

COUNTRY REPORT OF MYANMAR

Han Win

Assistant Fishery Officer

Marine Fisheries Resources Survey & Research Unit, Department of Fisheries

■ INTRODUCTION

Myanmar has a long coastline of nearly 3,000 kilometers and the continental shelf covers an area of 230,000 square kilometers with a relatively wider portion in the central and southern parts. The territorial sea of Myanmar extends 12 nautical miles and EEZ extends 200 nautical miles from the baseline towards the sea. The total area of Myanmar marine fisheries waters, which include territorial sea and exclusive economic zone (EEZ), is 486,000 square kilometers.

Myanmar's coastline can be divided into three coastal regions: the Rakhine Coastal Region (from the mouth of Naff River to Mawtin Point, about 740 km in length), the Ayeyarwady Delta and the Gulf of Mottama Coastal Region (from Mawdin point to the Gulf of Mottama, about 460 km in length) and the Tanintharyi Coastal Region (from Gulf of Mottama to the mouth of Pakchan River, about 1200 km in length) in the Bay of Bengal and the Andaman Sea.

With a coastline of nearly 3,000 km, Myanmar possesses a considerable diversity of coastal habitats, including coral reefs, mangroves, sandy beaches and mudflats. Corals are important coastal resource for sustaining coastal fisheries. Myeik Archipelago along the southern coast, where the majority of Myanmar coral reefs is found. Myanmar has 1,686 sq. km. of coral reef area (WRI, 2002).

■ MARINE FISHERIES RESOURCES

A "Marine Fisheries Resources Survey and Exploratory Fishing Project" was carried out with the assistance of FAO during 1979-83. Project activities consisted of acoustic experimental fishing surveys with R.V. Dr.

Fridtjof Nansen and trawl survey with M. F.V 525 and other vessels from Myanmar contribution. It is to be mentioned that the survey was conducted only within 200-meter depth.

According to surveys, it was noted that about 1.0 million metric tons of pelagic fish and 0.8 million metric tons of demersal fish exist as biomass in Myanmar marine fishery waters. Out of the total biomass, 0.5 million metric tons of pelagic fish and 0.55 million metric tons of demersal fish, totaling 1.05 million metric tons of marine fish is marked as Maximum Sustainable Yield (MSY).

■ CONSERVATION AND REHABILITATION OF RESOURCES

In many countries, depending on its condition of marine fisheries resources and environment, artificial reefs have been established as a possible tool for fisheries management in maximizing exploiting, resources conservation, habitats rehabilitation, and mitigating the effects of over fishing. In Myanmar marine fisheries water, artificial reefs have not been used yet. It may be attributable that the production in marine fisheries was not reached into its MSY, and there are in abundance of natural reef especially in islands from Tanintharyi Coast. However, the conservation of marine resources and their environment has been always the primary concern of the Department of Fisheries (DOF). Therefore, intending to remain the undamaging marine environment in perpetuity for future, among the islands in Tanintharyi Coast, Lampi Island had been gazetted as Marine Park and Marine Reserve under the Fisheries Laws as a management measure and resources conservation of DOF. The water around the Island area also has been

announced as Fishery Protected Area, whereby collection of marine fauna and flora is prohibited. Fishing in this area also prohibited unless especially licensed to do so. Public awareness of the need to protect the corals and other marine fauna and flora in the waters surround the islands is being promoted so as to ensure their conservation.

■ **MANAGEMENT MEASURES**

One of the goals of fisheries management is to achieve sustainable coastal fisheries. In order to achieve this goal, various management strategies have been formulated and implemented to control fishing effort and promote rehabilitation and conservation of marine resources and marine ecosystems. These measures include licensing of the fishing gear and fishing vessels, closed fishing area and season, and enacting laws and enforcement.

■ **DIRECT LIMITATION OF FISHING EFFORT**

State and Division-wise direct limitation of fishing effort through proper licensing of the fishing gear and fishing vessels. This is to ensure that the current high fishing pressure on the limited coastal fisheries resources will not be increased, and to prevent overexploitation. A person desiring to carry out fishery shall apply for license to his respective DOF office in the prescribed application form. The effectiveness of the fisheries licensing procedures is one year and it must be renew at the end of the year. Conditions for renewal of licenses are laid down annually from 1 September to 31 August of next year for deep-sea fishery and for the coastal fisheries, 1 April to the next 31 March of every fiscal year.

■ **CONTROL ON SIZE AND POWER OF FISHING VESSELS**

Any attempt by fishermen to change the tonnage or engine power of fishing vessels or to construct fishing vessels, requires permission from the Director-General, Department of Fisheries.

■ **REGISTRATION OF FISHERMEN**

This program controls entry of new individuals into the fishing industry. Every fisherman is required to register and everybody working, living, staying on the fishing vessel of fleet or any related vessel must have a fishermen registration card.

