

TECHNICAL COOPERATION REPUBLIC OF MALAWI
FEDERAL REPUBLIC OF GERMANY

LAKE MALAWI FISHERIES MANAGEMENT SYMPOSIUM

WORKSHOP REPORTS

LILONGWE

5TH – 9TH JUNE 2001



Department of Fisheries

NATIONAL AQUATIC RESOURCE
MANAGEMENT PROGRAMME
(NARMAP)



Deutsche Gesellschaft für
Technische Zusammenarbeit

Improving co-operation, co-ordination and communication between research institutions in Malawi.

Workshop Session I (Tuesday 5 June 2001)

Pre-amble

The development of realistic and robust management procedures for Malawi's fisheries requires a knowledge of the biology and population dynamics of the resources harvested, an understanding of the fisheries that harvest the resource and the social and economic factors which drive the fishery. Research in all these fields was, is and will be undertaken in Malawi by a variety of players including government departments, academic institutions and visiting scientists. To ensure that research findings are applied in the management of Malawi's natural resources there is a need to improve co-ordination, co-ordination and communication between research institutions in Malawi.

Purpose of the workshop

Initiate a repertoire between different research institutions,

Define the responsibilities of the various institutions and researchers for the creation of a transparent system of initiating and performing fisheries related research in Malawi.

Develop a consensus among the different stakeholders on who should co-ordinate such research.

Outcomes

A brief summary of the co-ordination and co-operation problems within Malawi fisheries and aquatic research was presented to the workshop participants. These were discussed and it was unanimously agreed that there was a need to establish some sort of forum with the capacity to play a meaningful role to improve communication and co-operation between all stakeholders.

Two possible structures were presented to the workshop participants; a Government driven inter-institutional fisheries and aquatic research coordinating committee or a stakeholder driven forum. There was general consensus that a stakeholder driven initiative (in the form of a Forum) is preferable to one driven by Government.

Points raised during the discussion (summarised by Jacqueline Chisambo)

- A major advantage with the stakeholder initiative is that the stakeholders can contribute towards their membership hence the initiative can be assured of some sort of funding and sustainability as compared to the government initiative seeing that the FD sometimes works under severe constraints.
- It should be remembered that the Fisheries department (FD) of Malawi, Tanzania and Mozambique are as much a stakeholder as the others.
- For the list of stakeholders, the user group should also be included. It was agreed that representatives from the commercial as well as artisanal fisheries sectors should be included in the steering committee.
- The information gathered through this forum should be disseminated through a newsletter or news flash to keep all concerned parties updated.
- There needs to be a link established between research and extension. This forum should play a role in ensuring that scientific information is disseminated in a user-friendly format for the Manager and user. It will also need to look at the feedback from communities so that research is demand driven. This will also utilise local or indigenous knowledge.
- The view of the National Research Council of Malawi (NRCM) is that the FD should develop its own research appraisal and monitoring committee involving various stakeholders. The NRCM already has guidelines and procedures that should be taken as 'umbrella' guidelines. The Fisheries sector however is free to add some more guidelines if it wishes to do so as long as the guidelines do not deviate from the 'umbrella' guidelines of the NRCM.
- All stakeholders will be expected to contribute equal amounts of money irrespective of project size otherwise there would be the risk of some stakeholders contributing more than others thus having more influence in driving the forum than others.
- The emphasis of such a forum will be to co-ordinate research efforts which is entirely different from attempting to give it a mandate or legal authority to decide on management matters. This forum will not be taking over the role of the government but should be looked at as an informal group mainly dealing with dissemination of information as well as playing a role in assessing various project proposals. This group can work hand in hand with the FD and the Fisheries advisory board (FAB).

