Promoting Environmentally Sustainable
Commercial Aquaculture Project in Uganda

MINISTRY OF AGRICULTURE ANIMAL INDUSTRY AND FISHERIES

CONSULTANCY FOR HARMONISATION OF THE LICENSES & PERMITS FOR AQUACULTURE PRODUCTION

Final Report

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AGT INTERNATIONAL

In Association with

AQUABIOTECH GROUP

November 2021

EXECUTIVE SUMMARY

This report has been generated from a consultancy that sought greater harmonisation of the licences and permits for aquaculture in Uganda. This work falls under the EU funded programme to *Promoting Environmentally Sustainable Commercial Aquaculture* (PESCA).

The aquaculture policy objectives in Uganda speak strongly to significant increases in production, which depend on a clear and harmonised permit and licencing system; not only to streamline the process, but also to attract investment. Key aspects that challenge greater harmonisation in licencing and permitting include the multiplicity of public authorities which have a role in the governance of aquaculture, the application process and application requirements, access to information, the time it takes for obtaining decisions on applications, licence periods, licence conditions and the enforcement thereof.

Fisheries (*including aquaculture*) licensing is an international fisheries management tool that is key in regulating entry to a fishery and for the sustainable operation thereof. The FAO Code of Conduct for Responsible Fisheries (1995) bestows upon states the obligation to conduct fisheries licensing as a regulatory process to optimize the sustainable exploitation and utilization of a fishery, which includes aquaculture development. Aquaculture licencing and permitting systems worldwide were largely developed from fisheries legislation, which is based on resource protection and sustainability, while fish farming is more akin to agriculture. In some countries, such a Uganda, this resulted in aquaculture governance becoming fragmented under divergent legal mandates and government organs.

Internationally, it has been recognised that a successful aquaculture legal framework must provide the operators with a secure right to conduct aquaculture operations in a sustainable manner, which sustainability includes financial performance, social performance and the conservation of environmental services that support the aquaculture operation and the needs of other users.

Ugandan aquaculture is currently faced with a plethora of legal and related frameworks that not only affect aquaculture, but many of which are at various stages of draft, revision, amendment, review, promulgation, and adoption.

Not only does this lay the sector bare to confusion but it makes the evaluation of the current legal frameworks exceedingly complex. At present, The Fish Act Cap. 197 is the primary regulatory instrument pertaining directly to fisheries and aquaculture. This Act will however be repealed by the Fisheries and Aquaculture Bill (2020) in which it is stated that the repeal seeks the "*urgent need to reform the law governing the fisheries sector*". The Fish (Aquaculture) Rules of 2020 are also in final draft and will require re-issue when the new Bill is enacted.

In the stakeholder consultation process for this project, a broad range of views were collected from government organs and private sector players. The private sector generally expressed concern over the number of permits that are required to operate an aquaculture business, which includes permits from national and district / local authorities.

In this study the approximate cost of compliance was determined, and it was found that the legislative definitions of farming scale are unclear and that small-scale, subsistence and artisanal fish farmers could potentially pay proportionately more for compliance than large-scale commercial operations.

In support of the specific recommendations in this report, the best practices in effective aquaculture licencing and permitting systems have been noted and discussed. The practices include:

- The establishment of an inter-ministerial task and permitting team.
- Supporting markets and investment in aquaculture as this will encourage compliance.
- The development and adoption of clear norms and standards to lessen the permitting burden.
- Development of the one-stop-shop or online permitting portal.
- Support to a well-trained extension service.
- Strong producer associations that can promote compliance.
- General education and awareness creation.
- The grading of licence needs in accordance with the scale of operation.
- Transparency in the permitting system and clear timelines.
- Standardised licencing conditions; and

- Clear compliance and enforcement systems that includes some degree of self-regulation.

The specific recommendations that have been made from this work are:

- Enactment of the Fisheries and Aquaculture Bill (2020)
- Re-issue of regulations and rules in terms of the new Act once promulgated
- A simplification of the permitting schedules to allow for a single Aquaculture Establishment Certificate that deals with matters such as seed, production systems, processing, sales, feed, and veterinary aspects as subcategories, and which is subject to the issue of a Certificate of Approval of an Environmental and Social Impact Assessment (ESIA), as well as water use permits, if these are required. This should be supported by a single live fish moving permit that is categorised into the national movement of live fish, Import or export.
- Develop simplified national guidelines around the permitting system.
- Complete the zonation of Lake Victoria for aquaculture.
- Accommodate small-scale, rural, subsistence and artisanal fish farmers in the permitting system.
- Standardised the permits and licences that are required by district authorities.
- Implement procedural training around permitting and licencing at local, district and regional level.

Simplifying the permitting and licencing system as indicated in this report will contribute toward adoption of a more conducive system for investors and farmers.

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Abbreviations and Acronyms

ASSP	Agriculture Sector Strategic Plan
AU	African Union
BMP	Best Management Practice
BSA	Business Summit Africa
CAADP	Comprehensive Africa Agriculture Development Program
CBA	Commodity Based Approach
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
DAMD	Department of Aquaculture Management and Development
DFO	District Fisheries Officer
DFR	Directorate of Fisheries Resources
DWRD	Directorate of Water Resources Development
DWRM	Directorate of Water Resources Management
EAC	East African Community
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
ESIS	Environmental and Social Impact Statement
EU	European Union
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
GIS	Geographic Information System
GoU	Government of Uganda
LVFO	Lake Victoria Fisheries Organisation
MAAIF	Ministry of Agriculture, Animal Industries and Fisheries
MoFPED	Ministry of Finance, Planning and Economic Development
MSIP	Multi Stakeholder Innovation Platforms
MWE	Ministry of Water and Environment
NaFRRI	National Fisheries Resources Research Institute
NAO	National Authorizing Officer
NARO	National Agricultural Research Organization

NBI	Nile Basin Initiative
NDP	National Development Plan
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NEMA	National Environment Management Authority
NEPAD	New Partnership for Africa's Development
NGO	Non-Government Organisation
OSS	One-Stop-Shop
PAF	Partnership for Africa Fisheries
PESCA	Promoting Environmentally Sustainable Commercial Aquaculture
PFRSFA	Policy Framework and Reform Strategy for Fisheries and Aquaculture
PMU	Project Management Unit
RECs	Regional Economic Communities
RFBs	Regional Fisheries Bodies
SACCO	Savings and Credit Cooperative Organisation
SON	Source of the Nile
TAT	Technical Assistance Team
TOR	Terms of Reference
UGX	Ugandan Shillings
UIA	Uganda Investment Authority
UN	United Nations
UNCST	Uganda National Council of Science & Technology
URA	Uganda Revenue Authority
WMD	Wetlands Management Department
ZARDI	Zonal Agricultural & Development Institute

1. INTRODUCTION

1.1. Project Background

This work falls under the EU funded programme to Promoting Environmentally Sustainable Commercial Aquaculture (PESCA) in Uganda. This project commenced on 13 January 2017 following the signature of the Financing Agreement between the EUD and the Government of Uganda (GoU). The subsequent recruitment of a Technical Assistance Team (TAT) through the EUD and the arrival of the two TAT experts in September 2017, initiated several technical activities associated with project implementation.

The National Authorizing Officer (NAO) is the Ministry of Finance, Planning and Economic Development (MoFPED), the Supervising Authority is the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), and the Department of Aquaculture Management and Development (DAMD) therein, who house the Project Management Unit (PMU).

A Technical Assistance Team (TAT) (provided by Agrotec SpA) was hired through the EU to support overall implementation.

1.2. Current State of Aquaculture in Uganda

The Uganda government prepared a 5-year rolling National Development Plan (NDP) in which all the strategic government interventions for development in all the sectors was envisioned harmoniously to attain the 2040 development vision. The vision is to transform Uganda from a peasant to a modern prosperous country by 2040. The goal of the NDP III 2020/21 to 2025/26 is to increase household incomes and improve the quality of life through sustainable wealth creation, employment, and inclusive growth. Among the key plans of the NDP III is the Agriculture Sector Strategic Plan (ASSP) which provides the framework for implementation of agriculture sector intervention priorities.

The ASSP III 2020/21-2024/25 is focused on agro-industrialization, promoting quality processing and value addition to key commodities for competitive high value markets across the globe.

