

REPUBLIC OF KENYA



MINISTRY OF AGRICULTURE, LIVESTOCK AND FISHERIES

# KENYA TUNA FISHERIES DEVELOPMENT AND MANAGEMENT STRATEGY



2013- 2018

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# ACRONYMS AND ABBREVIATIONS

ACP	African Caribbean Pacific
AFIPEK	Association of Fish Processors and Exporters of Kenya
ASDS	Agriculture Sector Development Strategy
BET	Bigeye tuna
BMUs	Beach Management Units
CA	Competent Authority
CDA	Coast Development Authority
CFFA	Coalition for Fair Fisheries Arrangements
CIDA	Canadian International Development Agency
CORDIO	Coral Reef Degradation in the Western Indian Ocean
DANIDA	Danish International Development Agency
DWFN	Distant Water Fishing Nations
EAC	East African Community
EAFPEA	East African Fish Processors and Exporters Association
EAWLS	East African Wildlife Society
EC	European Commission
EEZ	Exclusive Economic Zone
EMCA	Environmental Management and Coordination Act
EPAS	Economic Partnership Agreements
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FPAS	Fisheries Partnership Agreements
GDP	Gross Domestic Product
IOC	Indian Ocean Commission
IOTC	Indian Ocean Tuna Commission
ISSF	International Sea Food Sustainability Foundation

IUCN	International Union for the Conservation of Nature
IUU	Illegal, Unregulated and Unreported
KASA	Kenya Association of Sea Anglers
KMA	Kenya Maritime Authority
KMFRI	Kenya Marine and Fisheries Research Institute
KPA	Kenya Ports Authority
MCS	Monitoring, Control and Surveillance
MoF	Ministry of Finance
MALF	Ministry of Agriculture Livestock and Fisheries
MoT	Ministry of Transport
NCST	National Council for Science and Technology
NEMA	National Environmental Management Authority
NORAD	Norwegian Agency for Development Cooperation
NTBS	Non Tariff Barriers
RECs	Regional Economic Communities
RFMO	Regional Fisheries Management Organization
T-RFMO	Tuna Regional Fisheries Management Organization
SIDA	Swedish International Development Agency
SKJ	Skipjack tuna
SWIO	South Western Indian Ocean
SWIOFC	South West Indian Ocean Fisheries Commission
SWOT	Strength, Weakness, Opportunities and Threats
TUFAK	Tuna Fisheries Alliance of Kenya
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
WIOMSA	Western Indian Ocean Marine Science Association
WWF	World Wide Fund for Nature
YFT	Yellow fin tuna

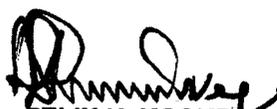
## FOREWORD

Tuna fisheries resources are significant in the global fish supply chain and trade is estimated at US\$ 4 billion. About a quarter of the global catch is caught in the West Indian Ocean. Indeed tuna forms the most important pelagic offshore fishery resources in the Kenyan Exclusive Economic Zone (EEZ) and the adjacent high seas. There is great potential to increase the economic benefits arising from these underexploited pelagic and migratory fisheries resources to the local economy.

Accordingly, consistent with the aspirations of the national development blueprint, the Vision 2030 and the Kenya Oceans and Fisheries policy, the sustainable exploitation of underexploited EEZ is of foremost priority. The national tuna management and development strategy is essential in providing the roadmap that shall build and sustain the development and growth of EEZ fisheries for increased socio-economic benefits to the national economy. It is in this regard that the national tuna management and development strategy is tailored to modernize and transform the coastal artisanal fisheries to commercially oriented oceanic fisheries; improve the sustainable management and development of Kenya's EEZ resources and accelerate the economic contribution of marine fisheries with direct positive impacts to employment, wealth creation, income and foreign exchange earnings.

This strategy is a testimony of the Government's commitment towards positioning the fisheries sector as a key economic driver in contributing towards the envisaged 10% annual economic growth projected in the economic pillar of the vision 2030. I am confident that with commitment of all players in the implementation of the strategy including state actors, industry, and the fisher community, applying the right mix of investments, policies, and incentives shall see the strategic plan goals achieved within the plan period.

My Ministry will take concrete measures to ensure the realization of the strategic objectives. I have no doubt that with cooperation and support from other Government ministries/ departments, development partners, industry and other key stakeholders, the Ministry will deliver on the objectives set out in this strategy.



FELIX K. KOSKE  
CABINET SECRETARY

**MINISTRY OF AGRICULTURE, LIVESTOCK AND FISHERIES**

## **PREAMBLE**

The Ministry of Agriculture Livestock and Fisheries is mandated to lead the development, management, exploitation, utilization and conservation of fisheries in Kenya. The Ministry, guided by the National Oceans and Fisheries policy emphasizes the sustainable development and utilization of Kenya's Exclusive Economic Zone's (EEZ) fisheries resources.

The Tuna Fisheries Development and Management Strategy is a step towards the full realization of the economic benefits from the offshore pelagic tuna fisheries resources. The need for a comprehensive strategy for tuna fisheries in the country is premised on the country's desire to transit from traditional artisanal-based fisheries to modern commercially oriented coastal and oceanic fisheries. This will accelerate economic growth of the marine fisheries with direct positive impacts to employment, wealth creation, improved incomes and foreign exchange earnings.

This strategy seeks to build effective governance system of the marine fisheries sector by providing for adequate institutional frameworks taking into account national, regional and international laws and agreements on the sustainable management of tuna resources. Effective governance systems shall ensure compliance with relevant national laws and international standards and agreements.

At the end of the implementation period, the strategy targets to transform tuna fisheries into productive and sustainable modern commercially oriented coastal and oceanic fisheries with direct positive impacts to employment, wealth creation, improved incomes and foreign exchange earnings. Further, the strategy will promote the maintenance of productive capacities of shared and migratory tuna stocks at sustainable levels and minimize negative fishing impacts on marine fisheries ecosystem.

The strategy is in harmony with the Kenya Vision 2030 that seeks to transform the country to a globally competitive middle-income country, with a high quality of life for Kenyans by the year 2030; the Agriculture Sector Development Strategy (ASDS); the National Oceans and Fisheries Policy; and the State Department of Fisheries strategic plan.



**PROF. MICHENI J. NTIBA, CBS  
PRINCIPAL SECRETARY  
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## **ACKNOWLEDGEMENTS**

The national tuna management and development strategy spearheaded by the Ministry of Agriculture Livestock and Fisheries relied on untiring and dedicated efforts of the Technical Working Group drawn from state agencies, Industry and civil society. Their collective pool of knowledge and experience harnessed together with stakeholders' contributions are credited for this work.

Special tribute is due to WWF for the financial and technical support that was essential in ensuring that the plan is completed.