Proposal for the establishment of Network for Fisheries and Aquatic Research

Malawi has a long and proud tradition of fisheries, aquatic and environmental research. This research has largely been in the form of joint ventures between the Government of Malawi and donor countries and or organisations, Universities and individual researchers. The diverse amalgam of specialist participants and stakeholders each with their own research agendas and restricted timeframes has resulted in a loss of co-ordination, communication and co-operation. The net effect of this has been:

- Uncoordinated research efforts
- Duplication of research effort
- Waste of scarce financial resources
- Poor management decision support

To address the problem it is proposed to establish a network of all stakeholders.

Proposed name

Network for Fisheries and Aquatic Research (NETFISHAR)

Aim of the Network

The overarching aim of the Network is the dissemination of information to its members and the general public. In other words the “currency” of the Network is information. This will be achieved through communication and co-operation between stakeholders, which will have the effect of improved co-ordination and co-operation between and among stakeholders, cost effective research, curtail duplication of research and enhanced management decision support. The network is apolitical and entirely stakeholder driven.

Structure of the NETFISHAR

The Network should consist of a Forum and a Steering Committee for which a constitution needs to be drawn up (A copy of a successful Research Network, which will have to be adapted for the Lake Malawi / Nyassa, Forum will be sent to Mr. Peter Jarchau of NARMAP). All stakeholders, including statutory departments, donor funded research and development projects, tertiary institutions and individuals, who are engaged in Fisheries and Aquatic research, development and management on Lake Malawi / Nyassa should be invited to become members of the Forum (see Appendix 1 for a list of potential stakeholders). The idea is to have the Network as inclusive as possible (but see section on Finances).

The Steering Committee of the Network is an elected body with a predetermined number of representatives. I would suggest that the steering committee consist of a maximum of nine (9) members, including a Chair, a deputy chair, secretary, treasurer and an elected body of five (5) members. All members are elected by the Forum. The Chair of the Steering Committee should not be a representative of a statutory body. The duration of tenure on the steering committee should be limited to a period of 2 years with overlap between the chair and other members. The Steering Committee will be responsible for organising a two yearly fisheries and aquatic science symposium. The Steering Committee will be required to source donor funding and sponsorship for the symposium.

Operation of the Forum and the Steering Committee

The Forum is a body consisting of member organisations. The Forum should convene an annual meeting for one day, at which each stakeholder presents a summary of activities, new projects and progress in a collegial and casual, though professional, manner. The Forum meeting should be attended by as many employees / members of each stakeholder organisation as possible.

The Steering Committee should meet, at least, on a quarterly basis or whenever necessary. The Steering Committee should be responsible for the production of a biannual newsletter in which information is disseminated to all members (individual or institutional).

Legality of the Network

The proposed Network should be an independent body with its own constitution. Pivotal to its success is its apolitical nature, which should guarantee that the Network is not “hijacked” by any individual member, thus guaranteeing the free flow of information between member organisations. The end effect of this structure should be that no single member feels threatened in any way by other members. It would be advisable to perhaps develop the

constitution of the Network within the framework of the Code of Conduct developed by the National Research Council.

Relationship between the Network and the Departments of Fisheries (Malawi, Tanzania & Mozambique)

The Steering Committee of the Network must develop a good working relationship with the Departments of Fisheries of the 3 countries. The Departments (as members of the Forum) should commit to use the Network, through the Steering Committee, to act as a sounding board (if it so wishes) to assess the quality of research proposals and or projects, consider management proposals and the implementation thereof. Given that the Steering Committee will have an intimate working knowledge of all projects it can also advise the Department on duplication of research efforts and funding and in so doing contribute towards cost effective research and management of aquatic resources. Implicit in all this must be the understanding that the Network does not have any powers to force the Departments to accept any of its recommendations. Similarly, the Fisheries Advisory Board could use the Steering Committee of the NETFISHAR as a sounding board to consider management options, although the advisory board need not necessarily accept the suggestions of the Steering Committee.