Fish as a commodity is a key contributor of foreign exchange earnings for Uganda. In 2018, about 20 364 tonnes of Nile perch dominated exports to international markets and earned the country $153.2 million. The estimated beach value for the total landing of 447 000 tonnes from capture fisheries was UGX 1 700.56 billion, with a market value of UGX 3 839.128 billion, representing a contribution of approximately 3% to the Ugandan GDP estimated at 103 448.480 billion (US$ 28.111 billion) in 2018, and about 12% of the total agriculture GDP. Aquaculture contributed about 1.4 billion (US$ 389 000) from 120 000 tonnes in 2018. Due to the increasing demand for fish resulting from an increasing middle class across the country, there is a net deficit for fish.

According to the fisheries and aquaculture policy of 2018, the government is focusing on producing 1 750 000 tonnes of fish for both local and export markets. The maximum potential yield however, expected from the capture fisheries is only 750 000 tonnes even though what was realized is about 440 000 tonnes in 2018. This implies that the only credible future source of fish will be aquaculture. To produce 1 million tonnes of fish from aquaculture, will require 2.5 billion fish seedlings (fingerlings/fry) and about 1.5 million tonnes of fish feed. Currently only about 200 million seedlings and about 80 000 tonnes of feed are produced in Uganda. This, coupled with good conditions and enormous water resources for fish growth in the country, provides great potential in terms of fish productivity, employment, economic opportunities, and economic benefits.

Agriculture is the backbone of the Ugandan economy, and its development is considered of strategic importance for the country, as "primary growth sector". This includes the strategic importance of taking into consideration the value chain approach for priority commodities such as fish.
To support and facilitate the emergence of commercial agriculture to increase the livelihoods of actors along the value chain, the government, through MAAIF, adopted the Commodity Based Approach (CBA) to increase agricultural production and productivity.

Fish is one of the priority commodities that the MAAIF is pursuing under the Agriculture Sector Strategic Plan. Under the ASSP Commodity Based Approach, investments are channelled to the development of value chains of 12 prioritised commodities, namely: maize, beans, rice, bananas, cassava, cattle, meat, fish, coffee, tea, fruits, and vegetables.

Under the fish commodity section of the ASSP, the following priority interventions have been identified:

a) promoting recovery of depleted stocks of the large commercial fishes;
b) developing the fishery of small pelagic (Mukene, Muziri and Ragogi) fishes;
c) promoting commercial aquaculture;
d) developing infrastructure along the value chain;
e) strengthening monitoring on all water bodies; and
f) controlling new breeds of weed and water hyacinth.

The relevant policies for the fisheries sub-sector and the development of aquaculture in the country is the National Investment Policy for Aquaculture Parks (2012) and the Fisheries and Aquaculture Policy (2018). In addition, there is also a strategic framework at the level of the Government: the Uganda National Aquaculture Development Strategy (2008) and the provisional Fisheries Sector Strategic Plan. The legal framework consists of the Fish Act (Cap. 197), the Fish (Aquaculture) Rules 2003, which are currently in the process of being updated, and the Fish (Beach Management) Rules 2003, updated in 2016.

The main objective of the fisheries legislation is to promote hygienic handling of fish, as well as to ensure responsible fishing practices as a way of enabling national and international trade. There are challenges in enforcing these laws due to the decentralisation and devolution of powers to the Districts and Co-management Units along the lake shores, which has disrupted the chain of command and communication between MAAIF (the policy makers) and the Ministry of Local Government (the enforcers).

The country has fast growing fish species (e.g., Nile tilapia, African catfish), extensive freshwater resources (lakes and many smaller water bodies, including slow-flowing sections of rivers) suitable for cage, pond, and tank-based aquaculture systems. Recent years have seen rapid growth in the aquaculture sector, especially in cage culture.

The agriculture and fisheries sector produce most of the raw materials needed for locally made fish feeds. Uganda also has a developed fish processing sector and associated infrastructure and quality systems, which developed around the export of Nile perch products to Europe. This is a vital infrastructure / framework system that would be able to support the aquaculture sector processing and export requirements.

A productive commercial aquaculture industry will have as one of its objectives the supply of high-quality raw material for “added value” products for local, regional, and international markets.

The trajectory of expansion of aquaculture in Uganda, brought about largely by development of cage culture, has in the most recent decade flattened off. This has been attributed to poor availability of quality aquaculture inputs, insufficient genetic advancement and poor brood stock management on the farms, poor or lack of differentiation of aquaculture products from the capture fisheries, inadequate and incompetent extension and technical service providers, increasingly erratic weather associated with climate change, and generally poor aquaculture practices at farm level (as indicated in the National Aquaculture Development Strategy and Action Plan of Uganda 2021 - 2025)**.**

2. CONTEXT TO THE ASSIGNMENT

Key aspects that challenge greater harmonisation of licencing and permitting include the multiplicity of public authorities which have a role in the governance of aquaculture, the application process and application requirements, access to information, the time it takes for obtaining decisions on applications, licence periods, licence conditions and the enforcement thereof. It is apparent that some licence and permit systems overlap, duplicate, and contradict each other, while there may be key aspects that have been omitted.

2.1. Objectives & Purpose

The core objective of this project is to increase the efficiency, connectivity, and applicability of the licensing and permitting systems that apply to aquaculture. This will contribute towards a more competitive, job-intensive, and environmentally sustainable aquaculture value chain in Uganda, and one in which investors have a clear understanding around authorisation requirements.

2.2. Scope of the Project

This assignment seeks to create a framework for greater harmonisation of the licenses and permits for aquaculture production. It is focused at the private and public-sector stakeholders and others in Uganda who require or influence these licenses and permits for doing business in the sector. To achieve this, the Ugandan legal policy, legal framework, and institutional framework has been studied and areas identified for improvement and harmonisation.

3. INTERNATIONAL CONTEXT

Fisheries (*including aquaculture*) licensing is an international fisheries management tool that is key in regulating entry to a fishery and for the sustainable operation thereof. The Code of Conduct for Responsible Fisheries (1995) as developed by the Food and Agriculture Organization (FAO) of the United Nations (UN) bestows upon states the obligation to conduct fisheries licensing as a regulatory process to optimize the sustainable exploitation and utilization of a fishery, which includes aquaculture development. The code recognizes the nutritional, economic, social, environmental, and cultural importance of fisheries (*and aquaculture*) and the interests of all those concerned. The Code considers the biological characteristics of the resources and their environment and the interests of consumers and other users.

3.1. Evolution of Aquaculture Legislative Systems

Aquaculture licencing and permitting systems worldwide were largely developed from fisheries legislative frameworks, given the development of aquaculture from and alongside to fisheries. Legal frameworks for fisheries are largely based on resource protection and sustainability, and although these areas are also key to aquaculture, the agricultural nature of fish farming and the use of water resources to host the farming activities resulted in aquaculture governance becoming fragmented between ministries and government organs that deal with resource sustainability, farming, and water management, respectively. Modern aquaculture, unlike traditional agriculture, developed in an era after the adoption of structured governments and wide-ranging legal frameworks for commerce, societal norms, trade, resource use etc. This has resulted in aquaculture often being governed in a fragmented manner under the auspices of divergent legal segments within single countries. Uganda is no exception.

Despite the situation indicated above, aquaculture is necessarily affected by other sectoral laws that govern access to land, including the use of public domains, water law, environmental law, animal health and animal disease law, fisheries law, and trade law. Where these laws have developed before the onset of aquaculture they are often not specifically accommodating to the nature of this sector. In such instances, laws and legal frameworks can become confusing and inhibiting for aquaculture.

Conflicts and duplication may arise within the range of applicable legislation, or among the agencies and institutes involved in governance.

The ability to develop sustainable aquaculture operations depend on the establishment of several necessary institutional and technical preconditions. This has become ever more evident given the greater political awareness of aquaculture, the economic importance and potential of the sector, and a greater awareness that inappropriate laws and institutional arrangements can significantly constrain development. Evidence of environmental damage and social disruption due to the rapid and largely unregulated expansion of aquaculture, and a growing emphasis on improving the quality and safety of aquaculture products adds to the critical importance of ensuring a streamlined, efficient, and effective governance and permitting system.

The FAO paper *Aquaculture Regulatory Frameworks: Trends and Initiatives in National Aquaculture Legislation* (2013) contains a summary of the core areas that should be addressed through licencing and permitting systems for aquaculture. These ensure societal order, sector optimisation, resource protection and conflict prevention (in the case of aquaculture, conflict with fisheries, tourism, agriculture, and other water users).

