problem of over-fishing and declining productivity in coastal regions, various measures have been adopted according to the fisheries law.

(a) Closed area

To conserve the juveniles fish and shrimp and to avoid conflict between the artisanal fishermen and the trawler. Rakhine coast five miles from the shore line, for Ayayerwady and Tanintharyi coast 10 miles from shore line. The trawlers will not allowed to fishing operation in those areas.

(b) Closed season

June, July and August, the three months are closed seasons. That season most of the Juveniles come back to the mangrove area (feeding ground). The fishing boats must stop fishing operation.

(c) Limitation of mesh size and license system

As the major portion of marine product came from artisanal fishermen, it is important to fulfill needs of small scale and indigenous fishermen by increasing the income, improving their lives and those of their families, as well as their environment. Accordingly, this zoning of fishing is entirely based on policy of protecting our local fisheries. Under these circumstances the Department of Fisheries gives first priority to local fishermen by permitting them to operate in all zones. In addition to this and as declared in the Territorial Sea and Maritime Zone law the waters between the baseline and the coast are reserved entirely for local fishermen.

The rapid increases in demand for quality marine products significantly accelerated momentum on shrimp and other demersal resources exploitation, resulting in resources use conflict and violence between trawlers and small scale fishermen. To ensure a more equitable exploitation and distribution of resources and to support the sustainability of small-scale artisanal fisheries, efforts have been made by DOF by limiting the size and engine power of fishing boats in inshore areas. For effective management and control the DOF also determines the type of fishery, volume of business method of fishing, species of fish permitted to exploit, size of fish fishing implement and fishing grounds and these conditions are attached to all fishing licenses.

Minimum mesh size and minimum catchable size for main economic fish species have been established based on Rule of expansion and protection of fishery resources. For instance, the mesh size on fish trawl codends is not allowed smaller than 2.5 inches and 2 inches for the shrimp trawl codends, The large mesh drift net, the minimum mesh size shall be 8 inches and for small mesh drift net are 3.5 inches mesh size.

4. Marine Fishery Management

Myanmar as a developing country has to have comprehensive and placid management scheme with objective for optimum utilization of natural marine living resources. To achieve this, the DOF has determined the total allowable catch (TAC) on the concept of insurance that the TAC is not set too high as to do damage to the resources potential (MSY) and also not too low as to waste resources is optimum utilization. The data and information in calculating TAC are based on the present status of marine fishery and scientific evidence and various surveys.

There have been infrequent surveys of living resources in Myanmar marine fisheries waters in the 1980's. Three research surveys, the last in 1989 were undertaken and it was found that our M.S.Y. can be safely estimated as a little over 1 million M.T. noted that estimated possible yield of marine fish and shellfish is approximately 1 million tons.

According to DOF catch statistics, nearly 0.6 million mt; of fish or about 60% of the MSY has been harvested in 1991-1992. The indication is that under-exploited living resources exist in the marine waters of Myanmar and that quantity would allow fishermen to have more opportunity for sharing these resources. The extension of national jurisdiction to 200 miles also presented a new and unprecedented opportunity for Myanmar Naing Ngan to reap the full benefit of the living resources of marine potential. Table (1) show. Trawling survey estimate of biomass fish and maximum potential yield of 550,000 MT.

5. Activities with the International Agencies

To achieve our aims and objectives, the Departments and Organization concerned are Collaborating with international and regional organizations, such as UNDP, FAO, NACA and BOBP. The major activities are imparting of technologies to local fishery industries and to people who are involved in fisheries aspects through extension and training.

6. Conclusion

The fisheries sector is considerably important in Myanmar's economy, as fish constitutes a major source of animal protein in the diet of the people. It is the fourth largest source of foreign exchange earnings after timber, minerals and rice. The above mentioned data and information express that Myanmar Naing Ngan is endowed with rich and diverse fishery resources.

Reliable and timely data on all aspects of fisheries are needed for the development planning, implementing and subsequent monitory of fishery management. National capability to collect data and information should be developed and it is most essential to enhance the capability of the state in monitoring control and management measures.

It is our sincere urge to the worship to deal in equal depth on management spects, so that more efficient and effective management systems could be formulated nd practiced because poor management will certainly lead to dwindling industry.

Table (1)

TRAWING SURVEY ESTIMATE OF BIOMASS OF DEMERSAL FISH AND MAXIMUM POTENTIAL YIELD OF 550,000 MT.

Breakdown calculation in Mt.

AREA	DEPTH Mtr	FISH BIOMASS TON	MSY TON	NUMBER OF VESSELS 100 GRT/360 TON/YR
RAKHINE	10-50	171650	120753	335
	51-100	55550	39235	109
	101-200	37650	27012	75
		264850	187000	519

AREA	DEPTH Mtr	FISH BIOMASS TON	MSY TON	NUMBER OF VESSELS 100 GRT/360 TON/YR
AYEYARWADY	10-50	222800	158338	440
	51-100	49350	34904	97
	101-200	14500	10258	28
		286650	203500	565

AREA	DEPTH Mtr	FISH BIOMASS TON	MSY TON	NUMBER OF VESSELS 100 GRT/360 TON/YR
TANINTHAYI	10-50	134650	92163	256
	51-100	87050	59370	165
	101-200	11650	7967	22
		233350	159500	443

GRAND TOTAL		784850	550000	1527

DEPARTMENT OF FISHERIES

FISHING GROUNDS OF MYANMAR