Finances

The Network is to be financed by the stakeholder member institutions or individuals. It is suggested that a differential fee structure be developed, e.g. Institutional, company, community and individual membership. A budget will have to be drawn up to cater for quarterly meetings of the Steering Committee, secretarial costs such as production and mailing of a half-yearly newsletter. All other services to the Network should be on a voluntary basis, in return for which all members will be provided with information. The operation of the Network will incur costs and these have to be recovered. All members will therefore have to pay their fees, though as suggested above these could be staggered.

Kick-off

To make the NETFISHAR work it is necessary for a champion to come forward and drive the initiative in a participatory manner. It is suggested that NARMAP plays a lead role in the establishment of the Network, by first gauging the interest of potential members by way of a survey and then to take the initiative in collaboration with enthusiastic partners to drive the process. The success of the NETFISHAR could be a major feather in the cap of NARMAP/GTZ as it will have provided the foundation upon which collaborative research can take place in Malawi for the first time.

Potential members of NETFISHAR

(The list of possible stakeholders is by no means complete and should be amended to be inclusive of all stakeholders)

Department of Fisheries (Malawi)
 Department of Fisheries (Mozambique)
 Department of Fisheries (Tanzania)
 Tanzanian Fisheries Research Institute (TAFIRI)
 Department of Parks and Wildlife (Malawi)
 National Research Council Malawi
 NARMAP
 SADC / GEF Biodiversity project
 DANIDA Coastal Zone Management Project
 EU Fisheries Project
 ICLARM
 BZDP
 Fishermen's Association of Malawi and all recognised user groups
 JICA Fisheries and aquaculture project
 The University of Malawi (Chancellor and Bunda College)
 All Universities who have research interests in the Lake
 All private individuals who have a research, management and development interest in the Lake.

The role of Livelihoods research in Malawi.

Workshop Session II (Wednesday 6th June)

Introduction

This workshop followed presentations by Dr Edward Allison, Professor Frank Ellis and Mr Peter Mvula on the livelihood strategies of people dependent of the fluctuating fishery resources of Lake Malawi¹. The workshop was essentially a panel² discussion session based on the previous presentations.

The research examined how small-scale fisherfolk adapt to fluctuations in the natural resource base, and used an analysis of their household livelihood strategies to examine appropriate management and development interventions aimed at poverty reduction and resource conservation. While focused on fisheries, the research has wider applicability to the role of common property resources in sustaining rural livelihoods in Malawi and to problems of appropriate management of such resources.

The following report is a compilation of comments to the panel during the discussion session. Comments during the panel discussion fell in three categories, namely, Community based resource management, livelihoods and indigenous knowledge.

Community based resource management

- There is need to define community
- For effective resource management, there is need of an 'assemblage' of different stakeholders sharing a common resource.
- Land-based and lake-based communities need to be differentiated.
- It was noted that the implementation of community-based management departed from traditional management systems, which mainly deal with controlling access to a resource.
- For resource management, it is advisable to build upon systems already in place in the communities and work from there.
- Community based resource management should take into account various sectors within the fishery including small-scale business & Farming.
- There is positive interaction between migrant fishers and communities
- Different types of fisheries need different management.
- Should the Department of Fisheries privatise extension and/or enforcement?.

Livelihood issues

- Regarding diversification at household level - how do the different sources of livelihood boost each other?
- What alternatives are there?
- the division of labour at the household level needs to be taken into consideration when assessing livelihoods.
- The absence of rural financial services should be considered at policy level.
- Fishermen do not save even if they make lots of money

Indigenous knowledge

- Fishermen know where the fish are.
- There are information systems among fishermen.

¹The paper entitled: "Fisheries management and uncertainty: the causes and consequences of variability in inland fisheries in Africa, with special reference to Malawi", is published in the proceedings of the Lake Malawi Fisheries Management Symposium.

²The panel consisted of Dr Edward Allison, Professor Frank Ellis and Mr Peter Mvula. The session was chaired by Dr W. Chirwa of the Center for Social Research., Zomba.