This strategic plan is indeed a culmination of an extensive participatory and inclusive process which involved consultations with various stakeholders drawn from state agencies, community organisations, fishermen, industry and civil society whose contribution is sincerely recognized.

## EXECUTIVE SUMMARY

The National Tuna Management and Development strategy provides a roadmap for the sustainable development of the Kenya's tuna fisheries resources occurring in the Exclusive Economic Zone (EEZ) and ensuring an efficient tuna fisheries value chain. The overall goal of the strategy is to transit tuna fisheries from artisanal-based fisheries to modern commercially oriented coastal and oceanic fisheries and accelerate economic growth of the marine fisheries with direct positive impacts to employment, wealth creation, improved incomes and foreign exchange earnings.

Chapter two reviews the current situation of tuna fisheries from a global, regional and national perspective regarding the status of tuna stocks, exploitation and impacts on marine ecosystems, the obtaining trade regimes and value chain activities and the prevailing tuna fisheries governance system. The strategy identifies four main strategic issues namely; Unsustainable utilization of marine resources; Low economic benefits accruing from tuna fisheries to the national economy; Inadequate tuna fisheries governance and General cross-cutting issues including gender issues, and HIV and Aids.

To address the strategic issues, four strategic objectives are prioritized for implementation. First, the maintenance of tuna stocks at sustainable levels and minimizing negative fishing impacts on the marine ecosystem. Secondly, transformation of tuna fisheries from artisanal fisheries to a modern commercially oriented coastal and oceanic fisheries and developing an effective tuna fisheries governance system that takes into account national, regional and international requirements and addressing the impact of HIV/AIDS pandemic and gender issues in tuna fisheries. A detailed implementation matrix for each strategic objective with the relevant activities is outlined in chapter five. Mechanisms for measuring progress during implementation and financing arrangements are highlighted in Chapter six.

# **CHAPTER 1**

## **1.0 INTRODUCTION AND BACKGROUND**

The Kenya Tuna Fisheries Development and Management Strategy is anchored on the Constitution of Kenya clause 69 1(a) and the enabling legislation providing for the development, management, exploitation, utilization and conservation of tuna fisheries in Kenya. It is also in congruence with other relevant Acts of Parliament and international legal agreements that specifically govern tuna fisheries and migratory fish stocks in general.

Moreover, the strategy is in line with the Kenya Vision 2030, the national long-term development strategy that seeks to transform the country to a globally competitive middle-income country, with a high quality of life for all Kenyans, by 2030; the Agriculture Sector Development Strategy (ASDS); the National Oceans and Fisheries Policy; and the State Department of Fisheries Plan. The main responsibility for coordination of the strategy's implementation lies with the Ministry of Agriculture Livestock and Fisheries. The private sector has the cardinal role of investing in the sector and generating employment, incomes and means of livelihood for Kenyans.

### **1.1 Mandate**

The Ministry of Agriculture Livestock and Fisheries is mandated to facilitate the exploration, exploitation, utilization, management, development and conservation of fisheries resources as well as aquaculture development and to undertake research in marine and fresh water fisheries.

### **1.2 Vision**

The vision of the Ministry of Agriculture Livestock and Fisheries with respect to the tuna industry is to derive the highest socio-economic benefits from the sustainable utilization of tuna resources.

### **1.3 Mission**

The mission of the Ministry of Agriculture Livestock and Fisheries regarding the tuna industry is to ensure optimal benefits from the country's tuna fisheries by facilitating their sustainable development and management, value addition, and equitable access to them.

### **1.4 Purpose**

The need for a comprehensive strategy for tuna fisheries development and management in Kenya is premised on:

1. The country's desire to transit from artisanal fisheries to modern commercially oriented coastal and oceanic fisheries;
2. The sustainable management and development of Kenya's Exclusive Economic Zone (EEZ) resources and surrounding high seas fisheries;
3. The need to accelerate growth of marine fisheries and their value chains in order to provide direct employment, wealth creation, higher incomes, food, and foreign exchange earnings
4. The effective co-ordination of tuna fisheries management initiatives with regional entities including Regional Fisheries Management Organizations (RFMOs) and regional trade blocs.

### **1.5 Scope**

The strategy provides the roadmap for the development of a tuna fisheries value chain activities, including fishing, management, governance, processing and value addition, and trade among others.

The strategy covers tuna and tuna-like coastal and offshore fisheries. Moreover, the strategy puts into consideration collective and regional approach to sustainable development and

management of tuna and other highly migratory species in the Indian Ocean region.

The strategy shall be implemented for a five-year period, starting in July 2013 to June 2018.

## **1.6 Policy Context**

The overall objective of the National Oceans and Fisheries Policy, on which this strategy is anchored, is “to enhance the fisheries sector’s contribution to wealth creation, increased employment for youth and women, food security, and revenue generation through effective private, public and community partnerships.” The overall objective of the Kenya Fisheries Sector Development and Management Strategy is therefore to maximize the contribution of tuna fisheries and industry to the achievement of the objectives of the National Oceans and Fisheries Policy.

## **CHAPTER 2**

### **2.0 SITUATION ANALYSIS**

#### **2.1 Global and regional outlook of tuna fisheries**

Global catch of major commercial tunas (tropical species big-eye, skipjack, yellowfin, and temperate species albacore) in 2010 was 4.34 million metric tonnes (ISSF, 2012) worth about US\$2-3 billion. The Western Indian Ocean region accounted for about 24 percent of this production, making it the second largest tuna fishing area in the world.

Purse seine fishing vessels account for nearly 65% of the annual global tuna catch (ISSF, 2011). Among the tropical tunas, purse seiners generally target skipjack and yellow fin, though they also catch bigeye tuna associated primarily with floating objects. Currently, a total of 24,341 large and small-scale fishing vessels operate globally for tuna species and in the area under the competence of T-RFMOs. Large-scale vessels have overall length of 24 meters or greater while small-scale vessels have overall length of less than 24 meters. Only authorized vessels are allowed to operate inside the EEZ of their flag States.

The Western Indian Ocean region accounts for only 9% of the global tuna processing capacity in spite of the high production in the region. Tuna processing involves a range of products, namely canned tuna, fresh and frozen sashimi, and other fresh and frozen value added products, which are marketed globally through complex distribution systems. Components of the global tuna supply chain (i.e. fishing, trading, processing, distribution, marketing, and consumption) are closely interrelated, and a change in any of these components has the potential to generate change throughout the entire chain.

The supply chain is particularly sensitive to perturbations in the status of tuna stocks, regulation (e.g. fisheries management, labour, environment, and food safety), input costs (e.g. raw materials, labour, energy, and packaging), technological innovation, international trade regimes and consumer preferences.

