



Government of Malawi

NATIONAL FISHERIES AND AQUACULTURE POLICY

Second Edition



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Foreword

The sustainable management of fisheries resources and development of aquaculture requires proper policy guidance both at national and local levels. Consideration of policy issues for sustainable management of natural resources and environment at international, regional and national levels also provide an informed choice for a sound fisheries management policy framework. It is against this background that a revised Policy for the fisheries sector is necessary in line with the overarching development objectives on food security and economic growth as outlined in the Malawi Growth and Development Strategy II (MGDS II) and other regional or international policy considerations.

The 2001 National Fisheries and Aquaculture Policy (NFAP) document has so far guided management of the fisheries resources in Malawi. However, there have been policy shifts from natural resources conservation and management to promoting sustainable production of fish for food security as well as income generation. Furthermore, the need for strengthening monitoring and evaluation as well as utilizing Public-Private Partnerships (PPP) has necessitated this review. Hence, it is timely that the Policy be revised at a period of so much change, both within and outside the sector. The revised National Fisheries and Aquaculture Policy will also provide strategies of addressing the challenges and identify opportunities that now prevail.

While noting various challenges facing the fisheries sector, the goal of the Policy is to promote sustainable fisheries and aquaculture development in order to contribute to economic growth in Malawi. It will also focus on enhancing fish quality and value addition for domestic and export trade to create wealth, promoting technology development and its transfer to the users, enhancing capacity for the sector's development and promoting social development, decent employment and fisheries governance through participatory resource management regimes.

The key to success is hard work and commitment to be demonstrated by both the Government and stakeholders. Let us all come together and make implementation of this Policy a success for the benefit of the present and future generations. It is my sincere hope that the Policy will be a source of renewed motivation and dedication for a more unified framework and a basis for diversifying interventions addressing fisheries development issues.



Dr. George T. Chaponda, MP
MINISTER OF AGRICULTURE, IRRIGATION AND WATER DEVELOPMENT

Preface

The second edition of the National Fisheries and Aquaculture Policy (NFAP) aims to address critical issues affecting fisheries and aquaculture development in Malawi. Several opportunities exist in the implementation of this Policy. The on-going governance reforms ensure sustainability of the fisheries resources for future generations of Malawians. The growing interest in aquaculture investment provides an impetus to sustained fish production for local and export markets.

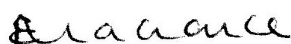
There are several challenges that exist in the sector and need to be addressed for the benefit of fishers and fish farmers. The major challenges include overfishing of commercial valuable fish species like Chambo, high post harvest losses, climate change, weak collaboration among stakeholders, and slow progress in aquaculture development due to poor quality feed and fingerlings. Hence, the revised Policy provides practical solutions to the challenges.

It is expected that the revised Policy will be implemented in line with the Malawi Growth and Development Strategy (MGDS II) goals. Among the priority themes in the MGDS II are sustainable economic growth and social development which are key to poverty reduction and improvements in the livelihoods. The MGDS II recognizes labour and employment as a sub-theme, which seeks to achieve, among others, increased labour productivity, enhanced gainful and decent employment for all, and elimination of worst forms of child labour. The main goal of Agriculture and Food Security priority area is to increase agricultural productivity and diversification which focuses on increased sustainable fish production within the medium-term outcome.

Besides other key national policies, this Policy takes cognizance of the Agriculture Sector Wide Approach (ASWAp), which provides a priority investment programme including fisheries. At international level, Malawi is a signatory to several agreements and protocols. The Policy takes into account key agreements and protocols including the SADC Protocol on Fisheries and the Abuja Declaration, both of which call for an end to open access in capture fisheries; the Convention on Biodiversity, and its subsidiary protocols, which commits Malawi to the preservation of Biodiversity; and the FAO Code of Conduct for Responsible Fisheries.

The revision process was consultative. A series of consultative meetings were held in various parts of the country. These meetings were held to consult fish farmers, fishers, public institutions, academia, the private sector and cooperating partners as the major stakeholders involved in the fish industry.

Implementation of this Policy will require concerted efforts of all partners identified in the document. I, therefore, call upon all stakeholders to work together in order to achieve the goals set in this Policy.



Erica Maganga (Mrs)
SECRETARY FOR AGRICULTURE, IRRIGATION AND WATER DEVELOPMENT

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The Ministry of Agriculture, Irrigation and Water Development would like to sincerely thank all individuals and organizations that contributed to the preparation of this Policy document throughout the extensive consultative process. In particular, the Ministry acknowledges technical and financial support from the European Union funded African Caribbean and Pacific (ACP) Fish II Project and the United Nations Development Programme (UNDP) through the Poverty and Environment Initiative (PEI) Project for their technical and financial support. Finally, the Ministry is indebted to the Food and Agriculture Organisation (FAO) for their useful comments that enriched the Policy document.

