REPUBLIC OF KENYA

MINISTRY OF MINING, BLUE ECONOMY AND MARITIME AFFAIRS

STATE DEPARTMENT FOR THE BLUE ECONOMY AND FISHERIES

NATIONAL AQUACULTURE POLICY 2025

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FOREWORD

The second edition of Kenya's National Aquaculture Policy (NAP) 2025 aims to address critical issues affecting the sub-sector in Kenya by guiding the development of a commercially sustainable aquaculture sub-sector that contributes significantly to food and nutrition security, employment, and income. The Policy intends to tap and develop underexploited aquaculture resources. Several opportunities will be explored during this policy implementation phase. The ongoing blue economy reforms, anchor the sustainability of aquaculture development. The growing interest in aquaculture investment and growing demand for fish and fish products provide an impetus for sustainable fish production for local and high-end markets. Consequently, the aquaculture sub-sector needs to operate within a comprehensive and progressive policy framework.

In developing this policy, consideration was given to the Kenya Constitution 2010, which underscored the importance of devolution in aquaculture management, the Kenya Fisheries Policy 2023 which provides for sustainable utilization of aquaculture resources for socio-economic development, the Ministry of Mining, Blue Economy and Maritime Affairs Strategic Plan (2023-2027), the National Food Security Policy (2023-2027), Sustainable Development Goals, the Kenya Vision 2030, Bottom-up Economic Transformation Agenda- Medium Term Plan IV (2023-2027), Regional Blue Economy Strategy and Implementation Plan (2021-2025), the Agricultural Policy 2021, the National Agricultural Research System Policy (NARS, 2021) and other National Development Agenda.

This Policy provides a comprehensive framework that consolidates the legal, technical, administrative, and cross-cutting issues. It outlines the guiding principles, objectives, interventions, and legal and regulatory frameworks that the Government envisions for the development of the aquaculture sub-sector. Further, the policy seeks to foster a vibrant aquaculture sub-sector by establishing strong and efficient marketing

systems that allow for increased investment and economic gains in aquaculture, as well as a greater contribution to food and nutrition security, all while being supported by strong and efficient demand-driven research and extension services. The Fisheries Management and Development Act Cap 378 provides the basic legal framework for the development and management of environmentally responsible and sustainable aquaculture. Part VIII of the Act stipulates the need for the development of aquaculture regulations, aquaculture development plan, and aquaculture siting and licensing.

In this regard, I call upon all stakeholders to work together to achieve the goals outlined in this Policy which have been validated through an extensive participatory process involving a wide range of stakeholders, including fish farmers, aquaculture farmer's associations, fish traders, fish trade associations, farmer groups, County Governments, National Government Ministries, Departments, Agencies, Academia and Development Partners as required by the 2010 Constitution.

Hon. Hassan Ali Joho, EGH
Cabinet Secretary
Ministry of Mining, Blue Economy and Maritime Affairs

PREFACE AND ACKNOWLEDGEMENT

Kenya's aquaculture sub-sector is gaining momentum to meet the ever-growing demand for fish due to the Country population growth. Sustainable aquaculture sub-sector that significantly contributes to national socio-economic growth through food security, income generation, employment and wealth creation needs to be addressed to contain the growth momentum. Aquaculture growth has been slackened by limited dissemination and adoption of improved aquaculture technologies and low extension service coverage; limited access to credit by farmers and value chain operators; inadequate cold storage and processing facilities resulting to post-harvest losses; weak market linkages limiting value addition and export potential; and lack of coordination mechanism among aquaculture associations and stakeholders.

The development of the National Aquaculture Policy 2025 ensued gaps experienced in implementation of the National Aquaculture Policy 2011 and the enactment of the Constitution of Kenya 2010. The developed Policy aligns with the Constitution, emerging issues and unachieved objectives. Furthermore, novel technologies e.g. cage culture, aquaponics, innovations in mariculture and emerging issues at the global and regional levels relating to aquaculture require policy direction. The development of the Policy followed a rigorous process involving consultations between National Government and County Government; fish farmers and value chain operators; and key stakeholders within the sub-sector. Desk review was conducted from secondary data and documents relevant to the policy.

I wish to acknowledge everyone and institutions involved in the policy formulation. Countless appreciation goes to the staff of the State Department for Blue Economy and Fisheries including the Semi-Autonomous Government Agencies; Various Government Ministries, Departments and Agencies who provided very critical contributions; The County Governments through Sector Working Groups and County

Executive Committee Members Caucus who gave valued inputs especially on the devolved governance; and the Joint Agriculture Sector Consultation and Coordination Mechanism who facilitated the two tier Governments meetings. In addition, I wish to acknowledge the role played by fish farmers and value chain operators and all stakeholders who immensely contributed to the formulation of the National Aquaculture Policy 2025.

I, therefore, call upon all stakeholders in the aquaculture sector to work together in implementing the policy for the benefit of the present and future generations. The information contained in this document will serve as a road map to the government, the private sector and development partners for the development of Kenya's Aquaculture Sector.

Betsy Muthoni Njagi, CBS
Principal Secretary,
State Department for the Blue Economy and Fisheries

EXECUTIVE SUMMARY

The Kenya Government has progressively recognized the pivotal role that aquaculture plays in food and nutrition security, creation of employment, rural development and other economic benefits to the populace engaged in the industry. Global aquaculture production reached a peak of 130.9 million metric tonnes valued at USD 312.8 billion in 2022. The production was 59% of total global production surpassing capture fisheries production of 94.4 million metric tonnes (51%). Africa accounted for 1.9% (4.28 million metric tonnes) world aquaculture production in 2022. Aquaculture production in 2024 was 33,289 MT valued at 9.907 billion shillings recording an increase from 31,655 MT valued at 9.971 billion shillings in 2023 in Kenya. The increase was attributed to expanding cage culture enterprise in Lake Victoria. Kenya aquaculture sub-sector has been guided by the National Aquaculture Policy 2011 which is being reviewed to align with the Constitution of Kenya 2010, to address emerging issues and unachieved objectives. The National Aquaculture Policy 2025 focus on increasing aquaculture growth envisioning a sustainable, thriving and economically vibrant aquaculture sub-sector. Challenges experienced in aquaculture are addressed through thematic areas including Aquaculture Production and Productivity; Aquaculture Value Addition, Marketing and Trade, Extension Services and Technology Adoption; Investments and Financing in Aquaculture; Aquaculture Research, Development and Innovation; Aquaculture Information Management, Data and Communication; Climate Change and Environment; and Social Inclusion in Aquaculture. The Policy will be implemented through a multi-sectorial and sector-wide approach involving all aquaculture stakeholders and a well-coordinated legal and institutional framework. A Monitoring, Evaluation, Accountability and Learning (MEAL) system will be used to assess the implementation the policy.

LIST OF ABBREVIATIONS AND ACRONYMS

ABDP Aquaculture Business Development Program
AG Attorney General
BE Blue Economy
EAC East African Community
FAO Food and Agriculture Organization
FMDA Fisheries Management and Development Act Cap 378
KeFS Kenya Fisheries Service
KFMA Kenya Fish Marketing Authority
KMFRI Kenya Marine and Fisheries Research Institute
MEAL Monitoring Evaluation Accountability and Learning
MT Metric Tonnes
NAP National Aquaculture Policy
SBEC Sustainable Blue Economy Conference
SDBEF State Department for the Blue Economy and Fisheries
TVET Technical, Vocational Education and Training Institution
VMGs Vulnerable and Marginalized Groups

DEFINITION OF TERMS

In this Policy, unless the context otherwise requires-

"Aquaculture"; means the cultivation, propagation or farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants whether from eggs, spawn, spat, seed or other means or by rearing fish lawfully taken from the wild or lawfully imported into Kenya, or by other similar process;

"Aquapark"; means an aggregation of fish ponds in a specific area on terrestrial land or cages in marine or fresh water bodies;

"Aquaponics"; means the technology that combines aquaculture (fish farming) with hydroponic (growing of vegetables);

"Aquaculture products"; means any product or part thereof (including oil) obtained from farmed fish by processing and intended for use as human food, animal feed or a raw material ingredient in the manufacture of other commodities of commercial or ornamental value;

"Biosecurity"; means measures put in place to prevent, contain and manage diseases and parasites in aquaculture;

"Blue economy"; means the sustainable use of both marine and fresh water resources for economic growth, improved livelihoods and jobs and ocean ecosystem health. It encompasses sustainable fisheries and aquaculture, renewable energy, maritime transport, tourism, mining and bioprospecting;

"Climate-Smart Aquaculture"; means the climate-resilient practices;

"Fish"; means any marine or aquatic animal or plant, living or not and processed or not, and any of their parts and includes any shell, coral, reptile and marine mammal;

"Mariculture"; means aquaculture that involves cultivation of marine and brackish water organisms for food and other products in enclosed sections of the open seas, fish farms, tanks, ponds or raceways which are filled with seawater.

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CHAPTER ONE: INTRODUCTION

1.1.0 Background

At global level, in 2022, fisheries and aquaculture production was 223.2 million metric tonnes (MT), worth USD 472 billion and contributing an estimated 20.7 kg of aquatic animal foods per capita. Production comprised 185.4 MT of aquatic animals and 37.8 million MT of algae. The aquaculture sub-sector production was 130.9 million MT valued at USD 312.8 billion, and comprising 94.4 million MT of aquatic animals and 36.5 million MT of algae where Africa production was 1.9 percent of the global production. For the first time, aquaculture surpassed capture fisheries in aquatic animal production with 94.4 million tonnes (Fig 2), representing 51% of the world total and a record 57% of the production destined for human consumption. (FAO, 2024).