## 2.2 National outlook of tuna fisheries

Kenya's marine fishery waters comprise of the coastal near shore waters extending over a 640 km shoreline stretching from 5° 25'S at the Tanzanian border to 1° 30'S at the Somali border and the 200 nautical miles EEZ. The continental shelf area is approximately 6500 km<sup>2</sup>. The northern banks support rich populations of pelagic fisheries resources due to the year-round upwelling in this region and the unique features such as seamounts that support high productivity.

Recent comprehensive assessment of the marine fisheries potential in Kenya is unavailable. However, earlier estimates by the Food and Agriculture Organization (FAO) in the 1980s indicated a potential of 150,000 MT for both offshore and inshore waters. Reported commercial catches have fluctuated between 5,000-8,000 MT annually since the 1970s, with the highest catches being registered during the northeast monsoon. The landings are dominated by demersal reef and reef associated species, and pelagic fishery species caught mainly in inshore waters.

The main species in the EEZ are the highly valued tropical tuna and tuna-like fish species, which form the most important resource of the offshore pelagic fishery. The principal tuna species occurring in the EEZ and adjacent high seas are *Thunnus albacares* (Yellowfin tuna), *Katsuwonus pelamis* (Skipjack tuna), and *Thunnus obesus* (Bigeye tuna). The coastal fisheries comprise of crustaceans such as shrimps, lobsters and crabs; mollusks such as octopus, squids and cuttlefish; demersal species such as snappers; and Neritic tunas such Kawakawa (*Euthynnus affinis*),

little tunny (*Euthynnus. alleteratus*) and frigate tuna (*Auxis thazard*). Wahoo, Mackerels and kingfish found along the continental shelf also constitute tuna-like species that are important to the artisanal fisheries. There is also a thriving recreational fisheries industry with the target species being the marlins (*Makaira spp.*), sailfish (*Istiophorus spp.*), and swordfish (*Xiphias gladius*).

The Indian Ocean Tuna Commission (IOTC) is responsible for the management of tuna and tuna-like species in the Indian Ocean. Kenya joined the IOTC in 2004. In the IOTC area of competence, there are over 8,000 authorized Tuna fishing vessels (IOTC, 2012).

Kenya's tuna supply chain is largely underdeveloped, with production being done by rudimentary artisanal vessels not capable of going beyond 20 nautical miles. The country does not have a commercial tuna fishing fleet and lacks even a single vessel capable of exploiting its EEZ.

The country has 18 processing companies with a total processing capacity of over 1200 MT per day. However, only one factory with an installed processing capacity of 105 MT per day is dedicated to tuna processing. The country, thus, accounts for only 5% of the Western Indian Ocean's processing capacity. The only tuna company in the country relies on supplies from distant water fishing nations (DWFN) and fisheries derogation. In 2011, the tuna fisheries accounted for only 3% of marine fish production in the country.

To attain middle-income status as envisioned in Kenya Vision 2030, the tuna industry is expected to make its contribution. To derive sustainable benefits from the tuna resources within the region, Kenya has to transit from traditional artisanal-based fisheries to modern commercially oriented coastal and oceanic high sea fisheries; enhance its fisheries management institutional capacity; and provide an enabling regulatory and infrastructural environment to spur sustainable development of the tuna industry.

## **2.3 Strength, Weakness, Opportunities and Threats (SWOT) Analysis**

A SWOT analysis has identified the key strengths and opportunities that should be exploited, and the challenges that must be overcome, in order for the country to build a productive and sustainable tuna industry.

### **Strengths**

- i) Existence of enabling policies that support development of offshore fisheries resources;
- ii) Ongoing review of the Fisheries Act to support development of Tuna fisheries sub-sector;
- iii) Current and on-going initiatives to enhance collaboration in fisheries co-management i.e. Beach Management Units (BMUs);
- iv) Existence of a strong research institution within the Ministry (Kenya Marine and Fisheries Research Institute);
- v) Excellent working relationship with key stakeholders in the fisheries sector, including development partners, the industry, fisher associations and Civil Society Organizations;
- vi) Constitution that seeks to provide for protection of the environment and sustainable management of natural resources; and
- vii) Membership and active participation in the Indian Ocean Tuna Commission (IOTC), South West Indian Ocean Fisheries Commission (SWIOFC), and other regional fisheries related initiatives.

## **Weaknesses**

- i) Weak Monitoring, Control and Surveillance capacity at the national level;
- ii) Lack of trained personnel on MCS and negotiations skills;
- iii) Inadequate facilities for specialized training in offshore fisheries;
- iv) Lack of capacity to support the development of a domestic offshore fishery and infrastructure;
- v) Limited access to safety, search and rescue capacity;
- vi) Challenges in access to capital for investment in the fisheries;
- vii) Limited national capacity to implement IOTC resolutions;
- viii) Limited capacity to engage and participate effectively in discussion on tuna related issues, including the quota allocations and fisheries access arrangements;
- ix) Lack of incentives from the government to support development of the fishery;
- x) Limited Foreign Direct Investment (FDI) in the sector;
- xi) Limited support by government in the development of the offshore fisheries resources;
- xii) Lack of legislative tools/instruments to support the development of offshore fishery resources;
- xiii) Inadequate operational facilities and equipment;
- xiv) Lack of information on current status of Tuna stocks within the Kenyan EEZ; and
- xv) Poor data collection and storage.

## **Opportunities**

- i) Regional and national supportive offshore fisheries development projects;
- ii) Kenya's extensive maritime zone which includes a 200 nautical mile EEZ, and the current proposals to extend it by another 150 nautical miles;
- iii) Large stocks of six different species of Tuna with dominance of Yellowfin Tuna;
- iv) Increased government revenue from the national economy;
- v) Creation of joint ventures between local entrepreneurs and foreign investors;
- vi) Public Private Partnership policy and regulations;
- vii) Easy access to foreign markets;
- viii) High demand for tuna products in the international market;
- ix) On-going tuna quota allocation discussions within the IOTC framework, which provide the country an opportunity to negotiate for a fair share; and
- x) Increased interest by development partners (including World Bank, GEF, FAO, WWF, and AUC) to leverage financial and technical resources to improve fisheries management and governance for increased socio-economic and ecological benefits.

## **Threats**

- i) Weak Monitoring, Control and Surveillance capacity at the regional level;
- ii) Lack of a coordinated regional approach in management of Tuna fisheries within the South Western Indian Ocean region;

- iii) Emerging restrictive trade requirements in the global market;
- iv) Declining or over exploitation of tuna resources especially for some species such as Yellowfin tuna;
- v) Increasing operating costs such as fuel costs;
- vi) Increased demand and competition for limited government resources;
- vii) Lack of safety and increased piracy and terrorism acts;
- viii) Increasing incidences of IUU Fishing; and
- ix) Limited knowledge on the impacts of emerging issues such as oil and gas exploration, climate change, and ocean acidification on tuna resources.