List of Abbreviations

ACP	African Caribbean and Pacific
AIDS	Acquired Immune Deficiency Syndrome
ASWAp	Agriculture Sector Wide Approach
CCRF	Code of Conduct for Responsible Fisheries
EAFA	Ecosystem Approach to Fisheries and Aquaculture
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GoM	Government of Malawi
HIV	Human Immunodeficiency Virus
ILO	International Labour Organisation
MCS	Monitoring Control and Surveillance
MGDS II	Malawi Growth and Development Strategy II
MK	Malawi Kwacha
MoAIWD	Ministry of Agriculture, Irrigation and Water Development
MSY	Maximum Sustainable Yield
NFAP	National Fisheries and Aquaculture Policy
NGO	Non Governmental Organisation
PEI	Poverty and Environment Initiative
PFM	Participatory Fisheries Management
PPP	Public Private Partnership
SADC	Southern African Development Community
SPS	Sanitary and Phytosanitary
UNDP	United Nations Development Programme

Definitions of Technical Terms

Aquaculture: It is the production of aquatic animals and plants in impoundments or enclosures.

Capture fisheries: This refers to the harvesting of fisheries resources from the natural water bodies such as lakes and river systems by using various fishing gears and vessels.

Fishing gear: This refers to any configuration of equipment used for fishing such as nets, hooks, fish traps, and spears, among others.

Hatchery: This refers to an installation for housing facilities for breeding, nursing and rearing seed of fish to fry, fingerlings or juvenile stages.

Mbuna: This is fish of closely related endemic genera such as *Pseudotropheus*, *Labeotropheus*, *Melanochromis*, *Labidochromis*, *Melanochromis*, *Cynotilapia*, *Petrotilapia*, *Genyochromis*, *Cythochromis*, *Gephyrochromis* and *Iodotropheus*. The fish is located in Lake Malawi and is unique in that it is generally strongly pigmented and is usually associated with rocky inshore habitats where it is confined to very narrow ranges among rock crevices and surfaces. Most of the Mbuna contributes substantially to the export trade.

Monitoring, Control and Surveillance: This refers to the collection, measurement and analysis of fishing operations; the specification of the terms and conditions under which resources can be harvested as contained in the fisheries legislation; and the regulation and supervision of the fishing operations to ensure that the fisheries legislation and terms, conditions of access, and management measures are observed.

Pair trawlers: Two vessels that tow a trawl net behind them.

Participatory Fisheries Management (PFM): a shared fisheries management arrangement involving Government, fishing communities and other stakeholders.

Stern trawler: A single fishing vessel that tows a trawl net behind it.

1. INTRODUCTION

This document presents the second edition of the National Fisheries and Aquaculture Policy (NFAP). It is a revision of the National Fisheries and Aquaculture Policy of 2001. The NFAP has a separate and complementary document, Fisheries and Aquaculture Policy Implementation, Monitoring and Evaluation Strategy, which outlines key issues relating to implementation, monitoring and evaluation.

The Government of Malawi (GoM) has revised the National Fisheries and Aquaculture Policy of 2001 in order to effectively contribute to sustainable economic growth in Malawi, as outlined in the Malawi Growth and Development Strategy II (MGDS II). The revised Policy seeks to provide guidance to all stakeholders in the implementation and provision of fisheries services as well as interventions that will continue rendering the sector as a key source of food and wealth in Malawi.

The revision was conducted based on the potential of the fisheries sector in contributing towards sustainable economic growth through sustainable fisheries management and increased aquaculture production. Thus the Policy focuses on increasing fish production, enhancing fish quality and value addition, promoting social development and decent employment, research and institutional strengthening of the sector.

1.1 Background

With 20 per cent of Malawi's surface area covered by water, the fisheries sector is important in contributing substantially to food and nutritional security, livelihoods of the rural population and economic growth of the country as it contributes 4 per cent to the Gross Domestic Product (GDP). In the 1970s, fish provided 70 per cent of animal protein intake of the Malawian population and 40 per cent of total protein supply for the country. These figures have declined as a result of the decrease in catches and rapid population growth over the last thirty years. The per capita fish consumption in Malawi has subsequently fallen by more than 60 per cent, from 14 kg per person per year in the 1970s, to about 8 kg in 2015. The decline in per capita supply and protein intake brings serious nutritional implications for the nation, especially to some vulnerable groups such as HIV/AIDS affected and infected people, orphans and the poor.

The fisheries sector is broadly divided into three categories, namely: capture fisheries, aquaculture and aquarium trade or ornamental.