It is now widely recognised across the world that issues with licencing and permitting of aquaculture, resource access, planning and management, and the many environmental impacts of aquaculture should be dealt with in a consistent manner to protect the industry, the environment, other resource users, and consumers. In this regard governments must:

a) recognize aquaculture as a distinct agricultural sector;
b) integrate aquaculture into resource use and development planning;
c) improve food safety and quality to safeguard consumers; and
d) improve the management of aquaculture, particularly where it has the potential to be socially or environmentally unsustainable.

In the case of Uganda, ensuring that small-scale, rural, and artisanal fish farmers are catered for is a critical addition to the list above.

3.2. International Licencing and Permit Systems

Internationally, it has been recognised that a successful aquaculture legal framework must provide the operator with a secure right to conduct aquaculture operations in a sustainable manner, which sustainability includes financial performance, social performance and the conservation of environmental services that support the aquaculture operation and the needs of other users. Licencing or permitting systems must also empower governments to manage the sector at large in a beneficial manner, specifically though the conditions and compliance requirements attached to these licences and permits.

Internationally, the typical aspects covered by aquaculture licences and permits include the following. These aspects can either be dealt with directly through aquaculture permitting and licencing (and the conditions thereto), or indirectly by related legislative frameworks. Internationally, the key aspects that define successful aquaculture licencing and permitting cover the following core areas:

a) Access and tenure arrangements to land and water, which could include measures and procedures for site selection, with consideration to the legal frameworks for land and water ownership or use (i.e., owning, leasing, renting or other forms of access over private or public land and water), technical suitability criteria and other uses and users. This includes measures implemented around zonation and the way zonation is used as a regulatory tool.
b) Environmental Impact Assessments (EIA). Although the approach to EIA differs from country to country, the ecosystem approach has become beneficial when considering the EIA requirements of aquaculture. The FAO defined the ecosystem approach as "*a strategy for the integration of the activity within the wider ecosystem such that it promotes sustainable development, equity, and resilience of interlinked social-ecological systems*". It is important that the scale and scope of EIA processes and requirements match the genuine risk of environmental damage. The criteria for determining whether this risk exists should focus on factors such as the size of the proposed aquaculture operation, the sustainable carrying capacity of the site and the receiving environment, possible discharge of waste, protecting species or products from modern technology or genetically modified organisms, and whether the project threatens rare or endangered species and ecosystems.

c) An authorisation framework that allows for access and sustainable use of water resources.
d) Effluent regulations and discharge licencing systems to govern the quantity and quality of water released from an aquaculture operation.
e) Permits and licences to control and govern waste and waste management.
f) Permits and licences for the management of aquatic animal health, including drug, chemical and therapeutant control and authorisation frameworks.
g) Permits and licences that govern the collection, movement, and introduction of aquaculture species.
h) Measures to control the use, collection, and trade of exotic and/or endangered species for aquaculture, as well as measures to prevent escape.
i) Authorisation measures that regulate trade in aquaculture inputs (feeds, seeds, equipment etc.), as well as aquaculture products.
j) Governance instruments to regulate aquaculture product health and safety measures.
k) Permits and licences that govern the business activities of aquaculture, as well as the employment conditions and social or workplace related impacts on aquaculture workers.

3.3. International and Regional Agreements

As a member of FAO, Uganda upholds the voluntary guidelines of the FAO's Code of Conduct for Responsible Fisheries, which provide a global consensus on principles of aquaculture governance in Article 9. Without diluting the importance of the entire code, Article 9.1.1 specifically prompts states to establish, maintain, and develop an appropriate legal and administrative framework which facilitates the development of responsible aquaculture. It is from this clear obligation that this assignment takes its importance in seeking greater harmonisation of the licenses and permits for aquaculture production in Uganda.

The Code has a strong persuasive effect on administrators, policy makers and lawmakers of states who are members of the FAO. This is reflected in the Uganda National Fisheries and Aquaculture Policy 2017 (Anon. 2017a).

Further to the above, Uganda is a party to the Convention on Biological Diversity (CBD) of 1992 and the Convention on Wetlands signed in Ramsar, Iran in 1971. This is an intergovernmental treaty, that provides the framework for national action and international co-operation for the conservation and wise use of wetlands and their resources. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) to which Uganda is a party, provides support to the Uganda National Fisheries and Aquaculture Policy 2017 as it contains several clauses relevant to conservation and trade in endangered fishes.

At the continental level, the African Union established the Policy Framework and Reform Strategy for Fisheries and Aquaculture (PFRSFA, 2014) to facilitate a coherent policy development environment for sustainable management and development of fisheries and aquaculture in the AU Member States, including Uganda (AUC/NEPAD, 2014). The African fisheries policy framework and reform strategy reflects the need to address the numerous challenges that continue to deny Africans the benefits that could be derived from the exploitation of fisheries and aquaculture resources. These challenges are limiting the full contribution of the fisheries and aquaculture sector to food security, livelihoods, and economic growth. Some of the reasons have been attributed to a lack of policy coherence and coordination, increasing levels of Illegal, unreported, and unregulated (IUU) fishing, weak intra-regional and international trade, weak capacity for aquaculture development, and poor development of the artisanal fisheries sector (FAO, 2018).

The PFRSFA (2014) aims to create an enabling environment facilitating African Union (AU) Member States, Regional Economic Communities (RECs) and Regional Fisheries Bodies (RFBs) to develop realistic fisheries and aquaculture policies. The PFRSFA elaborates and makes explicit essential guiding principles for good governance of Africa's fisheries for increased coherence and coordination of the sector.

It aims at:

a) facilitating African Union (AU) Member States, Regional Economic Communities (RECs) and Regional Fisheries Bodies (RFBs) to develop realistic fisheries and aquaculture policies by suggesting standards and best practices to the sector's benefits;

b) facilitating regional collaboration and integration in shared fisheries and aquaculture resource management.

By facilitating regional collaboration and integration in shared fisheries and aquaculture resource management, it will provide fishers and fish farmers with incentives and confidence to invest in fisheries resources while moving towards a progressive recovery of fish stocks and improvement in the safety and quality of fish on the market.

Uganda is a signatory to the Comprehensive Africa Agriculture Development Program (CAADP, 2003) that calls for a commitment to enhancing resilience in livelihoods and production systems to climate variability and other shocks. As a member state, the NEPAD–Partnership for Africa Fisheries (PAF) calls upon Uganda to leverage key partnerships through research and foreign direct investment to introduce new technologies and innovations that have worked elsewhere, and to elevate the levels of sustainable production and quality of fish and aquaculture products. This is only possible under an effective governance system.

Amongst the ten countries of the Nile Basin, the Nile Basin Initiative (NBI) provides an intergovernmental partnership amongst Burundi, the Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda, South Sudan, The Sudan, Tanzania, and Uganda, with Eritrea participating as an observer. The NBI's shared vision is "*To achieve sustainable socio-economic development through the equitable utilization of, and benefit from, the common Nile Basin water resources*". Fisheries and aquaculture in Uganda rely on Lakes Victoria, Kyoga, Edward, and Albert, which are all part of the Nile catchment. The Nile Equatorial Lakes Subsidiary Action Program (NELSAP) is one of the regional investment programs of the Nile Basin Initiative (NBI) that covers issues and is harmonizing policies and legal frameworks on Lakes Albert and Edward.

At the regional level, the East African Community (EAC) Treaty requires Governments to recognize and promote aquaculture as a distinct enterprise to optimize its economic contribution. The Lake Victoria Fisheries Organization (LVFO), established by the Republic of Kenya, the United Republic of Tanzania, and the Republic of Uganda in 1994, calls upon all the EAC countries to support the regulation, management and development of the

fisheries and aquaculture sector and to invest in interventions that ensure sustainable production that enhance food security, increase incomes, and contribute meaningfully to poverty reduction. The treaty aims to foster cooperation among the parties and harmonize national measures for the sustainable utilization of the living resources of Lake Victoria through the development and adoption of conservation and management measures. This policy is an actualization of the requirement to align to the East Africa Fisheries and Aquaculture Policy (2016). The LVFO is composed of the fisheries management and research institutions in the EAC Partner States and is coordinated by a secretariat based in Jinja, Uganda (LVFO Strategic Plan 2016-2020) (Anon., 2016).