## 2.4 Stakeholder Analysis

Stakeholder	Roles
<i>Government Institutions</i>	
i) Ministry of Agriculture Live-stock and Fisheries Development (MALF)	Exploration, exploitation, utilization, management, development and conservation of fisheries resources; Policy; Capacity Building; Revenue Generation
ii) Kenya Navy	Security and Surveillance of international borders, including EEZ
iii) Ministry of Transport and Infrastructure - Kenya Maritime Authority (KMA), Kenya Ports Authority (KPA)	Custodian of laws of the sea relating to licensing, Navigation, safety at sea and provision of port facilities.
iv) The National Treasury (MOF)	Budgetary provision, Review of duties and taxes, economic Policy
v) National Research and Technology Institutions, Universities	Fisheries Research, Information Dissemination and Capacity Building
vi) Beach Management Units (BMUs)	Exploitation, participatory management of fisheries resources, management of landing areas, Fishing, Trading
vii) National Environmental Management Authority (NEMA)	Implementation oversight over EMCA, 1999 and Environmental Policy
viii) Coast Development Authority (CDA)	Developmental projects at the Kenyan coast
ix) Marine police	Maintain security and order within the maritime zones and Ports.

<b>Stakeholder</b>	<b>Roles</b>
x) Development Partners including Government Aid Agencies	Financial and technical support and Information Dissemination
xi) Regional and International Non-Government Organizations	Environment conservation and management, Policy, Funding, Capacity Building, Research
xii) Regional/International Professional Organizations /Private Sector	International and Regional Policy advocacy, Marketing, Funding, capacity building
xiii) Non-Government Organizations/ Civil Society Organizations	Advocacy on Tuna fishery, Research and Monitoring, conservation and capacity building.
xiv) Regional Fisheries Management Organizations (RFMOs)	Policy making, Regulators/Enforcers, Capacity Building, Research, Information Dissemination
xv) Regional Economic Communities (RECs)	Policy, Information, Capacity Building, Funding and promote integration
xvi) National Gender and Equality Commission	Mainstream Gender

## 2.5 Challenges and Issues

### 2.5.1 Unsustainable utilization of tuna fisheries resources

Being an extractive activity, tuna fishing can have negative impacts on the sustainability of the target fish populations as well as the functioning and diversity of the ecosystems, if not properly governed.

The key issues of concern are maintenance of healthy populations of targeted stocks, minimization of fishing ecosystem impacts, and mitigation of climate change impacts on the fishery. Encouragingly, consumer demand for fish caught from sustainably managed fisheries is growing.

### ***Stock Status***

The estimated catches by Indian Ocean Tuna Commission (IOTC) for three main tropical tuna species for 2010, in its area of competence, are 428,719 MT for Skipjack tuna, 71,489 MT for Bigeye tuna and 299,074 MT for Yellowfin tuna. Recent stock assessment reports by IOTC in 2011 indicate that Maximum Sustainable Yield (MSY) for the skipjack tuna stock is 564,000 MT compared with 102,900 - 114,000 MT for Bigeye and 357,000 MT for Yellowfin tuna.

The general outlook is that the stocks of all the three<sup>1</sup> tuna species are stable. However, concerns have been raised over the level of recruitment of Yellowfin in the last 15 years and the capacity of the stock to support higher yields. The stock status of the coastal Neritic tuna resources is unknown due to lack of adequate catch and effort data from the artisanal fishery to support stock assessments.

Considerable efforts are being made to develop a working framework for sustainable management and conservation of tuna resources through a right based management approach. The ongoing IOTC process of developing a Quota Allocation System is vital for Kenya to participate in and achieve a fair allocation.

### ***Tuna Fishing Ecosystem Impacts***

There are growing concerns about the impact of the longline and purse seine tuna fishing on marine turtles, sharks and sea

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<sup>1</sup> It should be noted that there are five commercial species in the region, but reference here is to the three.

birds. Regrettably, data on these impacts is insufficient. However, it is known that several vulnerable and threatened species of sea birds are caught as bycatch in the longline fishery.

Secondly, six species of marine turtles that inhabit the Indian Ocean interact with the tuna fishing gears. The International Union for Conservation of Nature (IUCN) has classified the olive ridley turtle as vulnerable, the green and loggerhead turtles as endangered and the hawksbill and leatherback turtles as critically endangered. Kenya has not yet domesticated international plans of actions (sharks, sea birds and turtles) developed for tuna fisheries.

### *Impacts of climate change on tuna fisheries*

The impacts of climate change on the tuna fishery have been studied in the tropical and subtropical areas of the Pacific with respect to yellowfin, bigeye and skipjack tunas. Results from these studies show that climate change would result in changes in primary productivity, shifts in distribution and changes in the potential yield of exploited tuna species. This could be a threat to the development of a vibrant tuna industry in Kenya due to expected tuna resource fluctuations in the EEZ. Despite the gaps in understanding climate change effects on tuna fisheries, there is sufficient scientific information that highlights the need to implement climate change mitigation and adaptation policies.

### **2.5.2 Low economic benefits from tuna fisheries**

Tuna fisheries have the capacity to generate significant economic benefits to the country and local coastal communities. Efforts should be made to address the value chain bottlenecks such as local fleet development, supporting infrastructure and services, incentives, and favorable market access regime.

### *Domestic Capacity to Harvest Tuna Fisheries Resources*

Kenya lacks a domestic capacity to harvest its tuna resources, including a long-line and purse seiner fleet normally used in the industrial fisheries. The artisanal tuna fishery uses artisanal gears and is constrained by the vessel incapacity to operate off-shore.

### *Market Access*

Global tuna trade is governed by a myriad of international and regional trade regimes. Some of the regimes relate directly to the fisheries sector (i.e. WTO Fisheries Subsidies, EU-IUU Fishing Regulation, Sanitary and Phyto-sanitary measures), while others are much broader in scope but have implications for fisheries (i.e. EU-Economic Partnership Agreement). The on-going tuna quota allocation discussions within the IOTC framework and the Economic Partnership Agreement (EPAs) are likely to have considerable implications on fishing opportunities in Kenya waters as well as market access. The key issue for the country is to maintain favorable market access of tuna to the EU and other world markets in this dynamic trade environment.

### *Value Chain Infrastructure*

The Kenyan coast is strategically located in the West Indian Ocean region, one of the most important tuna fishing areas globally. Kenya can derive increased economic benefits from tuna fishing in the Kenyan EEZ and the adjacent high seas by undertaking strategic investments geared towards making port facilities more competitive and efficient than other regional port facilities.

The proposed investments include dedicated and efficient fishing port facilities, efficient and competitive bunkering services, efficient, competitive vessel supply services, and adequate cold chain facilities. This will spur onshore economic activities in processing, stevedoring and other auxiliary services creating

jobs, earning the country foreign exchange, and developing the nascent tuna fisheries.