1.1.1 Capture Fisheries

The capture fisheries sub-sector directly employs nearly 60,000 fishers, and over 500,000 people are indirectly involved in fish processing, fish marketing, boat building and engine repair. The sub-sector is largely artisanal in nature, except that in Lake Malawi there are also semi-commercial and commercial fisheries, made up of pair trawlers and larger stern trawlers respectively. The small-scale sector produces 90 per cent of the annual fish production while the rest is landed by the commercial or industrial sector.

The fishing areas include Lake Malawi, which is the biggest lake in the country. It has a surface area of 29,000 sq km. Lake Chilwa is the second and is around 2,000

sq. km depending on seasons. Other smaller water bodies include Lakes Malombe (390 sq. km) and Chiuta (about 200 sq. km) and the Lower Shire River system.

Fish production varies annually with estimates from 2000 to 2015 averaging 90,000 tonnes per annum. Catches of the most valuable fish, Chambo (*Oreochromis* spp), however, remain low averaging 4,000 tonnes per annum. This is in contrast to the period between 1981 and 1990 during which over 10,000 tonnes of Chambo could be landed per annum.

The aquarium trade mainly involves exploitation of Mbuna fish for export trade. Mbuna fish are also part of the rich biodiversity of Lake Malawi that attract tourism. The sub-sector is dominated by a few operators that have ranged from two to three per annum since the 1980s.

1.1.2 Aquaculture development

The aquaculture sub-sector has potential to increase fish production in the country. Enhanced aquaculture production especially at commercial level would improve supply of fish protein in rural areas far away from the major fish production sources and also creation of wealth and employment in such areas. The aquaculture sub-sector can also be one of the major sources of fish product exports, thereby contributing to Malawi's economic growth.

There are 6,000 fish farmers with varying sizes of ponds in the aquaculture sub-sector. Fish production in the sub-sector has been increasing from 800 tonnes per annum estimated in 2006 to 3,600 tonnes per annum by 2015. However, one of the major problems identified with commercial aquaculture is that the species cultured are slow growing and have a poor feed conversion, making the products of aquaculture expensive to produce.

Fish farming in Malawi began as early as 1906 with the introduction of rainbow trout for angling. The use of indigenous species in fish farming began in 1956/57 with the culture of *Oreochromis shiranus* and *Tilapia rendalli*. In 1957 pond culturing of the species increased with the establishment of the Domasi Experimental Fish Farm for breeding and distribution of *Tilapia rendalli* and *Oreochromis shiranus* to farmers. In the 1970s and 1980s the sub-sector received support from several donors and the non-governmental organisations (NGOs), which promoted wide adoption of fish farming in Malawi. Commercial aquaculture was established in 2005 with only two operators. In order to protect the native biodiversity, Malawi has been prohibiting introduction of alien fish species (exotics) for aquaculture.

The annual aquaculture production is currently estimated at 3,600 tonnes. Aquaculture being one of the key agricultural activities, it has potential to contribute to food security and poverty reduction goal by supplementing capture fisheries that are being exploited at over their maximum sustainable yields (MSY) for most of the commercial fish species including Chambo.

1.1.3 Fish processing

Several methods are employed for fish processing. Sun-drying, smoking, par-boiling and pan-roasting are common. Some fish is iced and sold fresh in towns, particularly from the industrial fishery. In rare cases, fish is frozen and delivered to supermarkets. There is very little value adding in the fishing industry. Fish smoking and other processing techniques contribute to problems of deforestation in areas surrounding those villages where such activities are carried out.

Although the quality of fish appears to have been generally acceptable for the local market, there are indications that more consumers are becoming quality-conscious. This is also critical with fish exports that demand proper handling and processing of the fish including stringent control of upstream practices. Certainly, the current quality of fish is not suitable for export to the highly regulated markets. Generally, there is an urgent need to address public services and infrastructure issues along the whole fish value chain.

1.2 Rationale

This Policy is designed to meet the challenges and emerging issues of the fisheries sector, and to provide linkages with the emerging cross-cutting policies, plans and activities of national and regional bodies where they affect or interact with fisheries. It gives clear pointers to the priority actions that Government and its partners must implement so as to make the best use of the resources that are available in the context of limited human resource, finance and logistics. The seven Policy priority areas outlined herein are key ones based on the consultations that were conducted with stakeholders. In specific terms, issues about resource mobilisation, timeframe and capacity were taken into consideration when identifying the Policy priority areas.

The country's increased population growth now estimated at 17 million is putting more pressure on demand for fish. The current per capita fish consumption level is 8 kg dropping by more than 60 per cent since the 1970s when it registered about 14kg per person per annum. The declining per capita fish consumption undoubtedly affects the nutritional status of the Malawian population, majority of which depends on fish as a cheap source of animal protein and valuable source of micronutrients.