4. UGANDAN PERMITTING AND LICENCING FRAMEWORK

Besides the international permitting and licencing frameworks referred to above, the following national documents have been reviewed in the preparation of this document:

a) Fish and Aquaculture Policy 2018
b) Aquaculture Strategic Plan (draft)
c) Fisheries and Aquaculture Bill 2020
d) The Fish (Aquaculture) Rules 2020 (draft 2021)
e) Agriculture Sector Strategic Plan
f) National Development Sector Plan III
g) Aquaculture Codes of Practise and Standard Operating Procedures

The one aspect that has become clear is that Ugandan aquaculture is currently faced with a plethora of legal frameworks that not only affect aquaculture, but many of which are at various stages of draft, revision, amendment, review, and adoption. Not only does this lay the sector bare to confusion but makes the evaluation of current legal frameworks that apply to aquaculture exceedingly complex. The following points illustrate this challenge:

a) The Aquaculture Development Strategy is in draft.
b) The draft Fisheries and Aquaculture Bill (2020) is now before parliament waiting to be passed into law (including proposed changes to the existing Act in the licensing and permit regime). In this Bill it states the objective of consolidation and reform to the law relating to the management of fisheries, fisheries products, and aquaculture by replacement / repeal of the Fisheries Act (Cap. 197). There is little value in seeking the harmonisation of aquaculture licenses and permits in Uganda without considering this forthcoming law, albeit that it has not yet come into force. Considering the approach to harmonisation of permits and licences in the absence of this legislation will lead to this assignment rapidly becoming obsolete when the Bill is enacted, while including consideration of its provisions at this stage may seem premature and irregular to the statutory and sovereign or parliamentary process.
c) The draft Fish (Aquaculture) Rules 2020 (draft 2021) currently resides with the office of the Solicitor General. This document is critical in that it speaks to all the core

permitting and licencing requirements for aquaculture outside of land/water tenure, the EIA process and authorisations that are required in terms of the Water Act. Like the Bill above, these draft rules will affect aquaculture permitting and licencing once they are finalised and will therefore affect the outcome of this assignment. Moreover, the rules will require amendment once the Fisheries and Aquaculture Bill is promulgated.

d) A review of the Water Act is currently being undertaken.
e) There is a new National Environmental Bill that may affect aquaculture.
f) The National Investment Policy for Aquaculture Parks in Uganda (2012) is under review.

4.1. Current Inventory of Licences and Permits

In Uganda, there are several permits and licenses that prospective aquaculture operators need to obtain. These can be sought from the different responsible agencies like the Department of Aquaculture Management and Development (DAMD) in the Directorate of Fisheries Resources for the aquaculture establishment permit; the National Environmental Management Authority (NEMA) for Environmental Impact Assessment (EIA); the Directorate of Water Resources Development (DWRD) in the Ministry of Water and Environment for water related permits and other relevant licenses and permits that may be required by Local Governments. These licenses and permits are underpinned by a range of laws and regulations, anchored in different departments and agencies, making it a rigorous process for an investor to get all the necessary clearances.

At present, The Fish Act Cap. 197 is the primary regulatory instrument pertaining directly to fisheries and aquaculture. This Act is supported through statutory instruments such as regulations that are issued from time to time. However, there are additional laws that are relevant to fisheries and aquaculture, which are summarised in the table on the next page.

Permit / License	Use	Agency
Certificate of Approval of Environmental and Social Impact Assessment (ESIA) Recommendations may be required for development in wetland areas.	Before developing sites for commercial farms Post development monitoring of conditions of authorisation)	National Environmental Management Authority (NEMA) Directorate of Environment Monitoring and Compliance Wetland Management Department in the Ministry of Water and Environment
Waste Discharge Permit	For discharge of large amounts of effluent into the environment/ water bodies	Directorate of Water Resource Management in the Ministry of Water and Environment
Aquaculture Establishment Certificate	All semi & intensive farms	Directorate of Fisheries Resources (MAAIF)
Fish Seed Production Certificate	For hatcheries & fish breeders	Directorate of Fisheries Resources (MAAIF)
Cage culture permit	All cage fish farms	Directorate of Fisheries Resources (MAAIF)
Construction permit	Construction of water harnessing infrastructures like dams	Directorate of Water Resource Management in the Ministry of Water and Environment
Surface water permit	When 270 liters of water per minute or more shall be extracted from a water way in a 24-hour period. Also if a motorized pump shall be used to pump water either temporarily or permanently from a water way.	Directorate of Water Resource Management in the Ministry of Water and Environment
Fish transfer permit	For movement of live farmed fish off from a farm to any other location within Uganda	Directorate of Fisheries Resources (MAAIF)
Fish movement permit	For movement of fish and fish products within the country	Directorate of Fisheries Resources (MAAIF)
Fish import/export permit	For import/export of farmed fish	Directorate of Fisheries Resources (MAAIF)
Fish sanitary certificate	For all consignments of fish for human consumption to be sold	Directorate of Fisheries Resources (MAAIF)
Uganda National Council of Science & Technology (UNCST)	For any use of genetic material in aquaculture	Directorate of Water Resource Management in the Ministry of Water and Environment
Fish feed processing and manufacture certificate	For all feed producers & processors	Directorate of Fisheries Resources (MAAIF)

Table 1: Summary of laws that are relevant to fisheries and aquaculture in Uganda.

At local government level there are additional permitting requirements that are underpinned by local governance instruments. In addition to this, there are informal and often irregular requirements (fees and taxes) that are selectively imposed on aquaculture developers and operators at local level (i.e., by District and Local Councils and Town or Municipal Councils). Such fees may not be gazette but must nevertheless be paid in respect of various services (e.g., establishment fees, product transfers fees for the use of roads or for loading and off-loading, as well as trading fees). This adds confusion and creates an irregular system of governance across the sector.

4.2. Commentary on Key Legal Frameworks

4.2.1. The Fisheries and Aquaculture Bill (2020)

Aquaculture is currently licensed under the Fisheries Act (Cap. 197) and its associated Regulations, which have been amended to give effect to the Department of Aquaculture Management and Development (DAMD). It has been stated in the yet unpromulgated Fisheries and Aquaculture Bill (2020) that once enacted by parliament, it will repeal the Fisheries Act (Cap. 197) to address the "*urgent need to reform the law governing the fisheries sector*".

The Bill indicates that the Fish Act "*cannot adequately cater for the current realities, including the changes in the fishery structure, aquaculture development, limiting of overcapacity and ensuring community involvement in enforcement. There have also been tremendous changes in the technological landscape, some of which require regulation*". Importantly, the Bill also states the intention to "*realign emerging issues and provide regulations necessary for the orderly development of the fisheries sub sector*", which includes aquaculture.

To obtain value from this project to harmonise licenses & permits for aquaculture, it would be fruitless to review the Fisheries Act (Cap. 197) if it is due to be repealed by the Fisheries and Aquaculture Bill (2020), as indicated above. Hence, only aspects from the Bill are highlighted below, which aspects may be considered in a future revision, given that it has already been tabled for promulgation by parliament.

Notwithstanding the fact that the Fisheries Act (Cap. 197) will be repealed, it remains important to consider the draft Fish (Aquaculture) Rules of 2020/1 even though they will likely need to be re-drafted, given that they have been compiled under the auspices of the Fisheries Act (Cap. 197). This is included in the next section.

Although aquaculture is recognised in the Bill, it remains strongly associated with fisheries. Although there is an undeniable relationship between aquaculture and capture fisheries, as well as benefits in collectively streamlining legal frameworks, administration, and markets of these subsectors, they remain different in that aquaculture is more closely related to agriculture, while fisheries revolve around sustainable natural resource utilisation. As indicated in Section 3.1 above, governments should recognize aquaculture as a distinct agricultural sector.

Section 3 of the Memorandum in the Bill deals with a broad range of remedies to deal with the current regulatory and administrative defects, which perpetuates the close relationship between fisheries and aquaculture to the extent that aquaculture is overshadowed by fisheries - a sector which is due to produce less fish than aquaculture in the foreseeable future. This complicates the regulation and administration of the sector, dissuades investment, and does not contribute to growth of the aquaculture sector that needs to provide more fish than fisheries in meeting the national per capita demand.

Some of the interpretive clarifications at the start of the Bill require careful consideration:

a) The inclusion of aquaculture services and trade in aquaculture inputs in the definition of an "*aquaculture activity*" means that there is no clear indication of the point at which such services and trade are related to general commerce as opposed to being specific to the aquaculture sector for purposes of regulation. This means that providers of services and trade to the aquaculture sector, without being involved in production, may attract unnecessary regulatory challenges.
b) Uncertainty is caused by the specificity of definitions for a "*fish processing establishment*", which is different from a "*fish processing facility*".