Aquaculture remains dominated by a small number of countries, with many low-income countries in Africa, Asia and Latin America and the Caribbean yet to exploit their full potential. Out of some 730 farmed species items, 17 staple species represent about 60% of global aquaculture production, while other species are important at local level. Targeted policies, technology transfer, capacity building and responsible investment are crucial to boost sustainable aquaculture where it is most needed, in particular in Africa. Concerted efforts and deliberate investments are required to achieve the projected increase in aquaculture production to 220 million tons by 2050 (Figure 1).

Aquaculture production in Eastern Africa increased from 68,351 MT in the year 2000 to 379,778 MT in 2021 representing an 8.51% annual growth against a potential of 138 million MT (FAO 2023). In 2024, the total fish production in Kenya was 168,424 MT worth 39.6 billion Kenya shillings. As has been the trend, most of the production was from inland capture fisheries, amounting to 121,357MT with an ex-vessel value of Kshs. 26 billion. The fish production from marine and aquaculture was 48,608 MT and 33,289 MT worth Ksh. 15.2 and 9.9 billion shillings, respectively (Kenya Fisheries Bulletin, 2024).

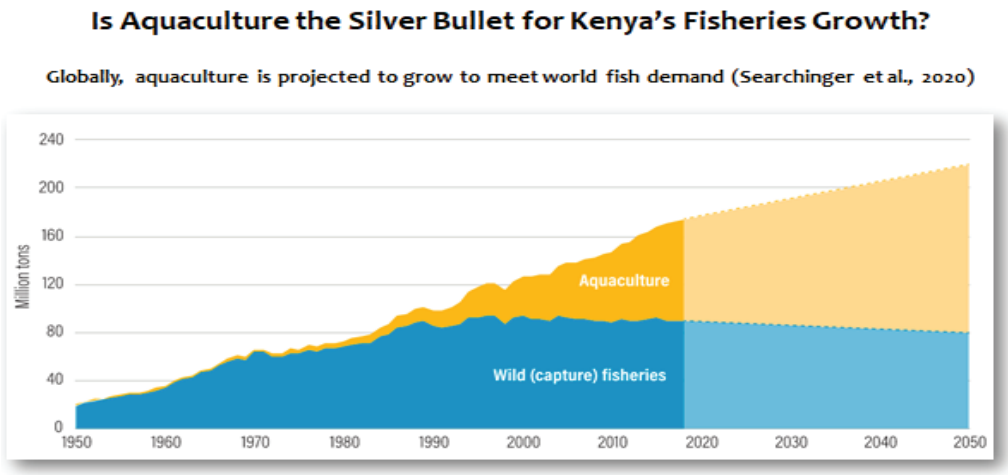

Figure 1: Projected global aquaculture growth 2020-2050 (Searchinger et al., 2020)

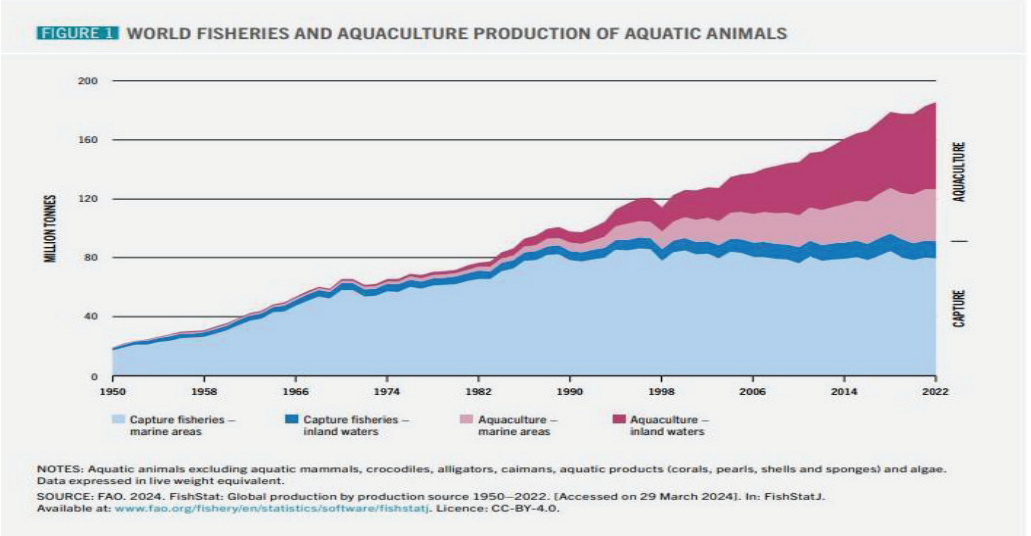

Figure 2: World fisheries and aquaculture production of aquatic animals (FAO, 2024)

The major limitations to aquaculture development include high cost of quality feed and seed, low aquaculture technology adoption, post-harvest losses & limited value addition, weak linkages between research and extension, limited technical capacity, inadequate infrastructural capacity especially marine hatcheries, poor access to credit, conflicts on water and land resource use, climate extremes and biosecurity risks.

The Government has progressively recognized the pivotal role that aquaculture plays in food and nutrition security, creation of employment, rural development and other economic benefits to those engaged in the industry. In this regard, it has initiated the development of specialized aquaculture centres in the country which include: Kenya Marine Fisheries Research Institute Research and Aquaculture Centres; the National Aquaculture Research and Development Training Centre – Sagana; Kiganjo National Trout Hatchery; National Mariculture Resource and Training Centre – Shimoni; and Kabonyo Fisheries and Aquaculture Service and Training Centre of Excellence – Kisumu. To take advantage of the blue economy space and exploit the huge aquaculture potential, the Government has operationalized various legal and institutional frameworks to push the Blue Economy and Fisheries development agenda. The Government has implemented several programs and projects such as; Kenya Coastal Development Project (KCDP), Kenya Climate Smart Agriculture Project (KCSAP), Aquaculture Business Development Program (ABDP), Kenya Marine and Fisheries Social Economic Development (KEMFSED) Project East Africa Community (EAC) 'True Fish' Project and is also promoting partnerships and collaborations with various players in aquaculture.

The Kenya Government aspires to create a conducive environment for a vibrant and competitive aquaculture industry to stimulate growth in the sub-sector and to address the challenges in aquaculture and exploiting existing opportunities. This will allow for increased efficient production as well as strong marketing systems that will enhance aquaculture investment and socio-economic gains.

1.2.0 Rationale for the Policy Review

Formulation and implementation of the Aquaculture Policy 2011 began after the enactment of the Constitution of Kenya 2010. However, the Policy was not aligned to the devolved system of governance. The reviewed Aquaculture Policy 2025 has ensured alignment with the Constitution and proposes solutions to emerging issues and unachieved objectives. Furthermore, the policy provides direction for new technologies e.g. cage culture, aquaponics, innovations in m ariculture and emerging issues at the global and regional levels relating to aquaculture.

1.3.0 Policy Guidelines and Objectives

1.3.1 Policy Purpose

Steer the aquaculture sub-sector towards the attainment of sustainable investment, management and development for food and nutrition security and wealth creation.

1.3.2. Policy Vision

A sustainable, thriving, and economically vibrant aquaculture subsector.

1.3.3. Policy Mission

Drive the sustainable development of the aquaculture sub-sector, catalysing socio-economic development and environmental stewardship.

1.4.0 Policy Goal and Objectives

1.4.1. Policy Goal

To achieve increased aquaculture production while promoting the sustainable utilization of aquatic resources and economic growth & development.

1.4.2. Policy Objectives

1.4.3. Overall Objective

To develop a sustainable aquaculture sub-sector that significantly contributes to national socio-economic growth through food security, income generation, employment and wealth creation.

1.4.4. Specific Objectives

a) To improve aquaculture extension services and technology adoption.
b) To upscale aquaculture production and productivity.
c) To promote aquaculture value addition, marketing and trade.
d) To promote investment, financing and insurance in aquaculture
e) To promote aquaculture research, development and innovations
f) To develop an aquaculture information management, data and communication system.
g) To enhance climate change adaptation and mitigate environmental degradation.
h) To promote social inclusivity in aquaculture.

1.4.5. Guiding Principles of the Policy

a) **Sustainability:** Promote sustainable aquaculture practices that minimize negative environmental impact and ensure the long-term viability of the sub-sector

b) **Good Governance and Management Partnerships**: Establish institutional frameworks and coordination mechanisms involving government agencies, industry stakeholders, and local communities for effective, inclusive and accountable aquaculture governance.

c) **Gender and Equity:** promote gender-responsive initiatives and equal opportunities in the aquaculture sub-sector among persons with disabilities, vulnerable and marginalized groups, youth, women, and the elderly.

d) **Public-Private Partnership:** foster public-private partnerships and collaboration in the aquaculture sub-sector for investment, training, innovation, and knowledge sharing.

e) **Public Health and Food Safety**: Promote food safety and standards, health management and product traceability by developing and enforcing regulations in aquaculture operations.

f) **Effective Aquaculture Planning:** Prioritize comprehensive and strategic planning in sustainable aquaculture development. This includes spatial planning, site selection criteria, and zoning.

g) **Sound Science and Precautionary Approach:** Prioritize science-driven, evidence-based decision-making in aquaculture development and application of the precautionary approach in areas of uncertainty or risks of serious irreversible harm to fish stock and/or aquatic habitats.