While there have been attempts to regulate fishing through licensing of fishing gear, competition for resource exploitation is a threat to sustainability of the fish stocks. The governance reforms that have been adopted since the 1990s with adoption of Participatory Fisheries Management (PFM) or co-management arrangements have not been successful. Critical issues include establishing community property regimes whereby empowered fishing communities and other stakeholders are responsible for formulation of fisheries by-laws and developing management plans in a decentralised framework. Without formulation of an appropriate strategy, fish supply in the country will continue to decline against the increasing human population.

Of particular concern regarding the aquarium trade are certification issues and development of a value chain for Mbuna fish. Some management measures of Mbuna are enforced by the Department of National Parks and Wildlife as they restrict fishing within a 100-m zone around islands on Lake Malawi where the rocky dwelling

fish is located. A strengthened collaboration between the Department of Fisheries and the Department of Parks and Wildlife is, therefore, necessary.

Aquaculture production has remained very low until the mid-2000s. The main constraints to aquaculture development include inadequate policies, limited technological advancement and weak institutional support. The policy issues mainly deal with hatchery development, tenure issues in cage culture, security problems; catfish fry survival, feed production and weak institutional collaboration.

Limited human resource management capacity within the fisheries and aquaculture sub-sectors remains a key problem which subsequently affects service delivery. A functional review of the Department of Fisheries was approved in 2012 to address manpower issues. Therefore, effective implementation of the functional review will greatly improve service delivery in collaboration with fishers, fish farmers and other relevant stakeholders. Furthermore, the level of skills in the sector is currently inadequate to satisfy needs of the capture fisheries and aquaculture sub-sectors. The Department also lacks appropriate infrastructure mainly for research, extension and training.

Inadequate funding also poses a great challenge on the implementation of fisheries policies, programmes and projects. For the past decades the fisheries sector has financially and technically benefited from the Government, non-governmental organisations (NGOs) and donors. Currently, there are no development projects in capture fisheries, which can support various programmes including research, extension as well as monitoring, control and surveillance (MCS).

Social development and decent employment issues in small-scale fisheries, as well as gender inequality remain crucial issues in Malawi's fishing communities. They affect livelihoods and socio-economic sustainability of the fisheries sector. The fishing communities often suffer from unhealthy and unsafe working conditions and are often prone to high levels of vulnerability that are not only due to their dependence on exploiting a limited natural resource base and the inherent unpredictability of the fishing profession, but that is also influenced by their often remote locations, low levels of education, ill-health and, lack of access to social services. Limited livelihood diversification, youth unemployment and child labour and gender inequalities are equally pertinent issues affecting small-scale fishing communities.

Several climate-related issues threaten sustainability of both the fisheries and aquaculture sub-sectors. Impacts occur due to both global warming and associated physical changes as well as from frequency, intensity and location of extreme events.

Based on the issues highlighted above, this Policy, therefore, aims to increase fish supply in the country within the short, medium and long terms. It is expected that in the medium term, the per capita fish consumption should increase from 8.12 kg in 2014 to 10 kg by 2020. Subsequently, this calls for an increased annual fish supply from capture fisheries from the current average landings of 98,000 tonnes to 110,000 tonnes by 2020 and in aquaculture from 3,600 tonnes to 10,000 within the same period, assuming an average human population growth rate of 2.8 per cent per

annum. Based on the same trends, by 2029 fish supply from aquaculture investments will increase to 50,000 tonnes. This will provide an annual surplus of over 20,000 tonnes.

With increased fish production from both capture fisheries and aquaculture coupled with value added initiatives, it is expected that fish exports will also increase by focusing on targeted markets that will include both high and low value fish products mainly destined for the regional market. By 2021, annual fish exports will increase to 3,000 tonnes from the current level of 500 tonnes.

1.3 Linkages with other Policies

The main goal of the Ministry of Agriculture, Irrigation and Water Development under which Department of Fisheries falls is to increase agricultural productivity and diversification of which increased fish production within the Medium-Term outcome is also highlighted. The Policy will be implemented in line with the MGDS II, which is an overarching development policy document. One of the priority themes in the MGDS is on the sustainable economic growth as a key to poverty reduction and improvements in the livelihoods. This Policy also takes cognizance of the Agriculture Sector Wide Approach (ASWAp), which provides a priority investment programme for the agricultural sector, including fisheries.

Other key policies and strategies with linkages to this Policy include National Environmental Policy of 2004, Malawi Nutrition Policy of 2009, National Land Resources Management Policy of 2000, Wildlife Policy of 2000, Water Resources Policy of 2005, Decentralisation Policy of 1998, Gender Policy of 2008, and Malawi National HIV/AIDS Policy of 2013. Below is an outline of the main focus of each Policy.