### **2.5.3 Governance**

A number of governance challenges confront sustainable management of fisheries resources in Kenya, including inadequacies in the areas of research and development, data collection, information dissemination, and implementation of statutory requirements.

#### ***Monitoring, Control and Surveillance (MCS)***

Current Monitoring, Control and Surveillance (MCS) capability is hampered by lack of vessels, equipment and trained officers. Efforts are being made by the Ministry to enhance enforcement of conservation and management measures, and establishment of MCS capacity.

#### ***Human Resource***

To achieve the strategic goals for the management and development of the tuna sector there is need to develop human resource capacity in the Ministry in the areas of fisheries management, fisheries economics, stock assessment, research and development, and policy formulation. This is to enable adequate participation in national, international and regional tuna management activities.

#### ***Legal and Policy Framework***

While the current fisheries laws and policy provide for the development of fishery management measures, several binding regional resolutions governing tuna fisheries management have not been domesticated to have legal effect under the local jurisdiction.

### *Sea Safety and Security*

There is limited coordination and linkage between the various government agencies responsible for safety and security measures at sea. Most artisanal fishers utilize simple craft without safety equipment. Piracy has also emerged as a serious security concern within the Western Indian Ocean with increased attacks on Merchant and Fishing vessels.

### *Stakeholder Participation*

There is limited engagement and participation of stakeholders in the management and development of tuna fisheries.

### *Data*

The quality fishery dependent data of tuna fisheries is inadequate due to limited staff, lack of species categorization of catch by local vessels, and lack of observers on-board the DWF vessels. An independent means to verify the accuracy of the data provided is inadequate.

### *Research*

There is limited research information on the tuna fishery in Kenya, including on stock abundance, distribution and behavior, and the projected impact of climate change and variability on the fisheries. This is mainly due to limited funding and capacity (research equipment and appropriate laboratories) and lack of a training institution with curricula focused on skill development for the exploitation of offshore fisheries resources.

### *Communication strategy*

Inadequate communication between fisheries managers, researchers, fishers and consumers has led to poor information dissemination and linkage between fisheries researchers and users.

#### **2.5.4 Cross-cutting issues**

A number of cross cutting issues such as climate change, HIV & AIDs and gender inequalities also constrain the ability of the country to exploit and sustainably manage its tuna fisheries. Some of the issues have a significant impact on the fisher communities and there is a need to develop a coordinated and integrated approach to address them.

## CHAPTER 3

### 3.0 GUIDING PRINCIPLES

In this strategy for sustainable development and management of tuna and other highly migratory fishery species, the following principles will apply:

#### *Sustainable Development and Management*

- i) Tuna management strategies and actions will consider ecological constraints and balance with current socio-economic benefits against intergenerational equity
- ii) The finite and the trans-boundary nature of the tuna resources will be recognized in planning strategies and management actions
- iii) The various biological and economic reference points will be considered in the management of tuna fisheries

#### *Application of Scientific Knowledge*

The best available scientific information and knowledge will be applied in the management and development of the resource. Moreover, investment will be made towards continuous verification of scientific knowledge and generation of new knowledge.

#### *Precautionary Approach*

Precautionary principles will be applied to Tuna fisheries management and development where there is inadequate scientific knowledge and information.

#### *Adoption of Functional Management Measures*

Tuna and tuna-like species will be managed using an adaptive management approach that is practical and enforceable and promotion of regional and international cooperation in management, including Rights Based Management.

### *Ecosystem Approach*

The proposed management strategies and actions will consider species interactions, food webs, and socio-economic needs. They will also incorporate adaptation and mitigation measures against climate change and variability.

### *Participatory Management*

The relevant stakeholders will be engaged in decision-making and management.

# CHAPTER 4

## 4.0 STRATEGIC MODEL

### 4.1 STRATEGIC ISSUES, OBJECTIVES AND STRATEGIES

#### **Strategic Issue 1: Unsustainable utilization of tuna resources**

**Strategic Objective 1:** To maintain tuna stocks at sustainable levels and minimize negative tuna fishing impacts on the marine ecosystem.

#### **Strategies**

1. Minimize tuna fishing ecosystem impact
2. Address adverse impacts of climate change and variability, and oil & gas exploration, on tuna fisheries
3. Restore and/or maintain tuna stocks at levels at or above IOTC Reference Points for each species

#### **Strategic Issue 2: Low economic benefits from tuna fisheries**

**Strategic Objective 2:** To transform tuna fisheries into productive and sustainable artisanal fisheries and a modern commercially oriented coastal and oceanic fisheries with direct positive impacts to employment, wealth creation, improved incomes and foreign exchange earnings.

#### **Strategies**

1. Upgrade and restructure artisanal tuna fishery
2. To attract increased landings from DWFN fleet
3. Empower investors to venture into tuna industry
4. Maintain favorable access of Kenya's tuna products into world markets

### **Strategic Issue 3: Inadequate tuna fisheries governance**

**Strategic Objective 3:** To enhance effective tuna fisheries governance that takes into account national, regional and international requirements.

#### **Strategies**

1. Strengthen human resource capacity of agencies responsible for fisheries and stakeholders to manage tuna resources
2. Enhance institutional capacity
3. Strengthen existing legal framework on the conservation and development of tuna fisheries
4. Enhance safety and security at sea
5. Facilitate active stakeholder participation in tuna fisheries management and governance
6. Integrate scientific advice in decision making

### **Strategic Issue 4: Inadequate mainstreaming of HIV/AIDS and Gender issues in the Tuna industry**

**Strategic Objective 4:** Reduce the impact of HIV/AIDS pandemic and gender inequalities in the Tuna fisheries industry.

#### **Strategies:**

Mainstream HIV & AIDS and gender issues in the Tuna industry.

## CHAPTER 5

### 5.0 IMPLEMENTATION FRAMEWORK

Table 1: Priority strategic objectives, strategic and results for the national tuna management and development strategy

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
Mitigate negative ecosystem impacts of tuna fishing	Identify and domesticate international and regional agreements/ conventions/ obligations on the protection of threatened and endangered species encountered in tuna fisheries	Reduced tuna fishing impacts on sea birds, sharks, and sea turtles	-Number of instruments domesticated -Number of reported incidents on sharks, sea birds and turtles arising from tuna fisheries -Impact assessment every 2 years against baseline established by research	MALF	Year 1
	Develop and implement national plans of action for sea birds, sharks, and sea turtles	National plans of actions	Number of plans	MALF	Year 1
	Research & Development to identify appropriate fishing technologies	Fishing technologies with reduced negative impact on ecosystem	Impact assessment against other technologies	MALF; KMFRI; Universities; Development Partners	Year 1 - 5

