

Fisheries Management and Law Advisory Programme

Report prepared for the Government of Myanmar

on

Monitoring, Control and Surveillance of the Fisheries
within the Exclusive Economic Zone



Food and Agriculture Organization
of the United Nations

Rome, September 1992

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by

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This report was prepared during the course of the project identified on the title page. The conclusions and recommendations given in the report are those considered appropriate at the time of its preparation. They may be modified in the light of further knowledge gained at subsequent stages of the project.

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Executive summary

The major known enforcement problem is that of Thai poachers along the southern coast of Myanmar. Although there are undoubtedly other fisheries violations of existing national and international law in Myanmar waters, they are of minor importance in terms of both gross numbers of vessels and estimated impact on the fish stocks. There are no significant domestic enforcement problems at present, but the potential for these should not be ignored in the future.

The policy to confiscate vessels found fishing without a licence in the Myanmar EEZ but to fine and release vessels found fishing in violation of the terms of an otherwise proper Myanmar licence, and to use force as necessary to ensure compliance in at-sea enforcement, requires additional consideration. Myanmar's general enforcement policy and ability to detect and seize violators should be well known already in the relevant fishing communities. The negotiation of bilateral agreements on fisheries should be considered, particularly with Thailand, as a means of limiting infractions.

Existing national legislation on fisheries provides the necessary authority for the basic enforcement procedures and tactics in use by the Myanmar Navy acting as the maritime law enforcement agency. Revised legislation as recommended in the first report (FIMLAP 92/12) will provide a yet stronger basis for a more sophisticated enforcement programme and one that could take advantage of less resource-intensive enforcement techniques.

At-sea enforcement is conducted by the Navy. Some assistance is received from the Air Force in offshore surveillance, however it is insufficient and generally ad hoc, being carried out in conjunction with other duties but with little or no advance notification.

The Department of Fisheries has a small network of state, division and township offices and agents who operate only ashore, with one shoreside checkpoint near Victoria Point on the Myanmar-Thailand border.

There are two radios ashore (at the Navy Headquarters and at the checkpoint) and there are radios aboard naval vessels. However the present system is totally inadequate for the task and should therefore be upgraded in conjunction with the proposed Operations Centre.

The relationship between the Department of Fisheries (the fisheries policy maker) and the Navy (the enforcement arm) is cooperative and effective. Day to day execution of policy and coordination of enforcement activities is however hampered by the lack of a central Operations Centre where officials of both agencies can work on a joint real-time basis, and be in direct contact with their field units. It is recommended that such a Centre be established soon.

The current fisheries enforcement information system is only manual thus cannot meet the needs of the patrol units or the Department of Fisheries. Moreover there is no formal intelligence effort in fisheries enforcement. Availability of resources is the primary limiting factor but staff training is also required. In this information and intelligence sector considerable improvements can be made at relatively low cost: a specific programme should be established and a small core group of staff trained to run it.

There is very little formal training for naval personnel performing enforcement duties. Similarly training is also needed for fisheries personnel who are involved in making enforcement policy or who are designated as fisheries inspectors. It is recommended that some short-term outside training expertise be acquired to run an initial intensive and specialised course for senior officers, and to plan a comprehensive regular training programme for other staff.

1. Introduction

This report is part of FAO's advice and assistance in the formulation of a comprehensive Fisheries Law, and in Monitoring, Control and Surveillance (MCS) of fisheries, provided under the Fisheries Management and Law Advisory Programme (FIMLAP project GCP/INT/466/NOR). Two missions to Myanmar were mounted: the first by a legal expert alone, and the second by the same legal expert and an expert in MCS. This report covers the MCS portion of the second mission undertaken 9-18 May 1991, and should be read together with the report on Fisheries Law (FAO 1992: Report prepared for the Government of Myanmar on Fisheries Law, by T. L. McDorman, FIMLAP 92/12). Every effort has been made to avoid duplication of material between the two reports, except where necessary for clarity.

A prerequisite for effective Monitoring, Control and Surveillance for fisheries law enforcement is a solid underpinning of maritime and fisheries law, both international and domestic. The above mentioned report by the legal expert Prof. McDorman noted the current Myanmar national law regarding fisheries, and recommended some changes thereto. That report also discussed relevant elements of international law and state practice as it affects the current situation in Myanmar.

The conclusions and recommendations in this second report are based on the MCS consultant's observations in Myanmar, discussions with officials of the Myanmar Department of Fisheries, the Myanmar Navy and others, as well as his experience and background in maritime and fisheries law enforcement generally.