In Part 2 (9)(2) the membership of the Fisheries and Aquaculture Technical Committee includes one representative of the fisheries private sector and one representative of the fishery civil society organisations. This potentially excludes specific representation of the interests of the aquaculture sector.

Part 3 (24 - 26) deals with the decentralisation of fishery and aquaculture governance from national to regional and district level and specifically places responsibilities around the coordination and the development of aquaculture at regional and district level. The Bill does speak to the national government empowering and equipping the regional governments to fulfil these functions, but the technical nature of aquaculture could lead to challenges insofar as regional governance is concerned. Specific support, assistance and a uniform approach from the national Ministry is essential, while the establishment of regulatory frameworks in any form should remain solely with the national Ministry to ensure national uniformity.

Part 5 of the Bill extensively lists the permits and licences that are required for various fisheries and aquaculture activities. It would be prudent to streamline the issuing of permits and to lessen the administrative burden for all parties by structuring the regulations around these licences and permits in such a manner that allows for a single application for several permit categories. This will entail careful consideration around the suite of information requirements related to the application process, but it will aid in preventing duplication of effort and administration.

Of the eleven parts (and one schedule) that make up the Bill, Part VI is dedicated to the Regulation of Aquaculture. The following specific aspects have been identified as needing attention to further harmonise licenses & permits for aquaculture production:

a) The Bill does not provide clear differentiation between subsistence, small commercial, medium, and large-scale farming. Just as artisanal fishermen are not catered for directly, small scale and artisanal fish farmers could be marginalised by the provisions of the Bill. Section 70 in Part VI is one of the few places that caters specifically for subsistence aquaculture by providing exemption from the need for an aquaculture licence. Yet, subsistence aquaculture is not clearly defined and the fact

that some small-scale operators sell farmed fish to generate household income is not recognised.

b) Section 73 speaks to the prohibition of alternations to a commercial aquaculture facility without the prior consent in writing from the Chief Fisheries Officer. Yet the scale, nature and extent of such alternations is not defined.
c) Section 81 calls for the need to have all aquaculture service and input providers certified by the Chief Fisheries Officer. This is understandable for service and input providers of seed, aquaculture feeds, aquaculture fertilizers, hormones, or antibiotics (as stated in the Bill), but not for general commercial services and goods in general trade.
d) Section 82 permits the use of any aquaculture feeds provided it contains "*all the nutrients in the proportions required for optimum growth of the target fish as prescribed by regulations*". Given that aquaculture feed is potentially the greatest contributor to the eutrophication of water bodies in which aquaculture is practiced, more attention ought to be given to the quality of feeds that would ensure the sustainability of the water resources used for farming, especially in the case of cage aquaculture.
e) The Bill is silent towards offences related to the disturbance of legitimate and licenced aquaculture activities.
f) Although the Bill has been written around the inclusion of aquaculture as part of fisheries management, Section 134 in Part X that deals with information management is silent on aquaculture information.

4.2.2. Fish (Aquaculture) Rules of 2020 (Draft 2021)

In Part VI Section 72 (2) of the Fisheries and Aquaculture Bill (2020) it states that, "*The Chief Fisheries Officer shall, in determining the conditions to be included in an aquaculture licence, have regard to guidelines as may be issued by the Minister from time to time*". It is assumed that these "*guidelines*" refer to instruments such as regulations and the Fish (Aquaculture) Rules of 2020 (draft 2021). Although these rules have been compiled in terms of the Fisheries Act (Cap. 197), they will require some degree of revision to ensure that they are aligned to the Fisheries and Aquaculture Bill (2020) once enacted.

The Fish (Aquaculture) Rules of 2020 refer to the range of aquaculture permitting requirements, either directly through the associated schedules, or indirectly through referring to aspects such as the requirement for a Certificate of Approval of Environmental Impact and Waste Discharge Permits. Having these rules in draft form adds to the fragmentation of the regulatory framework for aquaculture in Uganda. To gain value from this assignment that seeks greater harmonisation of the licenses and permits for aquaculture, commentary has been prepared around these rules as these may be useful in aligning these instruments for a more efficient regulatory environment. Matters related to these rules include:

a) From the interpretation in Section 3 of the Fish (Aquaculture) Rules of 2020, various scales and classifications of aquaculture production are defined, including:

   i. "*commercial aquaculture" means the growing of aquatic animals or plants for profit.*
   ii. *"non-commercial aquaculture" means the growing of aquatic animals and plants for no profit gain.*
   iii. *"extensive production" means aquaculture production with low stocking densities which depends mainly on the natural food web in water.*
   iv. *"semi-intensive production" means the culture of fish using the medium stocking densities which combine use of both natural and artificial feeds.*
   v. *"intensive production" means the culture of fish using high stocking densities, artificial feeds and aeration systems.*
   vi. *"subsistence production" means production at household level for domestic consumption.*
   vii. *"small scale commercial production" means fish production in small sized ponds of less than 2,000 square metres or 1,250 cubic meters for cage and producing less than 50 000 kgs annually.*
   viii. *"medium scale commercial production" means fish production in land-based production systems of average size of 2,000 to 10,000 square meters, or in cages of 1,250- 5,000 cubic metres with annual production levels of 50,000-200,000 kgs.*
   ix. *"large scale commercial" means growing fish in land-based production systems of average size of 1 hectare or cages of 5,000 cubic metres with annual production levels of 200 000 kgs.*

   Not only does this scaling need further clarification, but it also leaves out a large segment of farmers that produce less than 50 000 kg of fish per annum for commercial purposes, whether this commercial gain is for subsistence purposes or for

the accumulation of profit. These farmers are numerous in Uganda and will continue to make out a large portion of the country's fish farms. As these farmers have little financial and technical means to comply with all the licences and permits, they need to be recognised as a distinct category for which certain rules can be relaxed. The scaling of aquaculture used in the National Fisheries Policy 2017 in which small scale entails production < 10 tonnes, medium scale < 50 tonnes and large scale > 50 tonnes provides a better solution, albeit that the scale of production should not be associated with whether production is for subsistence or commercial purposes. A small farm of < 10 tonnes per annum can have specific commercial objectives.

Further to the scaling of aquaculture in the draft Fish (Aquaculture) Rules of 2020/1, it was ascertained in stakeholder engagement that a better-defined description of intensive and extensive fish farming is required. The National Fisheries Policy 2017 defines intensive fish farming as raising fish under controlled production processes in which feed is externally supplied, while extensive raising of fish involves limited control over production processes with growth largely dependent on internally generated nutrients.

From the stakeholder feedback that was received it has been determined that the confusion lies therein that small - and large-scale farming can be practised either extensively or intensively, and could have either subsistence or commercial intent, albeit that subsistence farms are generally of smaller scale.

b) The Fish (Aquaculture) Rules deal broadly with the approval of aquaculture operations through the following clauses that are specific to approval functions / requirements / actions as opposed to clauses that do not confer an administrative action of approval on the applicant. The distribution of these obligations through the Fish (Aquaculture) Rules makes it challenging for investors and applicants to follow.

   i. Clause 7 determines that the "*management of commercial aquaculture establishments*" shall undertake soil or water quality analysis before and periodically after establishment of a fish farming operation.

   ii. Clause 8 at (1) determines that a person who intends to set up a commercial aquaculture establishment shall submit a plan of the establishment and a list of the activities to be carried out to the Chief Fisheries Officer for approval.

iii. Clause 8 at (2) determines that intensive aquaculture for commercial purposes is subject to an Environmental Impact Assessment (EIA). This is superfluous as it is covered in detail in Clause 13.

iv. Clause 8 at (3) indicates that an Aquaculture Establishment Certificate can be issued "*provided it meets the requirements of existing guidelines and Code of Practice of Aquaculture*". This is acceptable, but the inclusion of specific requirements in the body text of the rules [such as that in Clause 8 at (6)], and in the attached schedules, and in the guidelines and Code of Practice of Aquaculture, make compliance difficult and confusing.

v. Clause 8 at (5) determines that an application for an Aquaculture Establishment Certificate for commercial cage fish farming shall be accompanied by a water use permit and a certificate of approval of the environmental and social impact assessment.

vi. Clause 10 at (1) determines that the management of commercial aquaculture establishments shall prepare an integrated food safety, quality assurance and environmental safety control plan for approval. The content of the plan and the codes that must be implemented at farm level are indicated in the body text.