<b>Activities</b>	<b>Sub-Activities</b>	<b>Expected output</b>	<b>Performance Indicators</b>	<b>Responsibility</b>	<b>Timeframe</b>
Mitigate negative ecosystem impacts of tuna fishing	Sensitize relevant stakeholders on ecosystem impacts of tuna fishing with various technologies	Enhanced stakeholder awareness	-Number of sensitizations reports, meetings, media highlights - Number of reported incidents on sharks, sea birds and turtles arising from tuna fisheries	- MALF -Civil society	Year 1 - 5
	Enforce conservation measures designed for sea turtles, sharks and sea birds	Enhanced compliance with measures on sea turtles, sharks, and sea birds	Regular compliance assessment	-MALF -Civil Society	Year 1 - 5
	Develop and enforce rules for by-catch management	By-catch management regulations	Regular compliance assessment	MALF; Civil Society	1 Year
	Encourage the retention and marketing of useful by-catch	Reduced discards	Amount of by-catch sold	MALF; Fishermen; Fishermen Associations; BMUs	Year 1 - 5

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 2: Address adverse impacts of climate change and variability, and oil &amp; gas exploration, on tuna fisheries</b>					
Mitigate adverse climate change and variability effects on the tuna fisheries	<ul style="list-style-type: none"> <li>-Identify real and potential climate change and variability impacts on tuna fisheries</li> <li>-Develop and implement adaptation and mitigation measures</li> <li>-Link with established international monitoring programs on climate change and information dissemination</li> </ul>	<ul style="list-style-type: none"> <li>-Potential impacts identified</li> <li>-Adaptation and Mitigation measures undertaken</li> <li>-Monitoring program in place</li> </ul>	<ul style="list-style-type: none"> <li>-Report on impacts of climate change and variability, adaptation measures, and mitigation measures</li> <li>-Number of briefing reports and updates from international climate change monitoring institutions</li> </ul>	KMFRI; Universities; MALF; NEMA; BMUs; Other Stakeholders	Year 2 - 5

<b>Activities</b>	<b>Sub-Activities</b>	<b>Expected output</b>	<b>Performance Indicators</b>	<b>Responsibility</b>	<b>Timeframe</b>
Mitigate adverse oil and gas exploration impacts on tuna fisheries	-Identify potential oil and gas exploration impacts -Develop mitigation measures	-Potential impacts identified -Mitigation measures undertaken	-Report of impacts and mitigation measures	KMFRI; Universities; MALF; NEMA; BMUs; Min. of Energy (MOE); Oil & Gas companies	Year 1
	Enhance oil spill contingency measures to cover tuna fisheries	-Potential impacts identified -Mitigation measures undertaken	-Report of impacts and mitigation measures	MALF; MOE; NEMA; Oil & Gas companies	Year 2

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 3: Restore and/or maintain tuna stocks at levels at or above IOTC Reference Points for each species</b>					
Establish and Enforce tuna harvest Quota	Develop a country position paper with regard to Tuna Quota Allocation Criteria	Country position paper on IOTC allocation quota	Country position paper on IOTC allocation quota	MALF; KMFRI; NEMA; Academia; NGOs; Private sector; CBOs; Other Stakeholders	Year 1
	Participate in regional stock assessment, research, conservation, management and monitoring partnerships	-Formal regional partnerships -Optimal harvest levels and Quotas	-No. of formal partnerships -No. of publications -No. of forums attended by the country -Reports on meetings attended	MALF; Min. of Foreign Affairs (MOFA); KMFRI; Universities; Private sector; NGOs & CBOs	Year 1 - 3
	Develop and implement Tuna Harvest control rules	Tuna Harvest control rules developed and implemented	Tuna Harvest control rules	MOF; KMFRI; Academia; NEMA; Partners in private & NGO Sector	Years 5

<b>Activities</b>	<b>Sub-Activities</b>	<b>Expected output</b>	<b>Performance Indicators</b>	<b>Responsibility</b>	<b>Timeframe</b>
Control fishing effort	Establish optimal fishing capacity and enforce the fishing effort limits	Tuna fishing effort limits established and enforced	-Tuna fishing effort regulations -Quarterly compliance reports	MALF; KMFRI & other Research Institutions; Academia; BMUs; Fishermen & their Associations	Year 3 - 5
	Adopt and domesticate regional and international tools and instruments with regard to appropriate tuna fishing technology	Regional & international instruments on appropriate tuna fishing technology domesticated	Tuna management plans with adopted instruments	MALF; KMFRI; Other Research Institutions; NGOs	Year 2

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategic Objective 2: To transform tuna fisheries into productive and sustainable artisanal fisheries and a modern commercially oriented coastal and oceanic fisheries with direct positive impacts to employment, wealth creation, improved incomes and foreign exchange earnings</b>					
<b>Strategy 1: Upgrade and Restructure Artisanal Tuna Fisheries</b>					
Study artisanal tuna fisheries to identify constraints that should be addressed in order to transform the fishery into a sustainable productive fishery capable of uplifting the economic conditions of fishers	Conduct the study	Study report	Report Action Plan	MALF; KM-FRI; Development Partners; NGOs	Year 1
	Implement study findings	Productive and sustainable artisanal tuna fishery	Fishery performance data	MALF; Development Partners	Year 1- 3

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 2: To attract increased landings from DWF fleet</b>					
Provide incentives for increased landings from DWF fleet.	Lobby for rebates on fuel, taxes and upgrading of facilities	Policy guidelines on rebates for DWF	Increased DWF landings at the port Number of DWF	MALF; MOF	Year 1
	Provide efficient and competitive fuel bunkering services at the landing sites	Improved bunkering facilities	Number of upgraded bunkering facilities	Kenya Ports Authority (KPA)	Year 1 - 4
	Develop evaluation criteria on preferential licensing	-Evaluation criteria -Preferential licenses	-Criteria for preferential licensing -No. of licenses	MALF; Private sector	Year 2
Develop cold storage facilities at the fish landing sites	-Establish the required cold storage capacity -Identify investment and funding opportunities for public/private cold storage facility -Develop cold storage facilities for preferred niche markets (sashimi, super frozen, chilled)	Cold storage facilities developed	No. of cold chain facilities	MALF; MOF; Private Sector	Year 1 - 4

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
Increase daily off-loading capacity at the landing sites	Upgrade current off loading facilities	-Enhanced daily off-loading capacity -Improved offloading facilities -Increased number of DWF landing	Weight of fish offloaded daily	MALF; Private sector; KPA	Year 1 - 3
Negotiate Fisheries Partnership Agreement	-Study on existing fisheries access agreements -Train Negotiators	Fisheries Partnership Agreement	Fisheries Partnership Agreement (FPA)  Amount of funds emanating from FPA	MALF; MOFA	Year 1
Establish a Export/Custom Committee to enable the industry to achieve optimal Value Tolerance criteria in the exports	-Establish actual value tolerance (%) per consignment -Identify and remove barriers to achievement of optimal value tolerance	Increasing value tolerance to as close to 15% (EU exports) as possible	Value Tolerance level	MALF; MOF and Customs	Year 3