The terms "Monitoring, Control and Surveillance" and "Fisheries Law Enforcement" are used interchangeably.

2. Background

The major known enforcement problem in Myanmar is that of Thai poachers along Myanmar's southern coast. Although there are undoubtedly other fisheries violations of existing national and international law in Myanmar waters, including some by Bangladeshis in the area of the northern border, they are generally considered to be of minor importance in comparison to the Thai problem, both in gross numbers of vessels and in estimated impact on the fish stocks. There are no significant domestic enforcement problems at present, but this should not be ruled out as a potential future problem.

In general, Myanmar policy has been to confiscate vessels found fishing without a license in the Myanmar EEZ but to fine and release vessels found fishing in violation of the terms of an otherwise proper Myanmar license. There is a clear willingness to use force as necessary to ensure compliance in at-sea enforcement. It appears however as though the policy on use of force is a military policy rather than a law enforcement policy, however. This aspect requires additional consideration. Myanmar's general enforcement policy and ability to detect and seize violators should be well known in the relevant fishing communities. Enough successful seizures have been made, with appropriate publicity,

over a long enough period of time, to insure the dissemination of that knowledge.

3. Organization

The Department of Fisheries, within the Ministry of Livestock Breeding and Fisheries, is authorised by law to enforce the fisheries laws of Myanmar. Revised legislation as recommended in the first report (92/12 by Prof. McDorman) can provide a yet stronger basis for more sophisticated enforcement programme, and one that may be able to take advantage of less resource-intensive enforcement techniques.

Authority is generally exercised through the Myanmar Navy, a part of the Ministry of Defence, which has the vessels and operational personnel to actually conduct at-sea enforcement activities. Although it is obviously a military organization, the Navy conducts the fisheries law enforcement, or monitoring, control and surveillance missions as a civil function. In theory, the Navy is merely providing a platform from which a duly authorised fisheries inspector can act.

In practice, the Navy provides a substantial amount of expertise in at-sea tactics and knowledge of the area, and naval personnel may be appointed as fisheries inspectors. A naval vessel also is generally more intimidating to potential violators because it is so obviously a war-ship. While at sea Myanmar's vessels are also available, on a priority basis, for other duties such as maritime search and rescue, environmental monitoring, as well as defense. Utilizing the existing resources of the Navy is more cost-effective than acquiring separate resources for the Department of Fisheries. As a practical matter, in most countries only one set of maritime assets can be afforded and thus must be devoted to whatever maritime tasks need to be done.

Enforcement policy is set by the Department of Fisheries. This Department is small but growing: it has authorization for many more positions than have been filled, but is proceeding with new recruitment only as qualified candidates are found. There is a general in-house policy, with a few exceptions, of requiring professional staff to be biologists first, and training them for other specialities later. This makes it difficult to fill positions quickly and may not always result in making the best match between job requirements and the qualifications of the candidates.

As the Department grows it will need to create a small staff of persons focusing on MCS aspects from a policy perspective. Such staff should provide the day to day liaison between the Department of Fisheries and appropriate staff of the Navy, the Attorney General's office, and the Ministry of Foreign Affairs. It should be responsible for developing MCS policy and coordinating its implementation. This staff will need to analyze enforcement effort, results, techniques, tactics, violation types, times and areas, fishing patterns, catch rates, and so forth. The Department of Fisheries personnel in the proposed joint Operations Centre (see 6 below) should come from this staff. However they should not

perform the information and intelligence programme functions: that should be done by a separate staff with different training (see 4 below).

The Department's goals and objectives reflect those of the Government as a whole and are, in general:

- the protection and preservation of the nation's fisheries resources;
- protection of the artisanal fisheries and the fishing communities they support;
- an increase in artisanal fisheries catches and development of local shoreside processing and infrastructure in order to get more local marine fish and fish products inland;
- promotion of aquaculture, including freshwater aquaculture in the interior of the country;
- promotion of a sustainable offshore fishing industry that will employ Myanmar citizens and contribute significantly to the national economy.

With respect to the offshore fisheries the current approach is to use joint ventures to achieve technology transfer, training of local fishermen, and some hardware acquisition, such as refrigeration and processing plants, to build the infrastructure needed for their own industry. Included within the broader statements is a commitment to environmental protection and to full enforcement of the laws and regulations.

The relationships, both actual and potential, between fisheries issues and other national interests, do not seem to be well understood outside of the Department of Fisheries. A clearer understanding of some of the issues involved, for example in the Ministry of Foreign Affairs, might make it easier to approach the Thai Government in a meaningful way with respect to its obligation to control the actions of its own citizens.