vii. Clause 12 deals with measures related to preventing the escape of fish.

viii. Clause 13 determines the need for an EIA and differentiates between large and medium scale commercial aquaculture in terms of their EIA needs. Clause 13 at (4) contains standards that should be contained in the Aquaculture Codes of Practice.

ix. Clauses 14 to 28 contain mainly obligatory practices as opposed to administrative approvals.

x. Clause 29 determines the need for a seed production certificate for hatchery operations.

xi. Clause 31 determines the need for a fish transfer permit for transfer of seed and fish to a different location.

xii. Clause 32 determines the need for a fish breeding permit, which should be integrated with the certificate required under Clause 29 (seed production certificate).

xiii. Clause 34 determines the need for a fish import permit, which permit runs concurrently with the need for a fish health certificate issued by the competent authority of the country of origin.

xiv. Clause 35 determines the need for a live fish export permit.

xv. Clause 36 determines the need for a live fish transfer permit within Uganda. The permit sighted under Clause 31 should be integrated into this permitting requirement.

xvi. Clause 38 talks to the general requirement to ensure that the sale, import or distribution of any aquaculture inputs (feeds, fertilizers, hormones, antibiotics, medication, or chemicals) meet any further authorisation requirement that may exist.

xvii. Clause 39 determines the need for a permit to import any aquaculture inputs. This should be governed by laws of commerce as its governance in aquaculture statutory instruments has little value.

xviii. Clause 40 at (2a) speaks of conformity certification along the aquaculture value chain, when this can be no more than monitoring or inspection.

xix. Clause 40 at (2b) speaks to inspection and sampling of manufactured fish feeds, which is likely to be governed under legal frameworks related to animal feeds in Uganda.

xx. Clause 40 at (3) requires certification of fish feeds by the Chief Fisheries Officer when this also should be a matter regulated under the legal frameworks related to animal feeds in Uganda. The standards and practices related to fish feeds in Clause 41 belong in the Aquaculture Codes of Practice.

xxi. Clause 47 determines the need for a permit for the introduction of non-indigenous fish species. This should be incorporated into the permitting requirements for the transfer of live fish.

xxii. There is confusion between aquaponics and organic aquaculture in Clause 48.

xxiii. Clause 50 at (2) determines the need for an aquaculture fish marketing permit.

c) The clauses sighted above are supported by various schedules attached to the Fish (Aquaculture) Rules of 2020, and these schedules are intended to serve as application and certificate templates. As these templates are currently mixed, it causes confusion and there is a requirement for clear division between application form templates and certificate templates. Despite this confusion, the following table depicts the schedules, the respective applications fees, and comments around areas of harmonisation. It is accepted that these schedules are in draft form but should be finalised and streamlined for uniformity.

Schedule	Title and Suggested Fee	Comment
First	Aquaculture Establishment Certificate (template) **100 000 UGX**	This should become the master certificate that should be populated with subcategories such as breeding, seed production etc., which will allow for a single master permit.
Second	Application for Fish Seed Production Certificate **100 000 UGX/year**	This should be a subcategory of the master permit (above) and should focus on the identification of brood stock and geographic area of distribution.
Third	Fish Seed Production Certificate (template)	Certificate templates can be removed from schedules and issued as templates to issuing authorities.
Fourth	Application for Fish Breeding Permit **500 000 UGX/year**	There is confusion between the seed production permit and fish breeding permits. This should be amalgamated into a single permit.
Fifth	Fish Breeding Permit (template)	Certificate templates can be removed from schedules and issued as templates to issuing authorities.
Sixth	Application for Certificate for the Import of Live Fish into Uganda **100 000 UGX/consignment**	This permit requirement can remain separate from the aquaculture establishment certificate given the transboundary importance thereof. The inclusion of screening for novel diseases such as Tilapia Lake Virus should be included
Seventh	Live Fish Import Permit (template)	Certificate templates can be removed from schedules and issued as templates to issuing authorities.
Eight	List of Fish Species, Pathogens, Medications etc.	These lists of species for import and export, as well as lists of medications should not be between the permit application templates. These should be clearly separated out into their own distinct schedule. The reasoning behind disallowing import of a specific gender of certain fish is unclear and the control and monitoring thereof will cause challenges.
Ninth	Application for Fish Transfer in Uganda **20 000 UGX/batch**	This permit requirement can remain separate from the aquaculture establishment certificate, but provision must be made for annual allowance for hatcheries to transport fish.
Tenth	Live Fish Transfer Permit (template)	Certificate templates can be removed from schedules and issued as templates to issuing authorities.
Eleventh	Annual Aquaculture Establishment Date	This form should be developed into a condition of the master permit, the submission of which is a prerequisite to having the master permit renewed annually.
Twelfth	Aquaculture Inputs Import Permit (template)	The requirement to regulate import and sale of inputs should be removed. The import of live fish is covered under another permit, while the import of medications and therapeutants should be dealt with under veterinary legislation. Import and sale of other inputs should only be regulated by standard custom controls.
Thirteenth	Fees Charged on Certificates and Permits for Aquaculture	These draft fees should be matched to the consolidated permit requirement taking into consideration the use of a master permit system with subcategories.
Fourteenth	Aquaculture Fish Marketing Permit	This should be a subcategory of the master permit (above) for national sales. For export the phytosanitary and food safety requirements could be dealt with in a separate permitting framework and should be developed with food safety authorities.
Fifteenth	Application for Live Fish Export Certificate (template) **50 000 UGX/consignment**	This permit should remain separate as it should be a requirement for the importing country. It should cover the disease screening requirements indicated under live fish import permits.
Sixteenth	Live Fish Export Permit (template)	Certificate templates can be removed from schedules and issued as templates to issuing authorities.
Seventeenth	Annual Fish Feed Processing/Manufacturing Certificate	This has not been completed in the draft document. The application and issue of an operating permit to fish feed manufacturers is supported.

Table 2: Summary of the schedules attached to the Fish (Aquaculture) Rules of 2020.

In addition to the suggested fees indicated above, the following fees have been abstracted from Schedule Thirteen, which should be consolidated into a simplified fee system for permits.

Cage Aquaculture Annual Operations Permit **Small Scale 50 000 UGX** **Medium Scale 100 000 UGX** **Large Scale 150 000 UGX**	These fee values will place a disproportional burden on very small scale and artisanal farmers. These fees should be attached to the issuing of the master permit.
Land-based Aquaculture Annual Operations Permit **Small Scale 0 UGX** **Medium Scale 50 000 UGX** **Large Scale 100 000 UGX**	The zero rating for small scale farmers is good, but with due consideration to the fact that small scale farmers are classified in these Fish (Aquaculture) Rules as producing up to 50 tons per annum, there should be a fee requirement as these are large volumes of fish. Very small scale and artisanal farmers (e.g., producing less than 10 tons per annum) should be exempt from fees. These fees should be attached to the issuing of the master permit.
Cost of an Application Form **10 000 UGX**	This should simply be incorporated into the permit fee.

Table 3: Fees from Schedule 13 of the Fish (Aquaculture) Rules of 2020.

4.2.3. Aquaculture Codes of Practise (2019 draft)

As with the Fish (Aquaculture) Rules of 2020 these codes remain in draft, which is a cause of concern. These codes set out to provide guidance to aquaculture operators on environmental and food safety standards that could improve commitment to ecologically sustainable aquaculture development. For this code to be effective it needs to directly address regulatory compliance, meaning that it should create an implementable framework that any farmer can follow towards the implementation of regulatory standards and best practices.

The Aquaculture Codes of Practice depend on the supporting legal framework which should regulate their adoption and implementation. As indicated above, the draft Fisheries and Aquaculture Bill (2020) is now before parliament, which will affect the legal framework and ultimately the nature and content of the Codes. For this reason, the Codes will require review once the supporting legal framework has been finalised (refer specifically to the need for the update of the legal and regulatory basis in Section 1.3).

The Aquaculture Codes of Practice are comprehensive in nature and well structured, dealing with aspects that range from site selection to water quality management, production systems, record keeping and more. Yet, using Section 2.2 on water quality management as an example, it should be noted that small scale farmers do not have the means to implement all of the code's recommendations. A rough estimate of the costs involved for the recommended water quality tests could be as high as 10 million UGX.