<b>Activities</b>	<b>Sub-Activities</b>	<b>Expected output</b>	<b>Performance Indicators</b>	<b>Responsibility</b>	<b>Timeframe</b>
Access to sufficient portable water to on-shore processing facilities	Provide reliable water supply	Water supply in place	Level of satisfaction by processing facilities	County Government and Public Water Service providers	Year 1
Access to waste disposal facilities to on-shore processing areas	Evaluate waste disposal access points.	Waste disposal access points in place	Level of satisfaction by processing facilities	County Government; Private Sector	Year 1

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 3: Empower investors to venture into tuna industry</b>					
Develop a domestic tuna fleet through Leasing, Flagging and Joint ventures	-Prepare a domestic fleet development plan -Promote joint ventures between foreign and local investors -Enter into lease agreements between private foreign vessels and local fishing companies	-A domestic fleet development Action Plan -Incentives for joint venture tuna enterprises -Investment & Business Plans -Signed Lease Agreements	-Domestic Fleet Development Action Plan -Formal announcement & documentation of joint venture incentives -No. of Investment & Business Plans -No. of Lease Agreements signed	MALF; MOF; Private Sector	Year --2
	-Flag vessels that meet national laws and criteria -Develop a tuna pole and line fishery	Local tuna fishing fleet in place	-No. of tuna boats flying Kenyan flag -% of tuna catch attributable to pole and line fishery	MALF; Private Sector	Year 1 - 5
Establish credit lines for fisheries activities	-Negotiate lines of credit with banks -Sensitize banks towards the establishment of credit lines	Lines of credit available	Growth rate of Lending to tuna enterprises	MALF; MOF; Kenya Bankers Association (KBA); Private Sector	Year 2 - 3

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 4: Maintain favourable access of Kenya's tuna products into world markets</b>					
Promote access to markets	Develop and strengthen trade partnerships	Improved market access	Growth rate of tuna product exports	MALF; Export Promotion Council (EPC); Private Sector	Year 1 -2
	Actively participate in international and regional trade forums, and fisheries expos	Improved market access	-No. of forums -No. of expos -Growth rate of tuna product exports	MALF; EPC; MOFA	Year 1- 5
	Harmonize customs tariffs, create awareness on them, and implement them	-Harmonized Tariffs in place -Awareness creation meetings	-Harmonized Tariffs -Number of people sensitized	MALF; MOF	Year 1- 3
	Train Fisheries Trade Negotiators and strengthen the negotiation committees	-Negotiators with sufficient capacity	-Negotiation committee in place - Training report	MALF; Min. of Trade (MOT)	Year 1
	Identify and lobby for reduction of Non Tariff Barriers affecting the tuna trade	-Non Tariff Barriers identified -Reduction of NTBs through lobby	-Database on Non-Tariff Barriers -Level of NTBs	MALF; MOT	Year 2

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
Promote access to markets	Establish a tuna fisheries market intelligence unit	Market intelligence on fluctuations in the international tuna trade	Reports and Briefs	MALF	Year 2
	Brand Kenya's Tuna products	Outreach messages and brands developed	-Number of outreach messages and brands developed -Branded Tuna in the market	MALF; Brand Kenya	Year 3
	Address sanitary and phyto-sanitary issues	-Legislation reviewed -Stakeholders sensitized -Fisheries personnel trained -Relevant infrastructure put in place (laboratories, fish handling facilities) -Developed standard operating procedures (SOPs)	-Legislation in place -Sensitization reports -Training reports -Number of facilities in place -SOPs in place	MALF	Year 3

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategic Objective 3: To enhance effective tuna fisheries governance that takes into account national, regional and international requirements</b>					
<b>Strategy 1: Strengthen human resource capacity of agencies responsible for fisheries and stakeholders to manage tuna resources</b>					
Strengthen human resource capacity	Undertake Capacity Needs Assessment	Database of specialized skills to support tuna fisheries value chain	-Capacity needs assessment report -Specialized skills database	MALF; Private Sector	Year 1
	Training and recruitment to acquire required specialized skills	Skilled staff	-Number of staff recruited & given responsibilities on tuna management -Number of officers trained on relevant courses	MALF; Private Sector	Year 1 - 3

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 2: Enhance Institutional Capacity</b>					
Operationalize and enhance MCS and associated capacity	<ul style="list-style-type: none"> <li>-Set up an inter-agency MCS Unit and provide facilities for port and sea</li> <li>-Develop manual (SOPs) for MCS and provide resources for MCS activities</li> <li>-Review foreign fishing license fees and resource rents to match MCS requirements</li> </ul>	<ul style="list-style-type: none"> <li>-Operational Fisheries Enforcement Unit</li> <li>-SOPs in place</li> <li>-Reviewed license fees and resource rents</li> </ul>	<ul style="list-style-type: none"> <li>Operational MCS Unit; Budgetary allocation; No. of staff re-trained; Legislation in place; MCS data</li> <li>SOP Document</li> <li>Revised License Fees &amp; Resource Rents</li> </ul>	MALF; Inter-Ministerial Committee; MOF; Private Sector	Year 1 - 3
	Build MCS partnerships nationally, regionally & internationally	<ul style="list-style-type: none"> <li>-Membership to international certified MCS bodies</li> <li>-National and Regional MCS database</li> <li>-Joint Patrols</li> </ul>	<ul style="list-style-type: none"> <li>-No. of MoUs signed</li> <li>-Number/ coverage area of Joint Patrols</li> <li>-National and Regional MCS database</li> </ul>	MALF; MOFA	Year 1

<b>Activities</b>	<b>Sub-Activities</b>	<b>Expected output</b>	<b>Performance Indicators</b>	<b>Responsibility</b>	<b>Timeframe</b>
Operationalize and enhance MCS and associated capacity	Increase national capacity to implement port state measures and combat IUU fishing	-Operational VMS -Inter-agency MCS unit -NPOA-IUU	-Port State Inspection unit in place -National Plan of Action – IUU in place	MALF; Kenya Navy	Year 1 - 3
	Increase national capacity to implement port state measures on by catch and non-target species	-Operational VMS -Inter-agency MCS unit	-Report on MCS data/ information	MALF	Year 1 - 3
	Train and accredit observers	-Observer programme in place -Supporting legislation	-No. of trained observers -Legislation in place	MALF; SWIOFC; IOTC	Year 1
	Improve and operationalize VMS	-Staff trained -Harmonized VMS system	-No. of staff trained -Operational VMS	MALF; RFMO; IFMO	Year 1