Fisheries law enforcement actions always have the potential to create international incidents: such actions (with respect to foreign fishing vessels) generally take place in the EEZ which is not sovereign territory. It is instead an area in which certain resource management rights have been authorised by international agreement. The means by which those rights can be exercised and protected are also authorised, and restricted, by the same agreement. The use of naval resources as enforcement platforms, whilst perfectly legitimate, nevertheless increases the potential for misunderstandings. Accordingly, all persons who have a role in fisheries law enforcement decision-making should understand the issues and the rules, and there should be a mechanism for coordinating law enforcement decisions at higher levels of government in unusual cases or those cases where the use of force is involved. Thus it is suggested that the Government of Myanmar may wish to carefully consider just how it is organized to deal effectively with such cases on a real-time basis. Even though a naval vessel is the law enforcement resource at sea, there should be demonstrably clear civil control of the law enforcement function, and of the law enforcement actions taken by the vessel.

Also from an organizational perspective, it should be noted that there is a built-in potential for conflict between the Myanmar Fisheries Enterprise (MFE) and the Department of Fisheries. At present the relationship is a healthy one, but there is always the possibility that good, biologically sound fisheries management policy may ultimately result in restrictions on MFE's business ventures. Such a situation would put the Ministry of Livestock Breeding and Fisheries in a very difficult position, since both agencies fall within its portfolio.

4. Information and Intelligence

There is no formal intelligence programme and the information gathering programmes within the Department of Fisheries have understandably grown from the needs of the scientists rather than from the needs of enforcement. Similarly, the information gathering efforts of the Myanmar Fisheries Enterprise are business oriented. The Department needs an intelligence programme to benefit not only enforcement but the full range of Departmental interests. Such a programme should draw upon and be helpful to other segments of government including amongst others, the Ministry of Foreign Affairs, the Attorney General's office, the Navy, the Customs, and the Myanmar Fisheries Enterprise. This is not because of any inherent obligation to serve the needs of other departments, but because this is the only way an intelligence programme can be effective: it must have a wide range of inputs from a great variety of sources.

The purpose of an intelligence programme is to collect, analyze and disseminate information that bears on the fisheries and their effective management. This is a very broad mandate, but one that can be approached in stages as resources and training are obtained. A comprehensive fisheries intelligence programme should cover a wide range of subject matter, including, but not restricted to:

- fishing activity in the EEZ and nearby waters - trends and developments;
- fisheries resources - trends and changes;
- fishing methods;
- fishing technology, gear types;
- vessels: foreign and domestic, fishing, fishing support, processing, suspect vessels;
- fish processing - ashore and at sea;
- tracking fish from sea to market;
- marketing, prices, duties, trends;
- joint ventures;
- distant-water fleet activities generally - trends and developments;
- activities of specific fleets (e.g. Thai) in other EEZs and markets;
- non-fishing activities in the EEZ: benign normal shipping; criminal, smuggling; search and rescue, environmental threats and changes;
- data management and analysis.

The intelligence programme should work toward predicting the activity and behaviour of foreign fishermen in the EEZ, and should be of direct benefit to the law enforcement programme. It should also provide management with information useful in a great number of other areas, for example: in preparing for negotiations with potential joint venture partners; in predicting the returns from varying levels of fishing effort, whether foreign or domestic; in anticipating the impacts of new technology on catch rates. The intelligence and information effort could start in a small way and yet be productive almost immediately. It can take advantage of those information collectors already in place but not being systematically utilized. Some initial training is required for the core persons who would staff an intelligence function.

5. Communications

The Fisheries Department relies heavily on the postal service for routine communications. The telephone is commonly used within the capital, between departments, and to a limited extent with field offices. The Navy maintains radio communications with its vessels on patrol, subject to geographical coverage gaps, atmospheric conditions and electronics maintenance. There is a radio at the fisheries checkpoint near Victoria Point at the Thai border. Nevertheless the communications system needs substantial upgrading in order to ensure reliable communications under most conditions. This is especially important in ensuring effective civil control of the law enforcement function. A central communications facility, as part of a joint Operations Centre, is needed. High frequency single side-band (HFSSB) capability is needed for long haul communications up and down the coast, and between ships and shore. MFE's vessels should also be included in the HFSSB network. Additional VHF-FM Marine Band capability is needed for short range ship-to-ship and ship-to-shore links. VHF-AM (Aviation Band) is needed for effective communications between ships and aircraft on surveillance missions.

