

**LINEFISH RESOURCES  
ANNUAL REPORT FOR THE YEAR 2000  
PART 3: TOWARDS A MANAGEMENT PLAN FOR THE MOZAMBICAN  
LINEFISHERY**

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## **Abstract**

The dependence of Mozambique on its marine resources is highly significant. There is a need for a plan of action for sustainable use of these important resources, for the benefit of the nation. In this document, are included some aspects that can be important to take in consideration for a sound action plan for the line fishery in Mozambique.

## **Resumo**

A dependência em Moçambique em relação aos recursos marinhos é bastante significativa. O uso dos mesmos recursos necessita de um plano de manejo sustentável para o benefício da nação. Neste documento, estão reunidos alguns aspectos a tomar em conta na hora de traçar um plano de acção para o sector da pesca à linha.

## 1. Background and rationale

Mozambique is endowed with a great diversity and abundance of marine resources, many of which have for decades formed the basis of important fisheries. These, in turn, have contributed to the socio-economic well-being of the Mozambique people. The dependence of Mozambique on its marine resources is highly significant. For many years, the export of marine products represented a primary source of revenue and foreign exchange. Much of this nation's citizens obtain their food security from the sea, while tourist related activities also draw on marine resources in a substantial manner. Associated with these fisheries is a huge infrastructure of processing, marketing, administration and maintenance. All of this contributes to job opportunities and ultimately to stability in society.

It follows that the use of resources needs to be managed to ensure sustainability and optimal benefits to the nation. This requires a management regime, such as is embodied in the Mozambique Fisheries Master Plan and the Mozambique Fishery Act (Lei No 3/90 of September 1990). This enabling legislation facilitates administration and management of the fishery and the promulgation of specific regulations in the form of Articles.

The marine resources and associated fisheries of Mozambique can be divided into various components. These are some of the groupings

- Geographically into four zones
- Sectors of fishing: artisanal, semi-industrial or industrial
- Resource type: e.g. camarão, gamba, linefish, etc

Each of these categories serves a particular function and satisfies certain needs. However, the latter category, that of resource type, is most useful in terms of resource management. This is especially true in the Mozambique situation where different sectors of the fishery, using different gear types all target the same resource. This complicates management, may result in non-sustainable use and cause user conflict.

One resource of major importance is linefish. This resource can be defined as a suite of finfish species (including sharks and rays), which are primarily targeted and caught by hook and line gear. Obviously these fish are also caught by other gear, which highlights the problem of potential fragmented management.

Examples are as follows:

- Subsistence
- Artisanal – many types of gear
- Recreational and sport
- Semi-industrial linefishing
- Semi-industrial trap fishing
- Industrial linefishing
- Industrial midwater trawling
- Industrial long lining

In order to ensure that management occurs in a structured and cohesive manner, it is imperative to draw up an overall management framework for the use and management of linefish resources (FAO. 1995, 1996). Such a plan would allow for the integration of different fishery sectors and gear types, it would establish optimal and threshold targets and provide guidance to facilitate equitable distribution and access to resources. Additionally, such a plan would promote public awareness and contribute to co-management through greater public participation. User conflict can be minimised and joint management with neighbouring countries will be facilitated.

In the case of linefish, such a plan is urgently needed. Tropical fisheries are generally difficult to manage because they are often open access, widely dispersed, multi-user and multi-species in character. This is the case in the Mozambique linefishery. High levels of endemism and complicated reproductive styles such as protogyny, all complicate management measures. Many species have slow growth long lives and late maturation.

There has been considerable growth in almost all categories of use. Trends in landings are negative and of special concern is the trend for vessels to operate increasingly further away from their home port in order to ensure that catch rates are maintained. Eventually this will lead to a sudden collapse of the fishery. New gear types are being introduced, such as trap and midwater trawl, but the relationship between these activities with other linefish usage is not well developed or understood. Considering the great importance of the linefish resource to so many people in Mozambique, it has become very necessary to develop an overall framework that will assist the authorities with planning a sustainable future for linefish management in this country.

## 2. Elements of a linefish management plan

A linefish management plan would need to be developed in collaboration with users. It is not possible to segregate all the components that affect management, hence they need to be linked in terms of such a plan. Some of the components could be:

### Management

- Management objectives
- Target and threshold levels
- Management advice structures
- Straddling and migratory stocks

### Management measures

- Output controls: size limits, catch limits, seasons,
- Input controls: seasons, licensing, gear types, effort control
- Access to the linefish resources
- Operational management procedures

### Research and Monitoring

- Priorities and partnerships
- Data collection, monitoring

### Marketing

- Standards and quality
- Waste minimization
- Commercial vs recreational

### Implementation

- Compliance and enforcement
- Awareness and education
- Interface with other agencies such as MICOA, DNFB, Tourism etc
- Setting up of liaison and work groups that will deal with linefish management matters.

### 3. Plan of action

It is proposed that time and resources are allocated to develop a linefish management plan for Mozambique. This would involve *inter alia* the following steps:

- Inform the user groups, via a workshop, seminar and the media, about the planned development of a linefish management plan and to promote their involvement and support.
- Undertake a desk-top assessment of linefish management strategies in other countries, especially Australia and South Africa.
- Develop, and undertake, a questionnaire based survey of the major user groups to assist with identifying needs and aspirations. Such a questionnaire should be developed during a workshop that could draw on experiences from other projects. South Africa, West Australia and Queensland have successfully undertaken such surveys, and their systems can provide useful examples. The information collected would include fishery, socio- and economic factors.
- Collate all available information about linefish exploitation in Mozambique. This should include the status of resources, current management structures and highlight problems and limitations to sustainable development.
- Compile a “straw-dog” proposal as a linefish management plan. This will probably be initiated by a workshop of key stakeholders.
- Develop a “rule book” that will document the rationale and procedures to be applied to all aspects of linefish management.
- Finalise the proposal for presentation to fishery administrators. This to be followed by review, modifications and final adoption.
- Establish liaison committees to assist with ongoing implementation and refinement.

It is expected that the above programme would take about two years to complete and would require staff allocation.



#### 4. References

FAO. (1995) - Code of conduct for responsible fisheries. Rome 41pp

FAO (1996) - Precautionary approach to capture fisheries and species introductions. 54pp