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
Operationalize and enhance MCS and associated capacity	Strengthen investigative skills and evidence handling	Trained fisheries staff in investigation and evidence handling	No. of staff trained	MALF; DPP	Year 1 - 3
	Sensitize judges, magistrates and prosecutors on importance of fisheries regulations	Improved judgments	-No. of sensitization workshops -No. of sensitization materials developed -No. of judicial staff sensitized	MALF; Judiciary	Year 1 - 3

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 3: Strengthen existing legal framework on the conservation and development of tuna fisheries</b>					
Provide adequate support to basic and demand driven research and use quality research findings in the management of tuna fisheries	Create scheduled forums for dissemination of research findings	Regular information sharing forums created	<ul style="list-style-type: none"> <li>-No. and types of forums created</li> <li>-No. of forum reports compiled</li> <li>-No. of information materials produced and disseminated</li> </ul>	KMFRI; DOF Universities; Development Partners	Year 1 - 5
	Identify, and conduct priority research activities	Priority research areas identified and documented	<ul style="list-style-type: none"> <li>-No. of letters showing demand driven research requests</li> <li>-No. of priority research activities conducted</li> <li>-No. of priority research reports</li> <li>-No. of research findings streamlined into fisheries policies</li> <li>-No. of publications in refereed journals per researcher</li> </ul>	KMFRI; Universities DOF; Development partners	Year 1 - 2

<b>Activities</b>	<b>Sub-Activities</b>	<b>Expected output</b>	<b>Performance Indicators</b>	<b>Responsibility</b>	<b>Timeframe</b>
Provide adequate support to basic and demand driven research and use quality research findings in the management of tuna fisheries	Lobby for funds for identified priority research issues	Adequate re-search funding	-No. of proposals funded -No. of publications and reports on priority re-search areas per researcher -Growth in % of annual budget spent on actual research	KMFRI; DOF; Universities; Development partners	Year 1 - 5
	Continuous monitoring, reporting of data and research	Monitoring programmes developed and documented	-No. and types of monitoring programmes developed -No. and types of monitoring reports produced and disseminated -Database on tuna fisheries with data on catch, effort, technology, price, trade, etc.	KMFRI; DOF; Universities; Development partners	Year 1 - 5

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategy 3: Strengthen existing legal framework on the conservation and development of tuna fisheries</b>					
Provide adequate support to basic and demand driven research and use quality research findings in the management of tuna fisheries	Establish an information management system for tuna	A tuna fishery information resource centre	-No. of datasets deposited at the resource centre -No. of reports -No. of information requests -No. of visitors	KMFRI; DOF; Universities; Development partners	Year 5
	Collaborate and network with regional partners on tuna fisheries research on aspects like biological and breeding behavior, stock movements in different parts of the year, optimal sustainable yields, etc.	Established linkages with partners in the region	-No. of research partnerships created -No. of MoUs developed, signed and implemented -No. of joint research workshops and conferences held. -No. of joint publications	KMFRI; DOF; Universities; Development partners	Year 1 - 5

Activities	Sub-Activities	Expected output	Performance Indicators	Responsibility	Timeframe
<b>Strategic Objective 4: Reduce the impact of HIV/AIDS pandemic and Gender issues in tuna fisher</b>					
<b>Strategy 1: Mainstream HIV/AIDS and gender in tuna fisheries management</b>					
Incorporate HIV/AIDS issues in the tuna fishery sub-sector	Sensitize the stakeholders in tuna fisheries	Stakeholders sensitized	-No. of stakeholders sensitized -Survey to monitor change in behavior -Reduction in new infections among tuna fisher folk	MALF; Ministry of Health; NACC	Year 1 - 5
Incorporate gender and children issues in the tuna fishery sub-sector	-Conduct Assessment on special challenges that may be confronting any specific gender or children in the tuna fisheries with a view to identifying measures to enhance equity in opportunity. -Sensitize stakeholders on Gender mainstreaming in the sub-sector	-Assessment Report & Action Plan  -Stakeholders sensitized	-Assessment Report & Action Plan  -No. of stakeholders sensitized -No. of Sensitization Reports	MALF; Ministry of Gender & Social Development; NGOs; CBOs; Development Partners	Year 35

## **CHAPTER 6**

### **6.0 COORDINATION, FINANCING, MONITORING AND EVALUATION**

#### **6.1 Institutional Framework**

The Ministry responsible for Fisheries Development will coordinate implementation of this strategy. The Ministry will drive the process of implementation and facilitate consultations with agencies that have responsibility over specific activities identified in the implementation matrix in chapter 5. The private sector, comprising of all the value chain actors including fishers, processors, traders, other investors and their associations and other key stakeholders shall be actively involved in the implementation of this strategy. These actors shall play a key role of investing, producing, adding value and trading. The role of the Ministry and other public agencies will thus be essentially to provide a competitive and attractive environment for the private sector to invest and produce.

The successful implementation shall also rely on the support of other key state agencies. The Ministry of Finance shall play a critical role in funding, design and implementation of targeted incentives required to transform tuna fisheries. The Ministry responsible for foreign relations and trade shall play a central role in guiding regional and international negotiations with respect to tuna trade. Kenya Marine Fisheries Research Institute (KMFRI) and other research institutions shall collaboratively deliver innovative research addressing priority issues along the tuna value chain. Ensuring compliance with the Monitoring Control and surveillance measures shall involve the building strong collaborative mechanisms with other state security agencies such as the Kenya Navy and Kenya Police with the Ministry responsible for Fisheries Development. This strategy shall also involve the civil society for resource mobilization, capacity development and general oversight over governance and trade issues; and the development partners for support in almost all the areas of intervention.

## **6.2 Financing**

Funding for the implementation of the strategy shall be from the treasury and willing donors and the funding sourced through the Vision 2030 secretariat where the strategy shall be presented as one of the key programmes to be implemented

## **6.3 Monitoring and Evaluation**

The Ministry will put in place a monitoring and evaluation mechanism to ensure efficient and effective implementation of this strategy. In order to achieve this, the following monitoring and evaluation framework will be put in place:

- i. A multi-stakeholder Monitoring and Evaluation team led by Director of Marine Services will be established. The team will develop the M&E Framework consistent with the National Integrated Monitoring and Evaluation System (NIMES), identify the tools, facilitate the collection of baseline data, determine the monitoring and evaluation frequency, and develop the terms of reference for both internal and external reviews.
- ii. Monitoring, evaluation and reporting framework for the strategy will be based on the strategy implementation matrix with special focus on the performance indicators.
- iii. Implementation will be achieved through annual Performance Contracts negotiated between the Ministry and the Government, and also between the Ministry and the relevant semi-autonomous government agencies (such as the Kenya Marine Fisheries Research Institute).
- iv. There shall be an Annual Review Report (AR) of the strategy. This report will provide information for decision making by stakeholders.
- v. At the end of the strategy period, an external consultant will carry out a Terminal Review (TR) using a participatory process. This will lead to identification of achievements against performance indicators and make recommendations for the next strategy.