1.3.1 National Environmental Policy

The National Environmental Policy of 2004 calls for development of mechanisms for cross sector management; facilitating active participation of local communities and other stakeholders in enforcement of legislation; and integration of environmental planning, management and institutional frameworks into the decentralized structure.

1.3.2 National Land Resources Management Policy

The National Land Resources Management Policy of 2000 aims to promote the efficient and diversified and sustainable use of land resources both for agriculture and other uses in order to avoid sectoral land use conflicts and ensure sustainable socio-economic development.

1.3.3 Wildlife Policy

The Wildlife Policy of 2000 aims to ensure proper conservation and management of wildlife in order to provide for: sustainable utilization; equitable access to the resources; and fair sharing of the benefits from the resources for both present and future Malawians.

1.3.4 Water Resources Policy

The overall goal of the National Water Resources Policy of 2005 is sustainable management and utilization of water resources, in order to provide water of acceptable quality and of sufficient quantities, and ensure availability of efficient and

effective water and sanitation services that satisfy the basic requirements of every Malawian and for the enhancement of the country's natural ecosystems.

1.3.5 Malawi Decentralisation Policy

The Malawi Decentralisation Policy of 1998 seeks to create a democratic environment and institutions in Malawi for governance and development at the local level which will facilitate the participation of the grassroots in decision making; eliminate dual administrations (field administration and local government) at the district level with the aim of making public service more efficient, more economical and cost effective; promote accountability and good governance at the local level in order to help Government reduce poverty; and mobilise the masses for socio-economic development at the local level.

1.3.6 Gender Policy

The Gender Policy of 2008 seeks to mainstream gender in the national development process in order to enhance participation of women and men, girls and boys for sustainable and equitable development.

1.3.7 Malawi National HIV/AIDS Policy

The goal of the Malawi National HIV/AIDS Policy of 2013 is to prevent HIV infections, reduce vulnerability to HIV, to improve the provision of treatment, care and support for people living with HIV/AIDS and to mitigate the socio-economic impact of HIV/AIDS on individuals, families, communities and the nation.

1.3.8 International Instruments

At international level, Malawi is a signatory to several agreements and protocols. The Policy takes into account key agreements and protocols including the SADC Protocol on Fisheries of 2001 and the 2005 Abuja Declaration, both of which call for an end to open access in capture fisheries; the Convention on Biodiversity and its subsidiary protocols, which commits Malawi to the preservation of biodiversity; and the FAO Code of Conduct for Responsible Fisheries (CCRF) of 1995. The Policy furthermore supports Malawi's obligation related to the ILO Minimum Age for Employment Convention No. 138 of 1973 and Voluntary Guidelines on the Management of Small-scale Fisheries. Finally, the 1971 RAMSAR Convention on Wetlands is also considered for the principle of wise use of natural resources including fisheries with participation of the fishing communities.

2. BROAD POLICY DIRECTIONS

2.1 Policy Goal

The goal of the Policy is to promote sustainable fisheries resource utilisation and aquaculture development in order to contribute to food and nutrition security and economic growth of the country.

2.2 Policy Outcomes

When the Policy is fully implemented, it is expected that the following outcomes would be achieved:

- (i) Enhanced capacity to sustainably manage and develop fisheries and aquaculture in Malawi;
- (ii) Increased fish consumption for Malawians;

- (iii) Increased decent employment opportunities in the fisheries and other related sectors; and
- (iv) Increased earnings for people and government from fish exports and domestic trade.

2.3 Policy Objectives

The main objective of this Policy is to sustainably increase fisheries and aquaculture productivity for accessible nutritious food and increased contribution to economic growth. The specific objectives of the Policy within a five-year term (2016-2021) are as follows:

- (i) To increase annual fish production from capture fisheries from 90,000 tonnes to 110,000 tonnes;
- (ii) To increase small and large scale aquaculture production from 3,600 tonnes to 10,000 tonnes;
- (iii) To strengthen participatory fisheries management regimes;
- (iv) To reduce fish post harvest losses from 40 to 20 per cent;
- (v) To increase annual fish exports from 500 tonnes to 3,000 tonnes;
- (vi) To increase per capita fish consumption from 8.12kg to 10kg;
- (vii) To improve decent employment in fishing communities for youth, women and men and to reduce the number of child labourers;
- (viii) To promote applied research in fisheries and aquaculture and monitor the impact of pollution and environmental changes including climate change; and
- (ix) To develop capacity of the Government and local management institutions to serve the industry.

3. POLICY PRIORITY AREAS

This Policy has seven priority areas namely Capture Fisheries; Aquaculture Development; Fish Quality Control and Value Addition; Governance; Social Development and Decent Employment; Research and Information; and Capacity Development. While numerous issues could be considered to address the problem of limited supply of fish in Malawi, implementation of this Policy will concentrate on the seven Policy priority areas within the next five years.