Certain aspects in the Aquaculture Codes of Practice will require technical review and minor amendment. For instance, Section 2.3 fails to recognise the practicality (and necessity) of anesthetising all fish during spawning, while the clause disallowing for progeny to be drafted back into a breeding programme will require further clarity. Aspects such as the determination of resource carrying capacity for cages (Section 2.7.2) and cold chain management during product distribution may require re-evaluation. Despite these codes being very well compiled and comprehensive, they fail to recognise that the same set of codes cannot be applied to all scales of aquaculture.

Documents such as the Aquaculture Training Manual for Extension Agents in Uganda (2020) contain many of the codes indicated above and continues to document many aquaculture principles. Ideally, this manual should also be written as a useful tool that farmers can use to better implement aquaculture best practices.

4.2.4. Fish (Quality Assurance) Rules 2017

The Fish (Fishery and Aquaculture Products) Quality Assurance Rules of 2017 were promulgated in terms of the Fish Act, Cap. 197, which means they will also require repromulgation in terms of the Fisheries and Aquaculture Bill (2020) once it is adopted by Parliament. Nonetheless, these rules are comprehensive and play an essential part in ensuring food safety frameworks related to aquaculture products.

These rules are cross reflected to the Aquaculture Codes of Practise in the previous section, which creates a system of greater seamlessness.

4.2.5. The National Environment Act (2019)

Part 1(3) of the Fisheries and Aquaculture Bill (2020) states clearly that "*all persons involved in fisheries or aquaculture activities … shall take into account and give effect to the principles of environment management prescribe under the National Environment Act, 2019*".

The National Environment Act, 2019 indicates that the following projects are subject to Environmental and Social Impact Assessment:

> *Construction of facilities for commercial aquaculture of 200 000 kilos per year or of an area of one hectare.*
> *(g) Establishment of industrial or commercial fish processing plants.*
> *(h) Establishment of fish cages for commercial production.*
> *(i) Establishment of aquaculture parks.*

These ESIA requirements are universal and should be upheld in Ugandan aquaculture development.

4.3. Permitting and Licencing at District Level

Through consultation with several commercial fish farms, it has been found that District Authorities expect fish farmers to comply with a range of licence and permitting requirements in a manner that is not well coordinated, inconsistent from district to district and even from farm to farm, and in some cases clearly bias against aquaculture compared to other forms of agriculture.

These licences range from a so-called "pond tax", trading licences, local environmental licences, to loading and offloading licences. In some instances, farmers reported paying for a warehouse licence and operational licence like those that would apply to factories and unbefitting for an aquaculture operation. Property taxation for aquaculture also seems poorly aligned to property taxation of other agriculture types.

This level of inconsistency and uncertainty is untenable in the development of a well organised and investor friendly aquaculture sector. Although the elimination of all these district and local level permits and licences would be ideal, the decentralisation of aquaculture governance in Uganda, the district level licencing and permitting systems and the application of these district level measures over other industries, means that in practise these permits are likely to remain. Nevertheless, it is imperative that the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), and the Department of Aquaculture Management and Development (DAMD) standardise the list of permits that apply to aquaculture operations and that all district and local authorities (and farmers) be informed of this standardised list of district permits and the associated fees. This will entail extensive consultation with district and local authorities.

5. FINDINGS FROM THE STAKEHOLDER PARTICIPATION

5.1. Approach and Methodology

The stakeholder engagement for this project consisted of:

a) Identification of stakeholders drawn from producers/service providers in the private sector and Ministries, Departments and Agencies. These were recommended by the PMU, DAMD, MAAIF/ Directorate of Fisheries Resources (DFR) and Thematic Leaders.

b) Data and information was collected in accordance with a work plan that was presented to and discussed with the PMU and EU on one hand and the Consultants on the other. The following key data collection methods and tools were employed:

   i. Development of structured questionnaires and interview guides administered on-line with follow-up telephone calls.

   ii. Development of questionnaires for use during physical meetings with key stakeholders (Directors, Commissioners, Private sector / producers).

   iii. A review of documents related to aquaculture licensing and permits used by Ministries, Departments and Agencies as well as the LVFO reports on aquaculture development in the Lake Victoria basin.

   iv. A meeting with Business Summit Africa (BSA) to assess what inputs could be used to enrich the licensing regime through the *One-Stop-Shop* (OSS) that was being developed for aquaculture authorisation.

   v. Key informant face-to-face discussions held with: BSA (all staff on that activity and Thematic Leaders); DAMD (Commissioner and aquaculture staff including Thematic Leaders); DWRM/Planning (with Director and staff in charge of Planning, Permits and Water Quality); NEMA; Director of Research, NaFIRRI.

   vi. Telephone-led questions/exchanges with difficult-to-reach farmers.

   vii. Analysis of returns and follow-up phone calls for filled questionnaires or direct calls where required.

5.2. Engagement with Business Summit Africa (BSA)

Business Summit Africa (BSA) are currently engaged to develop the so-called One-Stop-Shop (OSS) for aquaculture investments, which by necessity includes permitting and licencing of aquaculture ventures. A virtual / physical hybrid meeting engaged the BSA Team and the Thematic Leaders. The following observations were recorded:

a. The online portal may need to be enriched with more information about aquaculture in Uganda, the different roles played by stakeholder institutions and the private sector. This would by necessity include information about permitting and licences, which should be informed by the recommendations of this report, and which should be incorporated once the Fisheries and Aquaculture Bill (2020) has been promulgated.
b. Information retained by MAAIF (including information destined for their website) could be a key information resource towards building awareness of the aquaculture industry in Uganda.
c. It was not clear whether the OSS was being developed as an open-source portal of information, or for registration only. This requires clarification to best position the system as a general information tool or as a portal in securing licences and permits.
d. The Ministries, Departments and Agencies, especially URA, UIA, NEMA and MWE should be given special attention. The Heads / Director of DFR should find ways of collaborating with the above Ministries, Departments and Agencies and integrate the respective online portals in the diverse institutions. As a start, the MAAIF website and DFR page could be edited to include links that lead users to the portal and additional links into websites of the relevant Ministries, Departments and Agencies. In turn, website administrators and managers in the respective Ministries, Departments and Agencies would also be requested to update their sites with links into the OSS portal to allow investors to virtually access all required information pertaining to the sector, investment, permits, licences, markets etc.
e. There is a need for structured engagement and possibly formalised agreements and/or linkages such as inter-agency committees or having desks or committed staff in the respective Ministries, Departments and Agencies to address optimisation of the OSS system.

f. The DAMD Information Technology capacity will need to be strengthened/developed if the OSS is part of the immediate future of MAAIF/DFR.
g. The evolving regulatory framework (e.g., the new Fisheries Bill, Aquaculture Rules, and others in MWE) will need to be studied and captured in a final product.
h. System maintenance (location, administration, costs/budgets) could be an issue that should be planned for in advance.

The progress made by the BSA team in developing a web portal is a step in the right direction, but it is not the end point. It may be considered as an alternative to the present structured arrangements in which different agencies retain their respective online portals with links into one-another through dedicated web pages in the respective websites. There are advantages to develop strong collaboration mechanisms in which all collaborators (relevant agencies in the licensing chain) can have their information displayed on a specific single online portal. In this way an investor, entrepreneur or other sector roll player can configure which information or requirement is appropriate and pertinent at each stage.

At regional and district governance levels, as well as at producer level, online application was considered rather complex to implement due to limited knowledge/capacity for online technology, inadequate use of the internet and related costs.
This was a specific concern for small-scale and extensive aquaculture operators.

5.3. Feedback from Ministries, Departments and Authorities

5.3.1. District Level Governance

Decentralisation of aquaculture governance is a central concept in the Fisheries and Aquaculture Bill (2020). In this regard the District Fisheries Officers (DFOs) are key contact points for aquaculture investors and operators.

In collection of information for this report both large scale commercial operators and the DFO’s in their area of operation were consulted. Through this process it became clear that there remains poor uniformity around the implementation of a standard set of procedures for licencing and permitting (see also Section 4.3 above). This is especially

relevant in the process that deals with initial authorisation of aquaculture sites. Some smaller farmers reported to have sought “permission” from the districts, while others approached the national authorities.

Districts (DFOs) may work with Environmental Officers (Environmental Screening) to register farmers, especially those interested in cage farming, while other farmers register at sub-county level. DFOs usually recommend locations while at higher (small-medium scale) operations (e.g., cages) Environmental Officers may carry out screening, require a proposal and an EIA before forwarding a farmer’s interest to the central authority. This process was found to be lacking formal procedures.