1.5.0 Scope of the policy

The National Aquaculture policy, 2025 targets to promote: improved extension & information dissemination; fresh & marine water aquaculture production & productivity; research and innovation; technology adoption; aquaculture public and private sector coordination; improved access to credit, financing and risk mitigation; post-harvest loss reduction, value addition; market access; climate change adaptation, mitigation of environmental degradation; empowerment of youth, women and vulnerable and marginalised groups.

CHAPTER 2: SITUATIONAL ANALYSIS

2.0.0 Analysis of the National Aquaculture Policy, 2011

The National Aquaculture Policy of 2011 aimed to establish a robust framework for sustainable aquaculture development in Kenya. While significant progress has been made in implementing its objectives, several gaps remain, necessitating a comprehensive review and update to align with current national, regional, and international aquaculture developments. Below is an analysis of key objectives from the 2011 policy and their current status:

2.0.1 Investment, Financing and Insurance in Commercial Aquaculture

Progress: There has been increased interest in commercial aquaculture through public projects such as the Fish Farming Enterprise Productivity Program (FFEPP) and the Aquaculture Business Development Programme (ABDP) and private sector investments in cages and land-based aquaculture & commercial hatcheries. In addition, there has been an increase in promoting the uptake of insurance for large scale commercial fish farm owners to insure their enterprises against the inherent risks. However, subsistence and small-scale commercial players are yet to adopt the uptake of insurance services.

Gaps: The financing, investment opportunities and uptake of insurance for aquaculture remain inadequate.

2.0.2 Legislative, Legal, and Regulatory Framework

Progress: Enacted the Fisheries Management and Development Act Cap 378; developed Aquaculture Regulations and Residue monitoring plan. In addition, National Aquaculture Development Plan and Strategy, the East African cage culture guidelines, fish feed standards, good aquaculture management practices (GAPs), standard operating procedures for fish seed for Tilapia and Catfish were developed.

Gaps: The East African Cage Culture guidelines and provision on the mode of establishment of fish cages or any such form of aquaculture establishment in Kenya fishery waters have not been domesticated.

2.0.3 Establishment of an Aquaculture Advisory and Research Board (AARB)

Progress: The policy proposed the creation of a private sector-led Aquaculture Advisory and Research Board to guide research and development. The Aquaculture Advisory and Research Board (AARB) was not established, however it was provided for through the Kenya Fisheries Advisory Council in the FMDA Cap 378.

2.0.4 Human Resource Development

Progress: Institutional reforms were undertaken that established independent Aquaculture Directorates at the State Department for the Blue Economy and Fisheries, KMFRI, KeFS and the same has been replicated at the county government level. These directorates are staffed by qualified personnel.

2.0.5 Seed and Feed Technology Development

Progress: Advances have been made in seed and feed production technologies, with research institutions and private hatcheries playing a key role. The National Mariculture Resource & Training Centre (NAMARET) operationalized at Shimoni, Kwale County; seed and feed fish farming training manuals, booklets and brochures developed; fish feed formulation manuals, reduced competition of animal protein sources for fish feed formulation through development of alternative fish feed sources, hatchery authentication guidelines, fish feed cottages, mariculture species manuals, selective breeding programs. Seed multiplication centres have been established to provide high-quality fingerlings.

Gaps: Limited dissemination and adoption of improved aquaculture technologies by smallholder farmers due to cost constraints and low extension service coverage.

2.0.6 Promotion of Aquaculture Enterprises

Progress: The government has provided an enabling environment for small, medium and large-scale aquaculture enterprises including infrastructure development, grants for aquaculture enterprises, fish market outlets, rural-based cottage fish feed production industries, aquaculture mini processing plants.

Gaps: Access to credit and financing remains a challenge for aquaculture entrepreneurs.

2.0.7 Aqua-Business Development and Value Addition

Progress: The government has facilitated public-private sector partnerships in aquaculture business services, including marketing, value addition and input supply. The government has facilitated the attainment of KEBS standard mark of quality for sausages, fish fillets, burger and samosas, seaweed lotion and soaps.

Gaps: Post-harvest losses is still a challenge due to inadequate cold storage and processing facilities. Market linkages are weak, limiting value addition and export potential.

2.0.8 Investment in Commercial Aquaculture

Progress: There has been increased investment in commercial aquaculture such as the Fish Farming Enterprise Productivity Program (FFEPP), the Aquaculture Business Development Programme (ABDP), cage farming and commercial hatcheries.

Gaps: The financing mechanisms for aquaculture remain inadequate. Mariculture is underdeveloped due to insufficient investment.

2.0.9 Mobilization of Funds for Aquaculture Development

Progress: There has been increased investment in commercial aquaculture such as the Fish Farming Enterprise Productivity Program (FFEPP), the Aquaculture Business Development Programme (ABDP), cage farming and commercial hatcheries.

Gaps: The financing mechanisms for aquaculture remain inadequate. Mariculture is underdeveloped due to insufficient investment.

2.0.10 Achieving Self-Sufficiency in Fish Supply

Progress: Aquaculture production increased from 4,000MT in 2011 to 31,768 MT in 2023. However, the country is not self-sufficient in fish production.

Gaps: Aquaculture production and productivity remain a challenge.

2.0.11 Extension and Training Framework

Progress: Aquaculture curriculum and training programs have been developed and are being implemented in Kenya Fishing School and TVET institutions respectively. Adoption of Fish Farmer Field Schools approach and aquaculture education tours to centres of excellence. Youth incubation programs for aquaculture value chains.

Gaps: Aquaculture extension and training remain a challenge due to inadequate skills, low staffing levels, insufficient extension services provision, low adoption of information communication and technology adoption in extension services.

2.0.12 Social Inclusion and Cross-Cutting Issues

Progress: Gender & HIV/AIDS policies were mainstreamed in aquaculture programs and projects.

Gaps: There is a need to prioritize social inclusion policies.

2.0.13 Aquaculture Information and Data Management

Progress: The state of aquaculture book; annual statistical bulletins were published; and establishment of Annual National Aquaculture Day, disseminated aquaculture information in trade fairs and exhibitions.

Gaps: The aquaculture information system remains fragmented. There is a need for a centralized, integrated aquaculture information management system.

2.0.14 Monitoring and Evaluation (M&E) System

Progress: Aquaculture programs were onboard on National Integrated Monitoring and Evaluation System (NIMES) and eCitizen platforms, MTP III and Vision 2030 reporting systems.

Gaps: There is still a lack of a structured M&E system to track Aquaculture Policy, 2011 implementation.

2.0.15 Stakeholder Engagement

Progress: Establishment of aquaculture associations; Aquaculture Association of Kenya (AAK), Commercial Aquaculture Society of Kenya (CASK), Cage Aquaculture Association of Kenya (CAAoK), Commercial Aquaculture Association of Kenya (CAAOK), Lake Victoria Aquaculture (LVA) Association. Aquaculture stakeholders are involved in the development of governance instruments.

Gaps: Weak coordination mechanism among stakeholders.

2.1.0 Challenges and Opportunities in the Aquaculture Industry

Aquaculture sub-sector plays a critical role in food and nutrition security, economic, and social development in Kenya, but is currently far from reaching its potential. This chapter describes the challenges that impede successful subsistence and commercial investments in aquaculture in the country. Furthermore, it identifies a number of opportunities and investment priorities to support the development of a sustainable, climate-resilient and equitable aquaculture sub-sector in Kenya as an integral component of aquatic food systems.

2.1.1 Aquaculture Industry Challenges

a) Aquaculture Production

Most fish farmers operate on small-scale pond-based production systems in remote locations with undeveloped infrastructure, making it expensive and inefficient to supply inputs and extension services. The limited diversification in the use of modern and climate smart aquaculture technologies and innovation leads to lower input-output production. The demand for critical inputs such as quality and cost-effective seeds and feeds far exceeds the production and supply in the country. In the seed production systems, there is inadequate specialized hatcheries to promote the genetic enhancement of native and indigenous species as well as limited marine and freshwater hatchery infrastructure and facilities for selective breeding. Feed costs are expensive due to the high cost of raw materials which often compromise the quality of the final product (KMFRI, 2021). Local producers also have limited technical expertise in seed production, feed formulation, processing, handling and storage. In addition, imported feeds are expensive due to transport and logistical costs significantly impacting the cost of production.

b) Post-harvest management and Value Addition

Many fish markets face significant challenges in receiving a consistent supply of high-quality fish from farmers due to a lack of appropriate post-harvest management strategies including support infrastructure like storage facilities, processing plants, cold chains, and transportation systems. This is compounded by unfavourable enterprise sizes, limited technical know-how, and isolated operations. Currently, the majority of fish and fish products are sold directly at the farm gate or in local markets. These value chain inefficiencies and inequalities along with disparities in access to resources, finance and skills lead to uneven distribution of benefits among aquaculture actors.