3.1 Policy Priority Area 1: Capture Fisheries

Capture fisheries refers to the harvesting of fisheries resources from the natural water bodies such as lakes and river systems by using various fishing gear types and vessels. Fish production in Malawi from Lakes Malawi, Malombe, Chilwa, Chiuta and Shire River system varies annually. From the year 2000 to 2015, annual fish landings averaged 90,000 tonnes. The fish production levels have increased for the past decade mainly due to the promotion of offshore deep water fishing in Lake Malawi, intensification of recording Usipa (low value fish) in the catch recording data systems, and the recovery of Lake Chilwa fishery after the 1995 recession. However, catches of the most valuable fish, Chambo, remain low averaging 5,000 tonnes per annum between 2001 and 2014. This is in contrast to the period between 1981 and 1990 when around 10,000 tonnes could be landed. There is also a large underexploited offshore resource in Lake Malawi estimated at 33,000 tonnes of Ndunduma (*Diplotaxodon spp.*) that fishers can sustainably exploit. The problem is however, on the availability and cost of technology that is needed to exploit such resources mainly for the small-scale fishers.

About 90 per cent of the fish landed comes from nearly 60,000 small-scale artisanal fishers while additional 500,000 people are engaged in other ancillary activities such as boat building, net mending, and fish processing and trading. There is increasing fishing pressure on the fish stocks in the inshore waters thereby leading to overfishing. This is attributed to a number of factors like increasing human population and limited alternative income generating activities. Finally, habitat degradation within the aquatic environment and catchment areas and climate change also affect fish productivity.

3.1.1 Policy Statements

The Policy will ensure that:

- (i) proper monitoring and control of exploitation of the fisheries resources in all lakes and river systems are put in place;
- (ii) fishing-related activities based on Public-Private Partnership arrangements are promoted;
- (iii) sustainable control measures for the recovery of the over-exploited stocks are developed, adopted and implemented;
- (iv) appropriate fishing technologies for the various fisheries with focus on the offshore fish resources are developed and disseminated.

3.2 Policy Priority Area 2: Aquaculture

Aquaculture is the production of aquatic animals and plants in impoundments or enclosures. In Malawi, aquaculture has mainly focused on farming fish in ponds, cages and tanks which require little investment. An average of 3,600 tonnes of fish is currently produced on an annual basis. About 6,000 farmers are engaged in small-scale aquaculture production. While the sector is dominated by small-scale fish farmers, there has been an emerging interest for investment in commercial aquaculture with some operators involved in the subsector for the past decade.

Aquaculture development in Malawi is constrained by several challenges namely: limited availability of quality fingerlings, poor feed and low participation of large scale investors. While there are some hatcheries, the quality of fingerlings produced is of low standard and uncertified.

However, there is great potential for aquaculture growth which can have a significant contribution to the economy of the country. By targeting large scale operations and promoting aquaculture as business at various operational levels (small, medium or large), fish supply will increase. Aquaculture production will involve use of native species and improved strains of the indigenous species for biodiversity conservation.

3.2.1 Policy Statements

To achieve sustainable development of aquaculture in Malawi, the Policy will ensure that:

- (i) appropriate regulatory measures for sustainable aquaculture development are put in place;
- (ii) small-scale aquaculture production is promoted as business; and
- (iii) investment in aquaculture development from both Government and the private sector is increased.

3.3 Policy Priority Area 3: Fish Quality and Value Addition

There is a global recognition of the importance of food safety issues including fish products. Fish quality and value addition are of major concern in Malawi as it is estimated that 40 percent of the annual catch is lost through post harvest spoilage and insect infestation. This implies an economic loss in terms of beach value of around MK8.4 billion annually, besides the lost income opportunities from rewarding markets given the limited value-adding within these operations. At present, the available fish standards do not cover all fish products and fish is landed in areas where there are no proper fish landing and handling facilities. In addition, there is limited monitoring, and control on fish quality aspects and safety for consumption is not guaranteed.

3.3.1 Policy Statements

To ensure improved fish quality supply and value addition to the fish and fish products, the Policy will ensure that:

- (i) an enabling legislative framework for quality fish for the local and export markets is put in place;
- (ii) adoption of best practices including sanitary and phytosanitary (SPS) aspects that will enhance quality, hygiene and sanitation and value addition for fish and fish products is promoted;
- (iii) fish quality standards are developed and enforced; and
- (iv) guidelines and procedures for certification of fish and fish products for domestic and export markets are introduced and implemented.