6. Command, Control and Coordination

Solid control of enforcement operations at sea and ashore, at all times, is essential. Achievement of control requires reliable communications with operating units, a well defined and understood chain of command, and well-trained personnel at all levels. The environment in which fisheries, and therefore fisheries law enforcement actions, are conducted, is an inherently hazardous one. Since any enforcement action involves a dispute between the parties, an additional level of potential hazard is imposed on top of the natural hazards of the sea.

The establishment of an Operations Centre is a time-tested mechanism for effectively resolving these problems. It must be staffed by trained, knowledgeable personnel representing the appropriate authorities, in this case the Department of Fisheries and the Navy. It should have the facilities to communicate directly with field units, with senior Department, Navy and Air Force officials. It should be active at any time that there are enforcement units on patrol.

The Operations Centre should be the focal point for decision making on the use of force on a case-by-case basis. The decision to use some level of force to compel compliance with fisheries laws is different from the classic law enforcement decision to use force ashore: the jurisdictional basis is different and the ability of the violator to escape jurisdiction is different. Without entering into a detailed discussion of the use of force in the maritime environment, it should be emphasised that decisions on the use of force should be made only after the most careful consideration of the issues in each case. Those decisions should be made by an informed and appropriate senior official, and yet must be made quickly. Again it should be noted that the environment in which fisheries law enforcement actions are taken is hazardous: any delay in decision-making that affects the ability of the on-scene fisheries officer to act, potentially exposes the officer to additional hazard. Accordingly, the Operations Centre must be able to make or obtain decisions quickly, as well as competently, in order to protect the unit on scene.

7. Enforcement Resources

The basic fisheries law enforcement resources such as ships, boats and aircraft, are already available in Myanmar. The Navy uses two Osprey Class patrol vessels and a variety of smaller craft in carrying out its fisheries enforcement mission. The Air Force provides some air surveillance, but considerably more is needed, and could be provided, if the Government were to decide to alter its priorities on the use of Air Force assets.

As noted above, communications and information-handling assets are inadequate, and basic computer resources are needed both for an intelligence programme and for an Operations Centre. A variety of communications equipment is also required for the Operations Centre to be effective.

8. Training

The greatest single need at present is for staff training: the Department of Fisheries and the Navy, working together, need a comprehensive training programme covering all aspects of fisheries law enforcement for all participants in law enforcement activities. There is a need for an initial programme of very intensive training for senior personnel. This could be provided in Myanmar over a period of about four weeks by a small specialised outside training team. There is also a need for a long-term programme of regular training, much of which could be given at first by the senior personnel who participate in the proposed initial intensive training programme. It would also be very helpful for a small number of key people to visit other countries with strong fisheries law enforcement programmes; to observe first-hand such programmes in operation.

The subject matter to be covered in the initial training programme is outlined in Appendix 1. A more detailed plan for such a training programme would require a pre-training visit to survey

the current levels of knowledge in various subject matter areas, and to arrange the conversion of teaching materials from English into Burmese.

Since Myanmar has chosen to use English as the language in which laws, regulations, permits, licenses, and so forth, are issued to foreign fishermen, and since English is frequently the common language between mariners of non-English speaking countries, some consideration should be given to the level of English language training provided to fisheries inspectors and naval personnel in command positions at sea.

9. Conclusions

Myanmar is rich in natural resources including fisheries, and some of these are under exploited. There is great potential for careful development of fisheries, including controlled foreign fishing and joint ventures offshore. The Department of Fisheries has tended to be conservative and err on the safe side of MSY (Maximum Sustained Yield) estimates and total allowable catches.

The current law enforcement programme is good but limited, and is run by enthusiastic and willing personnel. It suffers however from a lack of specific training programmes for its staff, poor communications, and a lack of an information and intelligence programme.

There is scope for a bilateral agreement on fisheries with the Government of Thailand in order to set out the terms of the fisheries relationship between the two countries, and to note Thailand's obligation to exercise some control over its citizens who are shown to be fishing illegally in Myanmar's EEZ.

There is no need at present for additional capital assets (ships, aircraft, boats) for the fisheries enforcement programme.

The Department of Fisheries and the Navy have requested that the MCS consultant should make a second visit in order to complete the survey of their fisheries law enforcement programme and resources, since due to the short time for his first visit they were unable to arrange for him to study the fisheries activities outside of Yangon. A second visit should include the out-ports, fishing activities, boarding opportunities, and equipment inspections.