Management priorities for Lake Malawi/Malombe.

Workshop session III (Thursday 7 June 2001)

Introduction

The aim of the workshop session was to determine Management priorities for Lake Malawi's and Malombe's fisheries and to attempt to identify key problem areas with the management of the Lake Malawi/Malombe system. The workshop was run in plenary discussion and information was captured on pin boards. This information was collated into problem trees of causes and effects of ecosystem degradation and low fish catches, a flow diagram for Implementation Strategies and a list of opportunities in the fisheries sector. While the information gathered during the workshop is by no means comprehensive, the information presented here should serve as a point for future discussion and planning.

Causes and Effects-Problem trees

Major problems in fisheries in the Lake Malawi/Malombe system were seen as ecosystem degradation and low levels of some fish stocks, which lead to low catches and ultimately poverty and hunger. Two problem trees were developed with the workshop participants. The first problem tree (Figure 1) shows the causes and effects of Ecosystem degradation; and the second shows the causes and effects of low catches in the fishery (Figure 2).

Implementation strategies

A flow diagram for Implementation Strategies was also developed (Figure 3). The workshop proposed that the objectives for management of the Lake Malawi/Malombe complex should be:

- To maximise social benefits, economic benefits and food production.

The guiding principles for Implementation Strategies were to be:

- The maintenance of biodiversity and ecosystem functions.
- The sustainable utilisation of the fisheries resources.

It was noted that past research programmes made little reference to future implementation of recommendations. The strategy for effort limitation was also seen as a high priority.

Opportunities

A number of opportunities within the fisheries sector were identified by the group. The opportunities listed during the workshop are shown in Figure 3.