One of the primary obstacles is the limited understanding among smallholder farmers regarding post-harvest management technologies thus reducing their ability to maximize profits. Additionally, there is an inadequate up-to-date information on aquaculture product trade, markets, market structure, and distribution channels. The development of value-added products is hindered by the inability to meet the quality requirements by major export markets.

c) Aquaculture marketing and trade

Aquaculture is responsible for a greater proportion of fish consumed in Kenya with supplies coming from local production and imports to meet the supply deficits. Local and international markets for fish have various market specifications which require different technological interventions in terms of production, processing, packaging and delivery to target markets. However, access to local and lucrative export markets is hampered by various challenges including: limited production to meet existing market demand; inconsistency in food safety, quality and standards; poor market linkages; weak distribution channels/networks; limited information on market requirements; Tariff and Non-Tariff barriers to trade in the international markets; limited diversification of aquaculture products and uncoordinated policies for competitive fish marketing.

d) Extension and Technology adoption

The growth of the aquaculture industry in Kenya has been enabled through the expansion of aquaculture production areas, intensified production systems, adoption of new technologies and systematic

improvement of existing technologies. Despite the development of several technological innovations in aquaculture, their adoption remains relatively low. Moreover, the adoption of existing technologies by small-scale farmers remains challenging to meet their needs and capacity.

e) Investments in Aquaculture

Investments in aquaculture are relatively low despite government efforts to promote aquaculture for income generation and food security. Challenges such as high-risk perception associated with aquaculture investment; high cost of investments in commercial aquaculture; limited entrepreneurial skills and land tenure system have hindered investment in aquaculture.

f) Research and Development

There is inadequate funding for long-term and targeted aquaculture research by the government. More often, research projects in the aquaculture sub-sector are substantially financed by development partners, which end with the project contract. As a result, critical research needs in several strategically important areas i.e., genetics, fish health, biodiversity, biosecurity, and environmental waste management have been under-funded . Furthermore, the dissemination of research findings to stakeholders has not been effective leading to "low input–low return".

g) Capacity within the Aquaculture Industry

The aquaculture sub-sector has inadequate human capital to respond to fast-moving technological advancements to boost the adoption and upscaling of technologies for the long-term development of the industry. A vast majority of personnel joining the sub-sector have diverse skills mix and require further capacity building in aquaculture. The sub-sector has few technical experts who are unevenly distributed, with no framework for human resource sharing and collaboration between the National and County Government.

h) Fish Safety Assurance and Certification

Inadequate fish quality assurance infrastructure, limited fish traceability systems and fish health management systems have hampered utilisation and trade in farmed fish and fishery products. Local and international

markets increasingly demand more products from sustainable farming and responsible sources, which requires the aquaculture industry's value chain to be certified and accredited. Therefore, fish product standard certification and compliance are anticipated to play a vital role in the growing market for higher-value niche fish products.

i) Information, data and communication

Quality data is critical for effective decision-making. Currently, the existing aquaculture information is fragmented and limits use in decision-making. The challenge is compounded by an existing gap in collecting, storing and sharing aquaculture information between government and relevant stakeholders. Poor data quality can lead to incorrect decisions and wasted resources. Huge volumes of data are generated that require an Integrated Information and Communication System to collect, collate and share data.

j) Management of shared aquatic resources

Resource use conflict in the utilization of shared aquatic resources for aquaculture development impacts the productivity of the subsector. In addition, a weak collaboration framework among stakeholders impedes the development of effective conflict-resolution mechanisms.

k) Legal, Policy, Regulatory and Institutional Framework

Significant advancements have been achieved in enhancing the capacity of government agencies, as well as in formulating regulatory and policy frameworks for the aquaculture sub-sector. These positive strides underscore a commitment to fostering sustainable growth and management within the industry. However, the implementation of these advancements is marked by a series of persistent challenges such as: overlaps and gaps in the legal and regulatory mandates of the national and county governments; the aquaculture sector has been for years constrained by an unconducive regulatory framework; weak private sector institutions within the aquaculture sub-sector; and inadequate coordination, collaboration and partnership among sector institutions.

l) Climate Change and Environment

Climate change poses significant challenges to the sustainability of the aquaculture subsector. Rising temperatures, changing rainfall patterns and increased frequency of extreme weather events such as floods, and droughts can disrupt aquaculture production systems. Rising sea levels, also pose risks to coastal aquaculture. Further, the environmental integrity and biodiversity may be affected by the effluents from aquaculture establishments.

m) Cross-cutting issues

The aquaculture sub-sector faces inclusion and equity challenges for Vulnerable and Marginalized Groups (VMGs) and youth hindering their participation and contribution to the sub-sector. The participation of VMG and youth in aquaculture is hampered by limited access to resources, socio-cultural factors, market opportunities and substance abuse. Additionally, gender disparities persist in access to resources, decision-making, and market participation within the aquaculture sub-sector.

2.1.2 Aquaculture Sub-Sector Opportunities

The sub-sector has tremendous potential to contribute to decent jobs, youth employment, food and nutrition security in the country, and the realization of this potential is within reach with stronger government leadership, commitment and collaboration among various actors. Several opportunities to sustain the aquaculture growth are discussed below.

a) Increasing priority of the blue economy sector by Governments and developing partners

There is a growing need to protect, manage, utilize, and develop Kenya's aquatic resources in a manner which is consistent with ecologically sustainable development to uplift the living standards of the fishing communities and to enhance food security. Kenya hosted the inaugural Global Sustainable Blue Economy Conference (SBEC) in 2018. In addition, Kenya co-hosted the second UN Ocean Conference in partnership with the Government of Portugal in 2022, a champion of the blue economy action group under the Commonwealth Blue Charter and a member of the High-Level Panel for Sustainable Ocean. Further, Kenya has adopted the Blue Economy (BE) concept as a priority sector in the Economic

Pillar of Vision 2030 providing opportunities for sustainable growth in the aquaculture sector. The government, through the Ministry of Mining, Blue Economy, and Maritime Affairs is steadfastly spearheading the development of the Blue Economy sector. In addition, the government BETA agenda is revitalising the blue economy sector with a focus on empowering value chain actors at the bottom of the pyramid.

Kenya is endowed with a vast network of aquatic resources comprising freshwater lakes, rivers, dams, underground water reserves, rain and/or flood waters and the extensive Indian Ocean marine waters. To a large extent, the country presently utilises lakes, and rivers for aquaculture and minimally underground and marine waters. Many water resources in the country remain unused or not sustainably utilised and yet technologies for efficient use of water resources for aquaculture are available. Moreover, the country has arid and semi-arid lands (ASAL) with unique underground water reserves with the potential for climate-smart aquaculture technologies, innovations and management practices.

b) Additional cultured species

The main cultured species in Kenya's freshwater systems is Nile tilapia, which accounts for about 80% of production, followed by African catfish, contributing about 14% of aquaculture production. Leveraging on the technological advancement made in tilapia farming in the country, more fresh water species can be prioritised for aquaculture. The additional fresh water species in Kenya include common carp, lungfish, other tilapia strains, rainbow trout, koi carp, giant freshwater prawns, largemouth bass, and diverse ornamental species for recreational and ornamental purposes.

The marine environment has over 220 fish species with potential for utilization as food, ornamental, recreational and medicinal purposes. Whereas efforts have been made to tap into this potential, only a few species are farmed in Kenya. The species currently under culture include seaweeds, milkfish, prawns, mud crabs, rabbitfish, mullets, salt-tolerant Nile tilapia and sea cucumbers. The Government is promoting investment in marine hatcheries to support aquaculture development.

c) Supply-demand gap

The demand for fish in Kenya is on the rise due to factors such as population growth and changing dietary preferences, driven by health consciousness and nutrition concerns. The domestic food fish supply remains low and accounts for 5.7 kg per capita consumption which is significantly lower than the African average of 10 kg per capita. To meet the growing demand and supply gap, aquaculture presents a promising solution to complement capture fisheries and gradually bridge the gap. The annual fish supply-demand deficit is estimated at 200,000 MT and is expected to widen thus requiring a significant increase in aquaculture investments and productivity.

Value addition and post-harvest management provide an aquaculture investment opportunity to scale outlets to segments not reached by fresh fish thus enhancing the demand and consumption of fish. Further, it is imperative to invest in innovative market linkages capitalising on the established transport infrastructure.

d) Infrastructural development in the aquaculture

The Kenyan Government is in the process of establishing a National Mariculture Resources and Training Centre (NAMARET) in Shimoni and Kabonyo Fisheries Training Centre of Excellence in Kisumu. These centres are intended to provide high-quality seed for both coastal and freshwater aquaculture. They will facilitate training, research, innovation, and best practices in Fisheries and Aquaculture through demonstrations and incubations. There is also ongoing expansion and modernisation of the National Aquaculture Technology Development and Innovation Transfer Centre (NATD&ITC) in Sagana, the National Trout Hatchery, research centres, universities, TVETs and private sector investments as aquaculture infrastructure. In addition, the County Governments support farmers in building hatcheries, production units, capacity building, access roads, TVETs, providing land, building aquaparks, fish related market outlets.

e) Digital Transformation

Access to digital services is key to the success of the aquaculture subsector by enabling entrepreneurs to transact with ease. The aquaculture subsector will leverage the national fibre optic internet coverage across the country to drive the new aquaculture technology.