■ **CLOSED FISHING AREA**

Commercial fishing vessels, like trawlers and fish purse seiners, are prohibited from fishing in waters less than 5 nautical miles from the shore, which is the nursery grounds of juveniles of shrimp and fish, in order to reduce their fishing pressure.

■ **CLOSED FISHING SEASON**

Nursery areas are identified to ensure survival of juveniles of commercially important fish species. They are one fishing ground in Rakhine, four in Ayeyarwady, two in the Mon, and three in Tanintharyi region. They have been gazetted as closed fishing area for three months, June to August.

■ **MANAGEMENT ZONES**

Two fishing zones have been classified through a licensing scheme whereby zones are designated for specific fishing gear, classes of vessels and ownership. These two management zones, Inshore- and Off-shore fishery, can ensure equitable allocation of resources and reduce conflict between traditional and commercial fishermen. Basically they are:

1. Inshore Fishery. Fishing in In-shore fishery (five nautical miles away from shore in Rakhine ten nautical miles in Ayeyarwady and Tanintharyi coast) is done by passive fishing gears without boat or non-mechanized boat or mechanized boat. If the boats are mechanized, the engine should not be more than 12 H.P. and the overall length of the boats should not be more than 30 feet.

2. Off-shore Fishery. In Off-shore fishery (from outer area of demarcated in-shore fishery areas to end of EEZ), active fishing gears are operated with fishing vessels which are more than thirty feet in over all length and engine power more than 12 H.P.

■ MYANMAR'S FISHERIES LAWS

The government promulgated four fisheries laws: "The Law Relating to the Fishing Rights of Foreign Fishing Vessels" in 1989, "Aquaculture Fisheries Law" in 1989, "Myanmar Marine Fisheries Law" in 1990, and "Freshwater Fisheries Law" in 1991.

■ PROHIBITION OF FISHING GEARS

Under the "Law Relating to the Fishing Rights of Foreign Fishing Vessels", "Myanmar Marine Fisheries Law" and related regulations, fishing gear or method that is destructive to the environment and the fisheries resources are banned. These gear includes pair trawl fishing, electric fishing, fishing with poisons, chemicals and explosives, push net and purse seine net (less than one inch in mesh size), trawl net (less than two inches in cod-end mesh size), drift net (less than four inches in mesh size), trammel gill net (less than 1.5 inches in mesh size).

■ MONITORING, CONTROL AND SURVEILLANCE (MCS) PROGRAM FOR FISHERIES MANAGEMENT

MCS program provided for effective and efficient scientific data acquisition for resources evaluation and management of fisheries in Myanmar. It also provides for the

design of effective monitoring and control of fisheries enforcement activities to ensure that only authorized or license holder fishing vessels conduct their fishing activities within designated areas in Myanmar's fisheries waters.

■ LAW ENFORCEMENT

Strict law enforcement on fishing activities in Myanmar's fishery waters, is carried out by a number of departments, namely Myanmar Navy, Customs Department, Myanmar Police Force and Department of Fisheries and these departments address the problem of illegal fishing.

■ FUTURE OUTLOOK

The fisheries resources of Myanmar can play a crucial role in production of food, improvement of income, generating of employment and foreign exchange, and fishery is ranked as third in national economy. According to the policy and principle objectives of the livestock and fisheries sector formulated and fisheries economy system in accordance with the market oriented economy, Myanmar fisheries has been gradually growing year by year production in marine fish had grown 1.02 million metric ton in 2001-2002.

In the future, the demand for fish will exceed potential supplies creating over exploitation subject to this, effective appropriate management measure are required to promote objectives 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 stage and particularly at the beginning of fisheries development rather than wait until the effect of over fishing has began to be felt.

DOF has accepted using artificial reefs (AR) for marine aquatic resources restoration and enhancement. DOF has considered to make an effort for being used ARs with suitable materials, design at suitable places in Myanmar marine waters. However, Myanmar marine fisheries were not so developed in the past and, therefore, exploitation on marine fishes has not been reached to unsustainable level. Lack of knowledge on the role of AR among public is a fact to be considered although their participation in establishment of AR is important.

Authorities concerned may consider increasing the number of Marine Park and Marine Reserve, or Marine Protected Area at a place where, especially, corals are abundant. The establishment of an AR is a difficult task in terms of financial and technology.

Assistance from international fisheries related agencies, such as FAO, NACA, BOBP and SEAFDEC, is essential for the fisheries development in assessment of fishery resources, development of appropriate technology, training of skilled manpower, identification and preparation of projects, financing of commercial operation.

REFERENCE

- 1) WRI 2002. Reefs at Risk in Southeast Asia. Laretta Burke (WRI), Liz Selig (WRI), and Mark Spalding (UNEP-WCMC, Cambridge, UK).