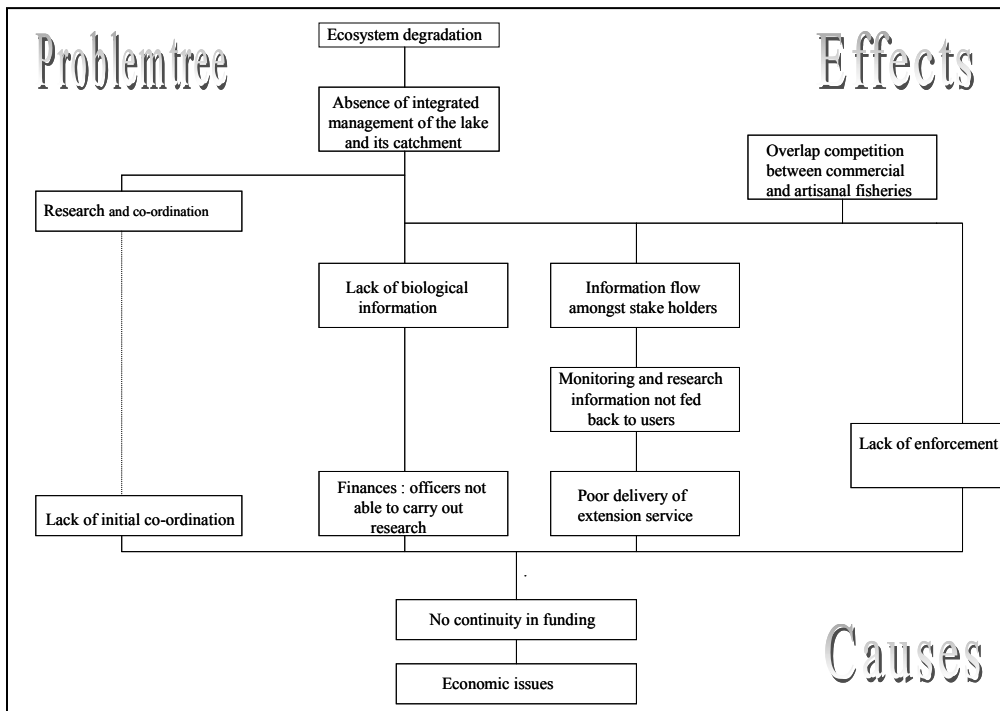
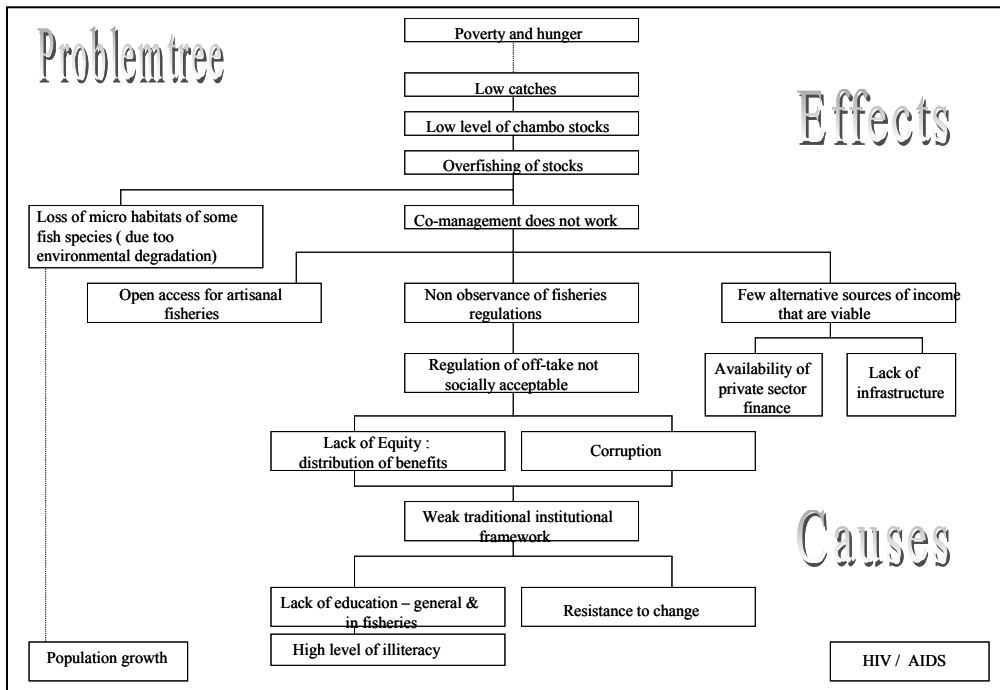


Figure 1. Causes and Effects of resource over utilisation as defined by a workshop session during the Lake Malawi Fisheries Management Symposium.