This policy will prioritize mainstreaming of digital solutions and other innovations in the aquaculture sector to leverage artificial intelligence, digital communication and other technologies and thus enhance Kenya's regional and global competitiveness.

f) Recreational and ornamental trade

Kenya possesses rich aquaculture resources in the Indian Ocean, inland lakes, rivers, and streams, abounding with highly attractive and diverse species of ornamental fishes. Noticeably, sport and ornamental aquaculture is underutilized. The market for ornamental fish aquaculture is widespread ranging from private homes, business premises, offices, and public and private institutions. This potential is enhanced by the development of Kenya as a middle-income economy that will also attract recreational aquaculture. Overall, ornamental and recreational aquaculture have a spillover effect leading to the development of associated industries such as non-exported products, youth enterprises, jewellery, aqua pets, aqua shops, and retail sales of glass aquarium accessories and fish feed.

g) Employment to youth and women

The aquaculture sub-sector catalyses and facilitates inclusive, meaningful and decent job opportunities for women, youth, persons with disabilities and VMGs. For instance, the modern aquaculture farms have created thousands of job opportunities along the value chain thereby leading to expanded work opportunities, graduate internship programs and entrepreneurial opportunities for the youth and increased market share of young people in the value chain. Further, the sub-sector provides a platform for the youth to put into use digital modern technologies and innovations. In addition, the availability of labour force particularly women and youth presents a significant opportunity for the growth and development of aquaculture in Kenya.

h) International and Regional commitments

Kenya is a signatory to several regional and international agreements, conventions, treaties and protocols that provide a framework for the sustainable development of the aquaculture subsector. The UN General Assembly proclaimed the years 2021-2030 the Decade of Ocean Science for Sustainable Development offers a unique opportunity to transform and co-design the production of knowledge, resulting in practical and sustainable solutions that address societal challenges with an ocean dimension and build a more climate change-resilient planet. Kenya shall use this opportunity to promote the science of aquaculture for economic and community development. Further, SDGs, Africa Union Agenda 2063, Africa Blue Economy strategy, IGAD Blue Economy strategy, LVFO Convention, Western Indian Ocean Marine Science Association (WIOMSA), Nairobi Convention, Aquaculture Network for Africa (ANAF), Comprehensive Africa Agriculture Development Program (CAADP) etc., provide policy guidance towards aquaculture investment and development.

CHAPTER 3: POLICY STATEMENTS

The policy focuses on the following areas:

1) Aquaculture Production and Productivity
2) Aquaculture Value Addition, Marketing and Trade
3) Extension Services and Technology Adoption
4) Investments, Financing & Insurance in Aquaculture
5) Aquaculture Research, Development and Innovation
6) Aquaculture Information Management, Data and Communication
7) Climate Change and Environment
8) Social Inclusion in Aquaculture
9) Legislative, Legal, and Regulatory Framework

1) Aquaculture Production and Productivity

a) **Policy issue:** Limited access to affordable and quality inputs.
b) **Policy objective:** To promote access to affordable and high-quality inputs.
c) **Policy interventions**

The National Government will:

i. Develop and implement regulations, guidelines and standards for quality inputs
ii. Facilitate sustainable utilization, protection and conservation of aquatic genetic resources for aquaculture development
iii. Promote access to affordable inputs

The County Governments will:

i. Promote production, distribution and access to high-quality and affordable inputs through public-private partnerships
ii. Ensure compliance with required regulations
iii. Promote and incentivize cluster-based input production systems

2) Aquaculture Value Addition, Marketing and Trade

a) **Policy issue:** post-harvest loss, limited value addition, and ineffective marketing in the aquaculture sub-sector.
b) **Policy objective:** To reduce post-harvest losses, promote value addition, and improve marketing linkages.
c) **Policy interventions:**

The National Government will:

i. Develop a fish marketing strategy
ii. Promote investment in development of post-harvest reduction and value creation infrastructure

The County Government will:

i. Promote fish value addition and processing technologies and innovations.
ii. Promote participation of women and youth in post-harvest management, value addition and processing.
iii. Support investment in development of post-harvest reduction infrastructure e.g. storage facilities, processing plants, cold storage and transportation systems.
iv. Strengthen market linkages and improved market access for aquaculture products
v. Ensure compliance with product safety and quality standards.

3) Extension Services and Technology Adoption

a) **Policy issue:** Inadequate aquaculture extension services and Limited Technology Adoption
b) **Policy objective:** To enhance aquaculture extension services and promote Technology Adoption
c) **Policy interventions:**

The National Government will:

i. Develop aquaculture standards and guidelines for aquaculture service provision
ii. Provide mechanisms for certification of extension service providers in the aquaculture sector
iii. Develop aquaculture extension services framework
iv. Promote innovation and incubation of aquaculture technologies
v. Establish National and Regional Technology Transfer Centres

The County government will:

i. Implement aquaculture extension services framework
ii. Strengthen capacity-building initiatives to enhance aquaculture human resource skills, knowledge and competency

iii.Strengthen governance of aquaculture farmer organizations.

iv. Strengthen extension services for technology transfer
v. Support the development and packaging of transformative aquaculture technologies
vi. Establish county-based technology transfer centres and demonstration farms
vii. Strengthen collaboration between research institutions, industry experts, and aquaculture farmers in the development and adoption of innovative technologies

4) Investments, Financing and Insurance in Aquaculture

a) **Policy issue:** Financing, investment and insurance in aquaculture
b) **Policy objective:** To promote access to finance for investment in aquaculture and insurance
c) **Policy interventions**

The National Government will:

i. Provide adequate funds for aquaculture development through annual budgetary allocations.
ii. Establish a framework for resource mobilization for funding aquaculture development
iii. Encourage public-private partnerships to leverage resources for aquaculture development
iv. Promote development of aquaculture Insurance with stakeholders.
v. Promote collaboration with international bodies involved in insurance for technical support and skills transfer;

The County Government will:

i. Provide adequate funds for aquaculture development through annual budgetary allocations.
ii. Establish a framework for resource mobilization for funding aquaculture development
iii. Encourage public-private partnerships to leverage resources for aquaculture development
iv. Promote financing opportunities in aquaculture development
v. Promote public private partnership in aquaculture insurance

5) Aquaculture, Research, Development and Innovation

a) **Policy issue:** Inadequate funding of aquaculture research and ineffective dissemination of research findings to stakeholders

b) **Policy objective:** To facilitate funding for demand-driven innovative research for development, technological advancement and conservation.

c) **Policy interventions:**

The National Government will:

i. Facilitate collaboration between academia, industry, and research institutions to foster knowledge sharing, interdisciplinary research, and innovation
ii. Increase public investment in aquaculture research and development.
iii. Promote research and development for quality and cost-effective inputs.
iv. Develop grant schemes for research and extension
v. Encourage research that is driven by market demands and incorporates indigenous knowledge systems in the aquaculture sub-sector.
vi. Establish and strengthen linkages between research institutions, and farmers to enhance knowledge transfer, and best practices in aquaculture production and management.
vii. Promote breeding and species selection for wild, extinct and endangered species to enhance aquaculture production and conservation
viii. Promote standards for bio-safety, bio-security and disease control
ix. Promote fish welfare standards

The County Government will:

i. Promote adoption and implementation of research-based existing, new and emerging technologies.
ii. Develop mechanisms for the dissemination and adoption of research findings, innovative technologies and indigenous knowledge.

6) Aquaculture Information Management, Data and Communication

a) **Policy issue:** Inadequate capacity and poor coordination in data collection, limited coordination in information management systems, and a lack of effective communication strategies.

b) **Policy objective:** To improve capacity, coordination, and communication in data collection and information management systems within the aquaculture sub-sector.

c) **Policy interventions:**

The National Government will:

i. Collect, collate, analyse and disseminate national aquaculture data and information for decision making
ii. Develop a National Aquaculture Information Management System

The County Government will:

i. Collect, collate, analyse and disseminate county-specific aquaculture data and information for decision making
ii. Develop a county-specific Aquaculture Information Management System

7) Climate Change and Environment

a) **Policy issue:** Climate change and environmental degradation negatively impacts the sustainability of aquaculture.
b) **Policy objective:** To enhance climate change and environmental degradation mitigation, adaptation and resilience in aquaculture.
c) **Policy interventions:**

The National Government will:

i. Promote research focusing on climate change mitigation, adaptation and resilience
ii. Promote public-private partnerships for sustainable and climate-resilient inputs
iii. Promote carbon trading in the aquaculture sub-sector
iv. Develop regulations governing aquaculture practices to minimize environmental degradation and pollution

The County Government will:

i. Promote the adoption of climate-smart aquaculture approaches
ii. Promote environmental conservation and ecosystem rehabilitation in water bodies
iii. Promote partnerships for preparedness, mitigation, and adaptation efforts
iv. Promote capacity building to address climate changes in the aquaculture sub-sector

8) Social Inclusion in Aquaculture

The aquaculture sub-sector faces inclusion and equity challenges for Vulnerable and Marginalized Groups (VMGs) and youth hindering their participation and contribution to the sub-sector. Additionally, gender and PLWDs disparities persist in access to resources, decision-making, and market participation within the aquaculture sub-sector.

a) **Policy issue:** Limited social inclusivity in aquaculture
b) **Policy objective:** To enhance social inclusivity in aquaculture.
c) **Policy interventions:**

The National Government to promote social inclusivity in:

i. capacity building programs in aquaculture.
ii. access to aquaculture resources.
iii. financing programs for aquaculture enterprises.
iv. research and innovation agenda in aquaculture.