3.4 Policy Priority Area 4: Governance

Governance in fisheries entails a joint effort by the state and non-state actors in the management of resources for the benefit and to the satisfaction of all relevant stakeholders in what is termed participatory fisheries management (PFM) or co-

management. The principles of governance include democratic participation, inclusiveness, accountability and equity. The key challenges in the on-going PFM include unclear benefits and roles of the communities, limited capacity of key stakeholders participating in the fisheries and aquaculture development, financial constraints, transboundary issues and weak cooperation among the stakeholders.

Open access is the major problem hampering achievement of sustainable fisheries. The small-scale fisheries are conducted under the open access management system and it is very difficult to regulate the operations. Clear tenure rights to fishing is, therefore, a fundamental step towards improved fisheries governance, however care has to be taken to ensure that access limitations do not result in worsening food insecurity or in undermining customary and traditional rights of current resource users. Controlling the size and capacity is important considering that there are too many fishers competing with each other and chasing after the dwindling fisheries resources.

Establishment of appropriate governance strategies for fisheries management is therefore essential. The rights-based approaches, co-management approaches, and capacity reduction strategies by supporting initiatives on diversified livelihood are central to achieve sustainable fisheries management. It is also imperative that mechanisms be put in place to ensure a sustained mobilisation of financial resources.

3.4.1 Policy Statements

For improved fisheries management and governance for both small- and large-scale sectors, the Policy will ensure that:

- (i) active participation of local fishing communities and fish farmers in the sustainable development of the fisheries sector is promoted;
- (ii) legal instruments and procedures for the participation of relevant stakeholders in the fisheries sector are developed;
- (iii) an enabling environment for fishing communities to organize themselves at local and national level is provided;
- (iv) sustainable financing mechanism for promotion of fisheries and aquaculture is established;
- (v) best practices in the management of shared ecosystems is promoted; and
- (vi) collaboration with other natural resource sectors in the conservation and management of fisheries resource is strengthened.

3.5 Policy Priority Area 5: Social Development and Decent Employment

Enhancement of social development and decent employment in small-scale fisheries, as well as promotion of gender equality in the small-scale fishing communities, are necessary for both the improvement of livelihoods and the socio-economic sustainability of the small-scale fisheries sector.

The small-scale fishing communities often suffer from unhealthy and unsafe working conditions and are often prone to high levels of vulnerability including HIV and AIDS. This is mainly due to their dependence on exploiting a limited natural resource base, inherent unpredictability of the fishing profession, remoteness of locations, low levels of education, lack of access to social services, as well as weak economic and socio-

political powers. Lack of livelihoods' diversification, youth unemployment and child labour are also pertinent issues affecting small-scale fishing communities. There is also a need to recognise that women and men play important and complementary roles in the governance and development of the small-scale fisheries sector, and that they should enjoy equal respect and rights, in all aspects of life and in decision-making. Women are often more disadvantaged than men, therefore, the Policy aims at supporting and empowering women whilst working with both men and women fishers.

Therefore, increased attention to social and economic development (health, education, organisational development, social protection mechanisms, decent employment and diversification of income, gender equality) is needed to ensure that small-scale fishing communities and their members are socially and economically empowered.

3.5.1 Policy Statements

To address issues on social development and decent employment, the Policy will ensure that:

- (i) a strategic enabling environment for the small-scale fishing communities in a gender-equitable manner is developed;
- (ii) HIV/AIDS and gender issues are mainstreamed in the fisheries sector strategies and programmes.
- (iii) child labour issues in the fisheries sector is assessed and mainstreamed;
- (iv) decent employment in small-scale fisheries and aquaculture is promoted; and
- (v) access by the small-scale fishing communities to services essential to social and economic development is promoted.

3.6 Policy Priority Area 6: Research and Information

Fisheries research involves generation of knowledge, information and technologies that are necessary for sustainable exploitation, management, conservation of biodiversity, utilisation processes and marketing as well as investment in the fisheries sector. As with any other natural resources, availability of accurate and relevant information about the fisheries resources is an essential pre-requisite for fisheries management. The current Policy shifts towards decentralisation of management responsibilities with a focus on the importance of small-scale fisheries in terms of food security, rural income generation and employment creation. In this respect, there is need to consider the type of data and information necessary for fisheries management based on the Ecosystem Approach to Fisheries and Aquaculture (EAFA). Presently, research and monitoring done to provide information on fisheries such as standing biomass, composition, biology and ecology, distribution and stock population structure, lake productivity processes, and fisheries socio-economic studies are intermittently undertaken due to financial constraints and limited skills.

Development and dissemination of appropriate messages through extension services are not effective. There is a weak linkage between research and extension services at both national and international levels. Research information is not readily available to be packaged for access by fishers and fish farmers. It is apparent that

the extension methodologies and approaches employed in Malawi need to be revisited considering the prevailing economic situation.