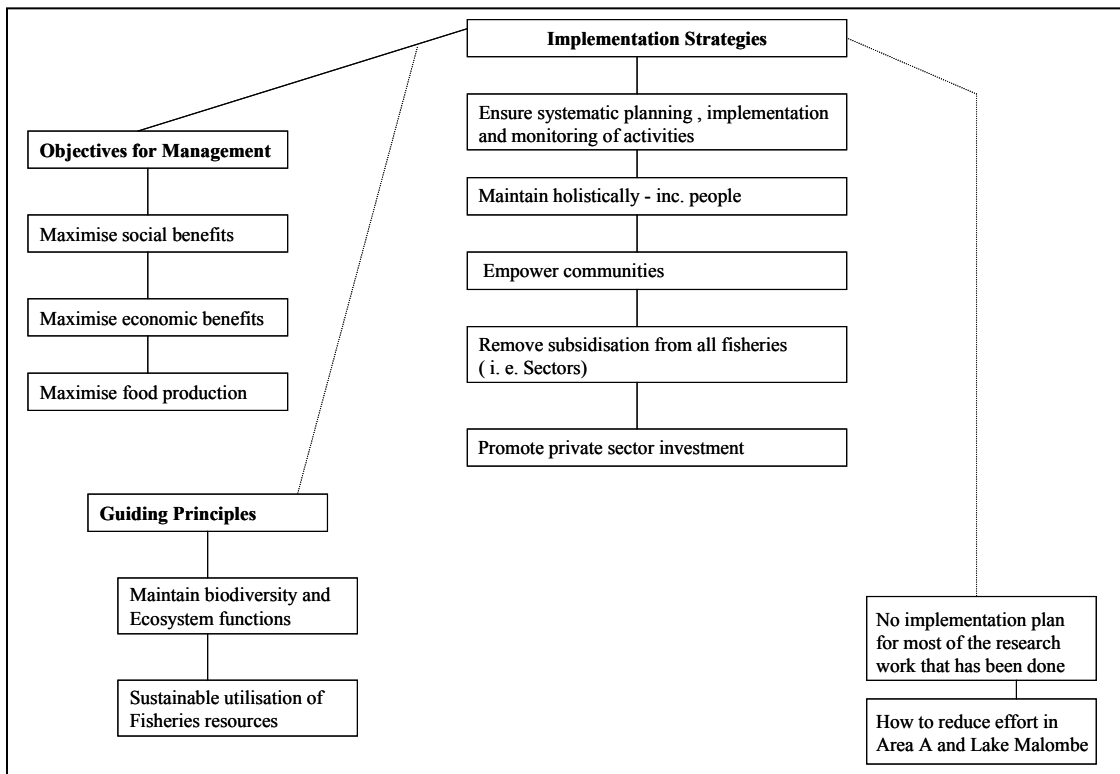


Figure 2. Considerations for Implementation Strategies for management measures in the fisheries sector in Lake Malawi/Malombe.

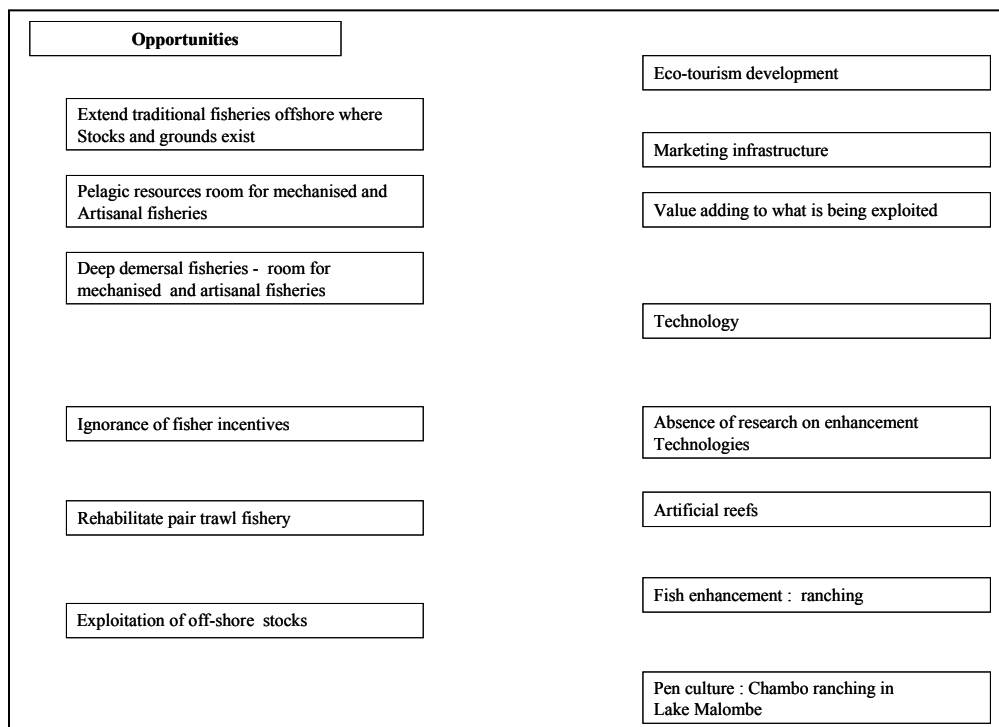


Figure 3. Opportunities listed for fisheries in Lakes Malawi and Malombe.