The County Government to promote social inclusivity in:

i. promotion of cluster-based aquaculture enterprises
ii. capacity building programs in aquaculture
iii. access to aquaculture resources
iv. financing programs for aquaculture enterprises.

9) Legislative, Legal and Regulatory Framework

a) **Policy issue:** Weak coordination in the aquaculture subsector
b) **Policy objective:** To provide a framework for coordination and harmonization within the aquaculture sector
c) **Policy interventions:**

The National government will:

i. Provide for enabling policy and legal frameworks for sustainable aquaculture development
ii. Develop a comprehensive Aquaculture Strategy, Development Plan and Guidelines.
iii. Strengthen regulatory enforcement and monitoring mechanisms.

The County government will:

i. Develop an enabling county- specific legal framework for the implementation of the policy
ii. Develop mechanisms for stakeholder engagement and coordination in aquaculture.

CHAPTER 4: AQUACULTURE POLICY IMPLEMENTATION FRAMEWORK

This Policy will be implemented through a multi-sectorial and sector-wide approach with the involvement of all aquaculture stakeholders including national and county governments, Development Partners, Private Sectors, Civil Society, interest groups and the public.

The implementation of this policy will require a well-coordinated legal and institutional framework. Thematic policies and strategies will be developed to address specific sub-sector requirements and for better implementation of this Policy. The implementation process will be preceded by the launch, publicity and distribution of the policy.

Further, a National Aquaculture Strategic and Development Plan will be developed using existing legislation to guide the implementation of this Policy. This policy will be reviewed from time to time as the need arises and it is subject to a comprehensive review in line with the Government Development Plans.

4.1. Aquaculture Institutional Framework

Aquaculture plays a significant role in food and nutrition security, creation of employment, rural development and other economic benefits to those engaged in the industry. The current executive Order No. 1/2025 mandates the State Department for the Blue Economy and Fisheries to develop an aquaculture policy.The Fisheries Management and Development Act (FMDA) CAP 378 establishes the following institutions to strengthen fisheries and aquaculture Management and Development:

a) The Kenya Fisheries Advisory Council as an advisory body to review and advise the national government on fisheries matters;
b) The Kenya Fisheries Service which is responsible for the conservation, management and development of Kenya's fisheries resources;
c) The Kenya Fish Marketing Authority which is mandated to market fish and fisheries products from Kenya; and
d) Fish Levy Trust Fund, which provides supplementary funding of activities geared towards management, development and capacity

building; awards and urgent mitigation to ensure sustainability of fisheries resources.

e) Fisheries Research and Development Fund: Provides supplementary funding for research intended to further the development of fisheries management, capacity building, scholarships, grants and support for the observer programme.

There are other institutions created under other statutes namely:

a) Kenya Marine and Fisheries Research Institute, established under Science, and Technology Act CAP 511 mandated to undertake research in marine and freshwater fisheries and aquaculture; and

b) The Kenya Fishing Industry Corporation (KFIC) established under State Corporation Act (Cap 446) to exploit and process fishery resources in the Kenya fishery waters and high seas by promoting establishment and efficiency of businesses engaged in the fishing and fishing related activities.5.3 Stakeholders Mapping

Potential partners identified for the Aquaculture sub-sector are:

No	Stakeholder	Role
	Ministry of Mining, Blue Economy and Maritime Affairs	The Ministry in charge of aquaculture will implement this Policy through its respective departments and agencies by developing subsector policies, strategies, laws, regulations and plans, attending to international obligations while coordinating the implementation of nationwide aquaculture programs
	The National Treasury and Economic Planning	Provision of leadership on fiscal issues and funding for national and county governments for implementation
	Ministry of Interior and National Administration	Cooperation in law enforcement during aquaculture Monitoring, Control and Surveillance including conflict resolutions
	Ministry of Health	Cooperation in enforcement and compliance with public health regulations.
	Ministry of Roads and Transport	Cooperation in the development of infrastructure supporting aquaculture development.

	Ministry of Water, Sanitation and Irrigation	Expertise sharing on dam development and water resources availability in terms of quantity and quality for restocking programs and aquaculture development
	Ministry of Foreign and Diaspora Affairs	Cooperation in managing aquaculture investments in trans-boundary waters, Regional and International instruments relating to aquaculture
	Ministry of Environment, Climate Change and Forestry	1) Environment matters relating to aquaculture. These will include the Environmental Impact Assessment of aquaculture establishments, licensing of identified and suitable aquaculture sites in forest areas.
	Ministry of Energy and Petroleum	Provision of energy for aquaculture development
	Ministry of Lands, Public Works, Housing and Urban Development	2) Zoning and acquisition of land ownership documents for areas identified for aquaculture development
	Ministry of Education	Curriculum development for aquaculture training
	Ministry of Public Service and Human Capital	Human Resource Capacity for Aquaculture Development
	Ministry of Cooperatives and Micro, Small and Medium Enterprises (MSME) Development	Formation of aquaculture-related cooperative societies and capacity building for aquaculture-related MSMEs
	Ministry of East African Community (EAC) the ASALS and Regional Development	Coordination of Economic, Social, Political activities and harmonization of Protocols to boost trade and investment in the EAC Partner States
	Ministry of Investments, Trade and Industry	Facilitate investments and trade in fish and fishery products and promote the development of Farmers organizations

	Ministry of Labour and Social Protection	Develop and enforce labour standards and guidelines specific to the aquaculture sub-sector; ensure decent working conditions, fair wages and social protection mechanisms for workers in aquaculture enterprises; collaborate with relevant agencies to promote youth and women employment opportunities within the sector; support capacity building and skills development
	Ministry of ICT and Digital Economy	Facilitate the integration of digital technologies in aquaculture operations, including data collection, market access, extension services, and value chain management; support the development and implementation of a national digital fish marketing information system; promote e-commerce platforms for aquaculture products; enhance digital literacy among aquaculture actors; collaborate with fisheries agencies to leverage technology for improved productivity, traceability and sustainability in the sector
	State Department for Physical Planning	Integrate aquaculture development into national and county-level spatial planning frameworks. Facilitate infrastructure development planning such as access roads, water supply systems and waste management facilities that support aquaculture zones. Mediate resource-use conflicts involving aquaculture operators and other players.
	Office of the Attorney General (AG) and Department of Justice	Promote policy, legal and institutional reforms
	State Department for Livestock Development	Promote synergies between livestock and aquaculture systems through integrated farming models; support feed production and supply chain systems that benefit aquaculture; collaborate with fisheries agencies on aquatic animal health and biosecurity measures; contribute to research and development of sustainable feed formulations using livestock by-products; enhance capacity building for farmers engaged in combined livestock-aquaculture enterprises.

	Parliaments	Make legislation and examine governance activities, policies and programs
	Judiciary	Promote the rule of law in shaping public policy through the interpretation of the constitution
	Office of the Director Public Prosecution	Prosecution of aquaculture Related crimes
	Kenya Fisheries Service	Responsible for the conservation, management and development of Kenya's aquaculture resources in accordance with the Act
	Kenya Bureau of Standards (KeBS)	Responsible for certification and standardization of fish and fishery products including value-added products.
	Kenya Marine and Fisheries Research Institute	Undertake research in marine and freshwater fisheries, aquaculture and the blue economy
	Fish Levy Trust Fund	To provide supplementary funding of activities geared towards management, development and capacity building; awards and urgent mitigation to ensure sustainability of aquaculture resources
	Kenya Fish Marketing Authority	To market aquaculture products from Kenya
	Kenya Maritime Authority	Maritime safety and capacity building
	National Environment Management Authority	Coordinate environmental compliance in aquaculture activities; ensure adherence to national and international environmental standards; collaborate with implementing agencies to assess and mitigate environmental impacts of aquaculture projects.
	Kenya Forestry Service	Catchment management
	Association Fish Processors of Kenya	Support and strengthen Kenya's trade in fish and fish products
	Kenya Wildlife Service	Marine protected areas, recreational fisheries within the parks, endangered species
	Water Resources Authority	Management of water extraction and use
	National Irrigation Authority	Integrated aquaculture development
	National Land Commission	Management of public lands

	Lake Victoria Fisheries Organization	Promote sustainable management and development of fisheries and aquaculture resources in the EAC region
	County governments	County governments will be responsible for the implementation of this Policy through domestication of national policies, strategies and plans arising from this Policy.
	Development partners	Support the financing, infrastructure development, capacity building and technical assistance.
	Private sector, fish farmers, civil society, and other non-state actors	Non-state actors including fish farmers will provide for independent ideas other than governmental agencies and will play a leading role in agenda setting, policy development and resolution of resource conflicts at the local level. Professional societies will enhance professionalism and formulation and implementation of aquaculture policies and best practices.