10. Recommendations

The Department of Fisheries and the Myanmar Navy should build on the fisheries law enforcement base that they have already established. They especially need to:

- institute a comprehensive training programme along the lines of the outline in Appendix 1, and consider the use of a specialist outside training team to teach the first (intensive) course;

- establish an information and intelligence programme, and obtain specialized training for a small core group of staff to run it;
- obtain significantly more air support from the Myanmar Air Force, and include Air Force personnel in the training programmes;
- create a joint Operations Centre, staffed by both Navy and Department of Fisheries personnel;
- develop and articulate national policy on the use of force in maritime fisheries law enforcement, taking into account the relevant international conventions;
- seek through the appropriate channels a bilateral agreement on fisheries with the Government of Thailand.

General Outline of a Four-Week Basic Training Course
in Fisheries Law Enforcement

Fisheries Law Enforcement in general
purpose, objectives.

Authority for Enforcement by Coastal States
sovereign rights, law of the sea, other international
conventions, bi-lateral and multi-lateral agreements,
limits and restrictions.

Authority for Enforcement by Myanmar Government
domestic law rooted in authority of international law,
specific requirements, authorisations, limitations of
domestic law, application of law to citizens and non-
citizens.

Exercise of Enforcement Powers
boarding and search, arrest of persons, seizure of
vessels and catch, evidence, hot pursuit.

Use of Force
national policy, pros and cons, limitations, role of
conventions, agreements, treaties, licenses, amount and
character of such force as may be necessary to compel
compliance, deadly and non-deadly force, controls on use
of force, review of all instances of use.

Myanmar Organization for Fisheries Law Enforcement
structure and lines of authority, relationship to other
parts of fisheries management structure.

Intelligence
the role of intelligence, structure of programme,
collection, analysis and dissemination, queries,
lookouts, linkage to other government agencies.

Surveillance (Air and Sea)
patrol planning, intelligence, communications, search
patterns, operational security, operational deception,
effect of height of eye, sea state and weather; joint
coordinated operations between surface and air units;
redirecting efforts during a patrol based on
developments.

Boarding and Inspection at Sea
stopping; signaling; small boat handling; arriving on
board; credentials; instructions to crew; systematic
inspection stem to stern; papers and documents; logbooks
including navigation, fishing processing and
communications; comparing on-site inventories to logs;
techniques for inventorying, estimating weights,
haulbacks, species composition, inspecting fishing gear,
measuring nets; clothing and special gear for

refrigerated vessels; protection of the boarding party; actions of the patrol vessel during the boarding and inspection; timing the onset of a boarding; interruption and delay of fishing operations; reasonableness.

Communications

verbal; written; radio computer; satellite, facsimile; telephone, telegraph; semaphore; flag-hoist; flashing light; wig-wag; gunfire (a shot across the bow is not a use of force; it is a signal); communications security.

Officer Protection

individual and group self-defense; use of weapons; special equipment; protection of the boarding party by itself and through the presence of the patrol vessel; coordinating protective actions in an emergency.

Fishing Vessels and Gear

common fishing gears; distinctive features in use, on deck, from a distance; surface marking; sub-surface hazards; radio beacon buoys, spotting, identifying, frequencies; FAO illustrations of gear by type; common fishing vessel profiles; distinctive features, information to include in sighting reports; markings of vessels and gears.

The Operations Center

working with and through the OpsCen; OpsCen as real-time center of planning and control of operations; communications hub; reports to be made and why; information to include; linkages to intelligence programme and importance of timely contribution of input; inclusion of MFE vessels in reporting system.

Training

purpose and importance of training programmes; long-term cyclic programmes; special programmes; areas to be covered; progressive and continuing nature; manner of organization; sources of materials and instructors; training ashore, at sea and in the air; joint exercises.

Principal Persons Consulted

Whilst in Myanmar the consultant held discussions with various officials of the Department of Fisheries, the Myanmar Navy, the Myanmar Fisheries Enterprise, in addition to the FAO Representative and his staff. Officials appropriate to the subject matter of discussion were always available and these principal contacts were:

U Win Htin	Director General, Department of Fisheries, Ministry of Livestock Breeding and Fisheries.
U Sein Lwin	Director, Department of Fisheries
U Hla Win	Department of Fisheries.
Captain Khin Maung Htoo,	Captain Naval Staff, Commander in Chief, Navy Office, Ministry of Defence
U Han Htun	Managing Director, Myanmar Fisheries Enterprise (MFE).
U Hla Myint	General Manager, MFE
U Aye Zin	Staff, MFE
Oscar J.S. Lazo	FAO Representative in Myanmar