Identification of research gaps and research priorities for the formulation of management guidelines for the Lake Malawi/Malombe system Workshop session IV, Friday 8th June 8th

Introduction

The purpose of this workshop session was to highlight research gaps that constrain the management of the fisheries in the Lake Malawi/Malombe complex. While it was not possible to fully describe and prioritise research activities during the workshop session, observations on lacking information and key questions were highlighted. The following list is by no means exhaustive and should serve as a guideline for future research.

Dissemination of Research

- The dissemination of research results to the fishing community can at best be described as weak if not non-existent.
- The development of mechanisms and tools for the rapid dissemination of such results is seen as a high priority.

Social Research

The paucity of knowledge on the social aspects governing the behaviour of the fishing community was regarded as a severe 'bottleneck' in the implementation of management measures in the fishery. To facilitate the management of the fishery a number of key questions need to be addressed by social research in the near future. Key questions were:

- What factors control the behaviour of the fisher on lake Malawi (i.e. migration, resource shifting)?
- Whom is the fishing community utilising the various fish stocks (i.e. migrants vs. residents)?
- How can the acceptance of regulations be improved in the fishing community?
- How can management interventions best be implemented in the Malawian context?
- How should management advice be relayed to resource managers and communities?
- What are socially acceptable management interventions in Malawi (i.e. closed seasons, gear limitations, access limitations, sanctuary areas).
- What is the legal framework governing access rights to fishing resources?
- What is the community structure in lakeshore villages.
- What are the main sources of conflict between fishing sectors that constrain management?

Fisheries

The maintenance of regular monitoring activities by the DoF were seen as vital. These monitoring activities include:

- Monitoring of commercial trawl catches.
- Regular independent monitoring trawl surveys by the FRU.
- Catch and effort monitoring of the small-scale fisheries.
- Research on the exploitation strategies for under-exploited deepwater and pelagic stocks was considered a high priority. Key questions were:
 - How can the deepwater and pelagic stocks be exploited by the small scale fisheries sector?
 - Why are these stocks not exploited by the commercial/ small scale sector?
 - What are the constraints towards developing fisheries for these stocks?
- The qualification of various stocks was seen as a high priority. Key questions were:
 - What is a stock of fish in Lake Malawi, taking into account the highly diverse ichthyofauna?
 - What species/groups of species form lake-wide single stocks and which form localised stocks?
 - What is the state of these stocks in the lake and in localised areas?
 - Is area specific management feasible?
- The characterisation of the various fishing sectors and the definition of their utilisation patterns.

- The definition of resource utilisation by all sectors is vital (i.e. inshore and off shore fisheries).
- Sub-sectors within the small scale fisheries need to be clearly defined.
- What are the utilisation patterns of the various gears used in the fishery and were are the utilisation overlaps?
- The paucity of data on the biology and population structure of many of the target species in the fishery constrains the use of analytical fisheries management models.

Economics

- Information of the market system is lacking both on local and regional levels.
- The economics of the small scale and large scale fishery are not documented.
- The economic forces driving the small-scale fisheries are not understood.
- The use and flow of capital gained from fishing is not understood at community level.
- The economic benefits of fishing to the local non-fishing community is not understood.

Mbuna

- It was suggested that research on the Mbuna should not be a high priority of the FRU. Since there is a high level of independent research interest in this species group, work by independent researchers on stock assessments, biology, life history and evolution should be facilitated by the DoF.
- Mechanisms need to be developed for the dissemination of research findings from such independent research to the DoF for the formulation of management plans for this stock.

Taxonomy

- Taxonomic research was considered as a vital component of fisheries management.
- Taxonomic research should be supported by the DoF at both institutional and independent researcher level.
- The development of a standard identification/field guide for the fishes of Lake Malawi is seen as a high priority.