ANNEXES

ANNEX 1: NATIONAL AQUACULTURE POLICY IMPLEMENTATION MATRIX

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Aquaculture Production and productivity	To create an enabling environment that promotes access to affordable and high-quality inputs.	Facilitate sustainable utilization, protection and conservation of aquatic genetic resources for aquaculture development	Inventory of genetic resources, map for the genetic resources, established gene banks	National Government	2024 – 2033
		Promote efficient distribution and access to high-quality and affordable inputs through public-private partnerships.	Number of Public-Private Partnerships implemented	County Government	
		Ensure compliance with required regulations, standards and certification.	Certification coverage, frequency of inspection	National and County Government	
		Facilitate public-private partnerships for sustainable and climate-resilient inputs.	Number of public-private partnerships, MoUs,	National and County Government	
		Facilitate availability and access to high-quality and affordable aquaculture inputs through strategic partnerships, incentives, and efficient supply chain management.	Partnerships implemented, reduced cost of inputs, inventory management.	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Promote and incentivize cluster-based input production systems.	Number of clusters formed, number of production systems established.	National and County Government	
		Encourage diversification of aquaculture species and production systems.	Number of species adopted and promoted, number of production systems promoted	National and County Government	
		Promote ornamental and recreational aquaculture production	Number of ornamental and recreational aquaculture establishments.	National and County Government	
		Promote development of infrastructural facilities and technical capacity for seed and feed actors.	Number of facilities developed, Number of seed and feed actors trained	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Post-harvest management and Value Addition	To reduce post-harvest loss, promote value addition, and marketing linkages.	Develop a fish marketing strategy and implementation plan.	Fish marketing strategy and implementation plan	National Government	
		Provide support and incentives to encourage fish value addition and processing technologies and innovations.	Number of processing facilities Volume of processing value-added fish and fish products	County Government	
		Promote participation of women and youth in post-harvest management, value addition and processing.	Number of women and youth involved in value addition, processing and post-harvest management.	National Government	
		Support investment in development of post-harvest infrastructure e.g. storage facilities, processing plants, cold storage and transportation systems.	Number of post-harvest infrastructures developed	National and County Government	
		Promote the establishment of effective market linkages and improved market access for aquaculture products	Number of fish marketing initiatives established Number of aquaculture producers accessing the market	National and County Government	
		Promote fish marketing initiatives for aquaculture products.	Number of fish marketing initiatives e.g eat more fish campaigns	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Develop market infrastructure to enhance post-harvest loss reduction and promote value creation.	Market infrastructure developed	National and County Government	
Aquaculture marketing and trade	To promote trade and increase market access for aquaculture products by implementing competitive marketing strategies	Develop a strategy for marketing aquaculture products.	Aquaculture marketing strategy	National Government	
		Promote the marketing of aquaculture products	Number of aquaculture products promoted	National Government	
		Support the development of a digital fish marketing information system.	Digital fish marketing information system established.	National Government	
		Develop, improve and maintain markets and rural access roads, local energy and water resources to enhance marketing of aquaculture products.	Number of markets and roads developed and maintained Infrastructure to support to access energy and water resources	County Government	
		Ensure compliance with product safety and quality standards.	Number of compliance certificates issued	County Government	
		Support the formation of producer marketing organizations to achieve sustainable market supplies and ease product certification.	Number of producer marketing organizations formed. Number of members to producer marketing organizations.	County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Establish entrepreneurship incubation centres for aquaculture value chain actors.	Number of aquaculture entrepreneurship incubation centres established.	County Government	
		Develop and implement a cluster-based approach in Kenyan aquaculture, engaging diverse stakeholders to enhance competitiveness, productivity, and innovation.	Number of clusters established.	County Government	
		Provide training programs for fish farmers and traders to understand market requirements and trends.	Number of training programs Number of fish farmers and traders	County Government	
		Negotiate and advocate to address tariff and non-tariff barriers to aquaculture products trade.	Number of MoUs developed	National and County Government	
		Facilitate the establishment of market linkages and strong distribution networks/channels.	Number of market linkages and distribution networks/channels established.	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Investments and financing in Aquaculture	To promote the availability of flexible financing options for aquaculture development.	Provide adequate funds for aquaculture development through annual budgetary allocations.	Budgetary allocations for aquaculture programs.	National and County Government	
		Establish a framework for resource mobilization funding aquaculture development	Established resource mobilization framework	National and County Government	
		Promote collaboration with financial institutions to develop specialized financing programs designed to meet the unique needs of aquaculture businesses.	The number of collaborative initiatives Specialised financing programs	National and County Government	
		Encourage public-private partnerships to leverage resources and expertise for aquaculture development	public-private partnerships initiatives established and implemented	National and County Government	
		Promote financial literacy and capacity building.	Number of training and awareness programs conducted	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Research and development	To Facilitate funding for demand-driven research for development, technological advancement and conservation.	Increase public investment in aquaculture research and development.	Budgetary allocation for research and development	National Government	
		Promote research and development for quality and cost-effective inputs.	Number of innovative technologies developed and transferred Number of funded research programs	National Government	
		Develop grant schemes for research and extension	Grant schemes for research and extension	National Government	
		Encourage research that is driven by market demands and incorporates indigenous knowledge systems in the aquaculture sub-sector	Demand driven research	National Government	
		Establish and strengthen linkages between research institutions, and farmers to enhance knowledge transfer, and best practices in aquaculture production and management.	Number of trainings and awareness programs for knowledge and technology transfer.	National Government	
		Promote breeding and species selection for wild, extinct and endangered species to enhance aquaculture production and conservation	Established species gene banks	National Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Promote adoption and implementation of research-based existing, new and emerging technologies.	Number of innovative technologies adopted	County Government	
		Develop mechanisms for the dissemination and adoption of research findings, innovative technologies and indigenous knowledge.	Mechanism for dissemination of research findings and indigenous knowledge Adopted research findings and indigenous knowledge	National and County Government	
		Establish partnerships for additional funding.	Funded research programs	National and County Government	
		Facilitate collaboration between academia, industry, and research institutions to foster knowledge sharing, interdisciplinary research, and innovation.	Shared research knowledge and innovation Implemented research programs	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Capacity within the Aquaculture Industry	To promote skilled and capable workforce for the management and advancement of aquaculture sub sector.	Develop training programs.	Training programs developed	National and County Government	
		Foster collaboration for specialized trainings and education.	Developed MoUs between training institutions	National and County Government	
		Establish mentorship programs in aquaculture.	Aquaculture mentorship programs	National and County Government	
		Provide opportunities for continuous professional development and career advancement within the aquaculture sub-sector.	Funded aquaculture training programs	National and County Government	
		Strengthen capacity-building initiatives to enhance aquaculture human resource skills, knowledge and competency	Capacity building initiatives	National and County Government	
		Promote partnerships between aquaculture businesses and educational institutions to bridge the gap between theoretical knowledge and industry practices.	Established MoUs Internship and mentorship programs.	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Promote investment in aquaculture education, research and extension capacity.	Budgetary allocations Funded aquaculture development programs Established partnership and collaborative networks	National and County Government	
		Strengthen and establish training institutions for capacity building of stakeholders to meet the evolving needs of the aquaculture sector.	Established and maintained training institutions Developed training curriculum	National and County Government	
		Strengthen governance of aquaculture farmer organizations.	Implemented training programs	National and County Government	
Fish quality assurance and certification	To promote effective fish quality assurance, fish health management and certification systems.	Strengthen regulatory frameworks for compliance with international food safety and quality standards	Number of regulatory frameworks reviewed and implemented	National Government	
		Facilitate the establishment of fish health management systems and disease surveillance	Fish health management systems established Disease surveillance systems established	National Government	
		Establish partnerships to facilitate alignment and compliance with international standards	Partnerships initiatives established and implemented	National Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Develop and strengthen mechanisms for certification of fish seed and feed.	Number of fish seed and feed standards developed and implemented	National Government	
		Invest in traceability systems and infrastructure for fish and fishery products.	Number of Infrastructures developed and maintained Traceability systems developed	National and County Government	
		Strengthen sanitary and phytosanitary measures to ensure the safety and quality of fish and fishery products in the aquaculture sub-sector.	Sanitary and phytosanitary systems developed and implemented	National and County Government	
Information, data and communication	To improve capacity, coordination, and communication in data collection and information management systems within the aquaculture sub-sector.	Collate, analyse and disseminate national aquaculture data and information for decision-making	Number of aquaculture data and information disseminated	National Government	
		Develop a National Aquaculture Information Management System	National Aquaculture Information Management System	National Government	
		Support and develop mechanisms to continuously collect, collate and share aquaculture information and data with the National Government and other stakeholders for management of the sector.	Number of mechanisms supported and developed	County Government	
		Support the provision of timely and reliable information on aquaculture resources.	Aquaculture resources information provided	County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Develop mechanisms for effective communication among relevant government agencies and stakeholders including persons living with disabilities (PLWD) involved in aquaculture management and development.	Number of mechanisms for effective communication developed	National and County Government	
		Leveraging on digital technology to enhance service delivery in aquaculture development	Digital technology leveraged	National and County Government	
		Develop a data collection and management system.	Data collection and management system	National and County Government	
		Promote transparency and data sharing.	Data sharing system	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Management of shared aquatic resources	To minimize resource-use conflicts among aquaculture farmers and other stakeholders.	Develop a harmonized regulatory framework for the management of the transboundary water resources for aquaculture to strengthen aquaculture governance.	Regulatory framework for the transboundary water resources	National Government	
		Engage with all stakeholders, including local communities, fisherfolk, industry representatives, and environmental organizations, in the decision-making process, to ensure their concerns and perspectives are taken into account.	Number of engagements with the various stakeholders Minutes of the engagement meetings	County Government	
		Identify and address potential conflicts through early warning systems and collaboration with stakeholders to prevent disputes from escalating.	Number of engagements with the various stakeholders Minutes of the engagement meetings	County Government	
		Enforce regulations and conduct multi-stakeholder meetings for accountability and compliance to establish rules and standards.	Compliance reports MCS reports	County Government	
		Promote public awareness and education on the importance of responsible aquaculture	Number of public fora and educational outreach activities	County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Develop comprehensive spatial plans for the management of shared aquatic resources	Spatial plans for the management of shared aquatic resources	National and County Government	
		Develop effective mechanisms for conflict resolution among aquaculture farmers and other stakeholders.	Mechanisms for conflict resolutions	National and County Government	
		Provide a regulatory framework for aquaculture activities, including licensing, permits, and compliance requirements.	Regulatory frameworks	National and County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Legal, Policy, Institutional and Regulatory Framework	To strengthen coordination and harmonization of mandates in aquaculture governance.	Develop a comprehensive aquaculture strategy, development plan and guidelines.	Number of new aquaculture regulations developed and implemented	SDBEF, KeFS, KMFRI,	
		Strengthen regulatory enforcement and monitoring mechanisms.	Increase in the frequency of regulatory inspection	SDBEF, KeFS, KMFRI	
		Provide for enabling legal frameworks for sustainable aquaculture development	Implementation of legal framework supporting sustainable aquaculture	SDBEF, KeFS, KMFRI,	
		Review and harmonize legislation relating to aquaculture.	Number of reviewed legislations, harmonized legislations, stakeholder engagement conducted	National Government, , SDBEF, CoG, KeFS, State Law Office,	
		Provide for county-specific legal frameworks for sustainable aquaculture development	Number of County specific legal frameworks enacted, Community engagements	County Governments	
		Develop an enabling legal framework for the implementation of the policy	Legal framework developed	County Governments	
		Foster collaboration to review and update aquaculture policies regularly	Number of collaborative policy review meetings	SDBEF, County Government, KeFS, KMFRI	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Enhance coordination and collaboration between national and county governments to streamline mandates and eliminate overlapping responsibilities in the governance of aquaculture.	Number of collaborations and meetings done Joint task force between the two levels of governments	SDBEF, County Government,	
		Develop mechanisms for stakeholder engagement and coordination in aquaculture.	Number of mechanisms developed for coordination in aquaculture Stakeholders mapped	National Government, County Governments and Non-State actors	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Climate Change and Environment	To enhance climate change mitigation, adaptation and resilience in the aquaculture sub-sector and minimize impacts of aquaculture on the environment	Encourage research focusing on climate change mitigation, adaptation and resilience.	Number of publications on climate change mitigation, adaptation and resilience. Funding allocation to research	National Government MDAs and non-state actors	
		Promote the adoption of climate-smart aquaculture approaches.	Farm-level adoption rate	County Government, Fish farmers, non-state actors	
		Promote environmental conservation and ecosystem rehabilitation in water bodies	Changes in water quality parameters Habitat restoration activities undertaken Changes in biodiversity	National Government, County Government, Fish farmers, non-state actors	
		Promote carbon trading in the aquaculture sub-sector	Number of carbon offset projects Carbon Offset Credits Generated Financial benefits accrued	National Government, County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Provide training and capacity-building programs for aquaculture stakeholders on best management practices for environmental sustainability.	Participants Attendance Evaluation Assessment	County Government	
		Develop strategies that promote the adoption of climate-smart aquaculture technologies.	Technology Adoption Rate Number of demonstration projects or technology trials	National Government County Government	
		Promote partnerships for preparedness, mitigation, and adaptation efforts.	Quantity of partnerships established Number of joint projects or initiatives developed through partnerships	National Government County Government	
		Foster an enabling environment that facilitates financing and attracts investments in climate-resilient initiatives.	Amount of climate finance mobilized Number of Financing Instruments Developed	National Government County Government	
		Strengthen climate change mitigation and resilience measures including carbon trade in the aquaculture subsector.	Adoption numbers of Low-Carbon Technologies Farmer participation in Carbon Trading Markets	National Government County Government	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Promote capacity building to address climate changes in the aquaculture sub-sector.	Adopted climate-smart aquaculture practices Participation number of stakeholders	National Government County Government Non-state actors, stakeholders	
		Enhance and enforce regulations governing aquaculture practices to minimize environmental degradation and pollution.	Number of Enforcement Actions Taken Number of compliances certificates issued	National Government County Government	
		Strengthen monitoring systems to ensure compliance with environmental regulations.	Number of inspections Regulatory compliance rate	National Government County Government	
		Promote and advocate for the adoption of Best Management Practices (BMP) and technologies that minimize environmental impacts of aquaculture establishments.	BMP adoption rate Technologies adopted Water quality Assessment	National Government County Government Non-state actors, stakeholders	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Foster collaboration among government agencies, industry stakeholders, and local communities to address environmental challenges in aquaculture	Number of collaborative partnerships Collaborative action plans MoUs developed.	National Government County Government Non-state actors, stakeholders	
Youth in Aquaculture	To create an enabling environment that empowers youth to establish and operate successful aquaculture enterprises.	Facilitate implementation of policies for aquaculture planning and access to land to enable youth-led aquaculture enterprises.	Number of policies implemented Number of youths engaged in aquaculture enterprises	SDBEF, County Governments, KeFS, FLTF, KFMA, KFIC	
		Promote collaboration with financial institutions to develop specialized financing programs designed for youth-led aquaculture enterprises.	Number of financial institutions offering tailor made credits to youths Number of youths accessing tailor made credit	SDBEF, County Governments, KeFS, FLTF, KFMA, KFIC	
		Facilitate inclusion of aquaculture in primary and secondary education curriculum.	Number of Aquaculture programs/courses incorporated in the primary and secondary curriculums	SDBEF, County Governments, KeFS, FLTF, KFMA, KFIC	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
		Facilitate Technical Vocational Education and Training (TVET) institutes to include aquaculture curriculum and infrastructure.	Number of TVETS institutions offering aquaculture courses	SDBEF, County Governments, KeFS, FLTF, KFMA, KFIC	
		Promote aquaculture in business incubation programmes for the youth.	Number of incubation Programmes developed and implemented	SDBEF, County Governments, KeFS, FLTF, KFMA, KFIC	