3.6.1 Policy Statements

For effective generation of information through research in capture fisheries and aquaculture, as well as development and dissemination of messages, this Policy will ensure that:

- (i) demand-driven, service oriented research focusing on problems identified with the stakeholders in the fishing industry is promoted and implemented;
- (ii) an information system necessary for sustainable exploitation, management, conservation of biodiversity, utilization marketing as well as investment in the fisheries sector is established;
- (iii) appropriate extension methodologies and approaches for fishing and fish farming communities are applied;
- (iv) vulnerability and risks of fishing and fish farming communities to climate change impacts is assessed;
- (v) an analysis of socio-economic risks and vulnerabilities of fish farmers in an age- and gender-sensitive manner is carried out;
- (vi) adaptation measures of the impact of climate change to resource and livelihood of the resource users are identified and implemented; and
- (vii) labour market in the fisheries sector with regards to work standards and conditions is analysed.

3.7 Policy Priority Area 7: Capacity Development

The institutional strengthening and capacity building of the Department of Fisheries and other stakeholders in the sector, in particular fishing communities, includes development of adequate human resources and skills and mobilisation of appropriate and adequate physical facilities (e.g. various types of equipment) for delivery of various services to the fishing and fish farming communities and other stakeholders.

Currently, the Department has a vacancy rate of nearly 30 per cent. There is also a need to increase the establishment considering the decentralised functions of the Department that have been on-going since 2003. Therefore, delivery of necessary skills to the various stakeholders in the sector should be in line with the identified gaps and opportunities mainly in fisheries research, participatory fisheries management, boat building, net construction and aquaculture development in the state institutions and the private sector.

3.7.1 Policy Statements

For effective delivery of services to various stakeholders within the fishing industry, the Policy will ensure that:

- (i) capacity of both technical staff and fishing community including women and youth in delivering various services is enhanced;
- (ii) collaboration with other natural resource related sectors and non-state actors in sustainable utilisation of fisheries resources is strengthened;
- (iii) fisheries research and educational facilities are rehabilitated and upgraded;
- (iv) skills on HIV/AIDS and gender mainstreaming in the fisheries sector strategies are enhanced; and
- (v) capacity on decent employment standards is developed.

4. IMPLEMENTATION ARRANGEMENTS

4.1 Institutional Arrangements

The national fisheries machinery, Ministry of Agriculture, Irrigation and Water Development, shall work in close collaboration with the other stakeholders in conserving and managing fisheries resources. Where necessary, the Ministry may enter into agreement with other public organisations, communities, the private sector, and NGOs on specific conservation and management issues. The Policy also promotes co-ordination and collaboration with other sectors in dealing with multi-sectoral issues, which have an impact on the environment and fishery resources. Additionally, international cooperation is required to carry out many of the activities proposed. Many international treaties and protocols cover the various Policy themes, and transboundary concerns that affect Lake Malawi in particular. This will ensure that efforts to resolve interrelated, causative issues involved in the multiple uses of aquatic and water resources and in the management of fisheries resources are not fragmented, overlapping and ineffective.

4.2 Legislative framework

For implementation of this Policy there shall be an Act of Parliament on conservation and management of fisheries resources, which shall be reviewed from time to time. This review shall take into consideration other legal instruments, particularly those having an impact on fisheries and aquaculture in order to ensure that they are harmonised.

4.3 Resource requirement

Government acknowledges the fact that appropriate sustainable utilisation of fisheries resources and aquaculture development requires adequate technical and financial resources. Consequently, it commits itself to build appropriate capacity and provide adequate funds to the sector. Supplementary support shall be sourced from various development partners.

4.4 Implementation Plan

To achieve the objectives set out in the Policy, an implementation plan has been developed as a tool for implementing the NFAP. The set targets and outcomes will relate to the seven Policy areas that include Capture Fisheries; Aquaculture Development; Fish Quality Control and Value Addition; Governance; Social Development and Decent Employment; Research and Information; and Capacity Development. This Plan is in a separate but complementary document called Implementation Monitoring and Evaluation Strategy.

4.5 Monitoring and Evaluation

The implementation of the Second Edition of the National Fisheries and Aquaculture Policy requires an effective monitoring and evaluation system with appropriate and efficient feedback mechanism. This entails carrying out monitoring and evaluation functions at all levels and gathering data and information at national, sectoral and local levels. To establish internal self-monitoring and evaluation mechanisms, an institutionalised framework as outlined in the National Fisheries and Aquaculture Policy Implementation, Monitoring and Evaluation Strategy will be developed and adopted at all stages of planning and programming. The framework has appropriate

monitoring and evaluation instruments such as performance indicators. The Policy will be reviewed based on a five-year cycle. However, this Policy or parts of it may be reviewed if there are significant changes in the operating environment in the course of its implementation.