Policy Area	Policy Objectives	Interventions	Indicators	Key Actors	Time Frame
Gender in Aquaculture	To create an enabling environment that promotes gender inclusivity, equity and equality in the aquaculture sub-sector.	Facilitate the formation and promotion of gender-responsive cluster-based aquaculture to enhance collective bargaining power and market access.	Number of gender responsive clusters formed and operationalized	County Governments	
		Promote gender equity in aquaculture financing.	Equal number of women and men accessing credits	SDBEF, KeFS, County Governments	
	To create an enabling environment that promotes gender inclusivity, equity and equality in the aquaculture sub-sector.	Develop gender-responsive capacity-building programs in aquaculture, including training and skill development.	Number of gender responsive training programs developed and implemented	SDBEF, KeFS, County Governments	
		Promote research and innovation that addresses gender-responsive challenges and opportunities in the aquaculture sub-sector.	Gender responsive research findings disseminated Number of gender responsive innovations developed	SDBEF, KeFS, County Governments	
		Facilitate the formation and promotion of gender-responsive cluster-based aquaculture to enhance collective bargaining power and market access.	Number of gender responsive clusters formed and operationalized	County Governments	
		Promote gender equity in aquaculture financing.	Equal number of women and men accessing credits	SDBEF, KeFS, County Governments	

ANNEX 2: MONITORING, EVALUATION, ACCOUNTABILITY AND LEARNING

Monitoring and Evaluation

The Monitoring, Evaluation, Accountability and Learning (MEAL) system will be used to assess the implementation of this policy. Further, MEAL will facilitate learning, improve service delivery, and resource allocation, and demonstrate accountability to key stakeholders.

A MEAL framework will be developed to support the implementation of the policy to achieve objectives cost-effectively while ensuring coordination and harmonisation efforts at the National and County levels. The Ministry responsible for aquaculture in collaboration with the County governments, relevant implementing Ministries, Departments and Agencies (MDAs), the private sector and other stakeholders will develop the MEAL framework within six months after approval and publication of the Policy.

The developed MEAL framework will be consistent with the National Integrated Monitoring and Evaluation Systems (NIMES) and will provide clear terms of reference for relevant stakeholders.

There will be an Annual Review Report (ARR) on implementation of the policy that will be presented to the President by the Cabinet Secretary responsible for aquaculture for dissemination to the public and relevant stakeholders. This policy will be reviewed from time to time or as the need arises and in line with the Government Development Plans.

Communication Strategy

To ensure successful implementation of the aquaculture policy there is a need for an effective and efficient communication system. To accomplish this, the Ministry responsible for aquaculture, in collaboration with relevant stakeholders will develop a communication framework to support implementation of this policy within six months. The implementation framework will provide for an effective information exchange between the National and County governments, the private sector, fish farmers, the public, the media and other stakeholders in the aquaculture sub-sector.

Implementation Plan

The Ministry responsible for aquaculture, in collaboration with County Governments and other relevant stakeholders will develop a plan to support implementation of this policy within six months. The plan will provide for budgeting and a time frame for the implementation of the policy interventions.

Policy Review

The policy will be reviewed from time to time or as the need arises and in line with the Government Development Plans.

NOTES

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