It was found that decisions on the suitability of areas for ponds are taken by a range of parties. In some instances, this is done by Fisheries Officers in charge of Aquaculture, but in other by extension staff (NaFIRRI), Fisheries Officers and Environment Officers. Notwithstanding, most districts require farmers to “obtain permission” to set-up ponds within their respective jurisdictions. In each district, there are sub-county Fisheries Officers who may have more information on aquaculture practices than that which can be obtained at the district level. This likely is due to budgetary constraints that limit extension activity at sub-county level.

The following key licensing features can be picked out from the analysis of district level governance:

a) The DFOs provide extension advice to farmers on pond site suitability, and what licenses or permits are required. They play an essential role in providing information to the small-scale farmers.
b) The DFOs give the go-ahead to start fish farming and recommend farmers to approach DFR, NEMA, the Wetland Department and NaFIRRI if they ask for more information in relation to the requirements.
c) Much of the DFOs focus lies with the promotion of fish farming in their districts.
d) The farmers source feeds (from local resources or animal feed stores) and identify local markets where they sell their produce, often without being licensed.

e) It seems it is the fish mongers/traders in neighbouring areas who may pay local trading taxes. In effect, many traders/buyers do not buy in bulk due to limited production.
f) The small number of seed producers that were consulted combine grow-out and seed production for sale to neighbouring small-scale pond producers without obtaining licences. It seems seed is produced from their grow-out operations as they do not appear to have dedicated brood-stock for seed production.
g) DFOs recommended licensing to be decentralised for it to be more efficient. Standardisation from district to district is however absent.

5.3.2. The National Environment Management Authority

The Executive Director of the National Environment Management Authority (NEMA) provided the following process outline and guiding principles with regards to this government organ's mandate in relation to aquaculture:

a) A prospective aquaculture developer that identifies a project site will consult with the district fisheries office on the suitability of the location.
b) Hereafter the developer is expected to prepare the Terms of Reference (TOR) to undertake a full assessment study and submits this to the NEMA.
c) NEMA, on receipt of the TOR, seeks for further technical comments on the study from the Fisheries Department at MAAIF or from NaFIRRI. These comments and inputs guide the general review process after a baseline verification exercise that consists of a site visit together with representatives of the local government fisheries office.
d) If the site is found to be technically and socially suitable a conditional ESIA certificate is issued.
e) As aquaculture ponds are often located in wetland or riverine environments, a wetland/riverine use permit is required after the ESIA process.

In such a case:

i. A structured questionnaire and interview process (predominantly online and via telephone/email) is used to collect baseline information.

ii. Hereafter the developer is expected to apply for a permit at local and district level.

iii. The application is routed to NEMA for final evaluation and issuance of the permit which will allow the use of the protected area for fish farming.

With regards to the costs of the process, there are two aspects to consider:

a) Preparation of the ESIS requires the services of an independent consultant as specified in law. The cost hereof is negotiated between the developer and the consultant.

b) The administrative costs of the ESIA fees and wetland permit are specified in the ESIA Regulations 2020.

After the submission of an acceptable ESIS, the ESIA process takes between 7 and 21 days depending on the location and the distance from main centers.

It was observed by NEMA that applicants often obtain the certificates but proceed to use the land for purposes other than aquaculture. In other instances, applicants do not abide by the conditions specified in the ESIA certificate or the permit. An example of such noncompliance relates to operators that mine sand commercially under the auspices of fish farming permits. It was recommended that these aspects could be addressed by greater care in the initial screening process by fisheries officers at local level, and greater training or sensitization of all prospective aquaculture operators.

5.3.3. The Wetlands Management Department

The Wetlands Management Department (WMD) resides within the Ministry of Water and Environment from where it executes its mandate to oversee and guide sustainable use of wetlands. There is however no specific law that directs aquaculture developers or operators to obtain authorisations or permits from this Department. Prospective aquaculture operators need to direct an application to NEMA, who have the responsibility to direct such applications to the WMD to review the applications and provide technical guidance on

whether a permit is required. For a Wetland Resource Use Permit to be issued, the following procedure applies:

a. The developer must complete a standardised application form and attach the following additional information:
    i. An acknowledgement from the District Environment Committee which will indicate whether there are wetland inspectors at the district level.
    ii. A map and detailed information showing the area directly or indirectly affected by proposed activity.
    iii. Comments and a report from the LC1 Secretary for Production and Environment Protection.
    iv. An executive summary of the environmental impact statement where necessary.
    v. Any other information that may support the application.
b. After an application has been filed with proof of payment as prescribed, a duplicate must be submitted to the NEMA executive director.
c. The Executive Director of NEMA consults with the relevant environmental officers and refers the application to a designated environment committee for further consideration and comments.
d. Once the lead agency and wetland resource committee are satisfied with the documentation, the matter is approved and assigned a permit registration number.

An analysis of the steps required to obtain a wetlands user permit suggest possible delays that can be avoided if there was greater coordination between the four key agencies: DFR, NEMA, WMD, DWRD, the last three of which fall under the same Ministry.

5.3.4. MAAIF: Directorate of Fisheries Resources and the Department of Aquaculture Management and Development (DAMD)

The Directorate of Fisheries Resources (DFR) as the lead agency for aquaculture and the Department of Aquaculture Management and Development (DAMD) as the technical arm for aquaculture are considered as the main government arms that are responsible for governance and developed of aquaculture.

These authorities envision an increase in Ugandan tilapia production from a current estimated level of 130 000 metric tons to 1 000 000 metric tons over a five-year period, with a concurrent increase in catfish production from 50 000 metric tons to 500 000 metric

tonnes. The use of aquaculture parks, optimisation of fingerling production and related matters are envisaged as keys to achieving these targets. Some of the challenges that were noted during consultation include the transformation of low yields to high yields in pond culture, unlocking investment, high start-up costs, access to quality feeds and fingerlings as well as inadequate extension services.

The Directorate of Fisheries Resources (DFR) is responsible for issuing of the universally required Aquaculture Establishment Permit and a range of permits that relate to aquaculture operations such as the moving and sale of fish.

In consultation with DAMD the following recommendations were noted for consideration:

a. There is need for DFR to strengthen the capacity of the DAMD to effectively address investor concerns for foreign to local commercial and small-scale aquaculture investments.
b. New permits and licences need to be issued in terms of the new Fisheries Bill once promulgated.
c. Guidelines related to aquaculture permits and licences requires revision. A step-by-step guide is required that can be followed by operators and developers.
d. There is a need for a practical and workable inter-ministerial structure around aquaculture development, monitoring and related matters.
e. There is a need for greater awareness creation, as well as more extension services for small holders.

5.3.5. NARO/NaFIRRI

In terms of aquaculture authorisation and development, the primary role of NaFIRRI lies in addressing requests for undertaking site suitability and site capability studies. Such requests may come directly from developers / investors or as a recommendation from DFOs, DFR (Fisheries Department) and NEMA. In some instances, NaFIRRI may be centrally involved in ESIA processes where their expertise may be necessary (i.e., at the cost of the developer or investor).

The reports produced by NaFIRRI are copied to the DFR, which in turn are made available to the NEMA. NaFIRRI is not obliged, nor legally mandated with following up the process, nor to recommend whether a permit or licence should be issued.
Some large-scale aquaculture developers or investors may approach NaFIRRI to carry out the required monitoring and provide the necessary reports that investors may submit to NEMA to verify compliance.

In conclusion it was found that there is limited linkage between the site suitability study reports and the issuing of permits and licences by the responsible authorities, which are DFR, MWE, NEMA, and the district authorities. As NEMA is mandated to approve or reject project proposals, they have a list of authorised practitioners from which they select people that may carry out studies ranging from site suitability assessments to monitoring. These in turn may approach NaFIRRI scientists to participate in the assessments. This reinforces the need for formalised inter-ministerial structures to guide investors and achieve greater uniformity in the process.

5.3.6. Zonal Agricultural & Development Institutes (ZARDIs)

The Zonal Agricultural & Development Institutes under NARO have a mandate to conduct and promote applied research in Uganda's agro-ecological zones, which includes aquaculture. During the stakeholder consultation process, two ZARDIs were selected based on their rapidly growing involvement in aquaculture. BugiZARDI is in Eastern Uganda and covers districts around Lake Kyoga and the hilly areas towards the border with Kenya. AbiZARDI is in Northern Uganda and covers areas close to the borders with Sudan and Congo.

The two ZARDI's provide technical knowledge to a total of 40 districts, of which at least 27 were reported to practice commercial aquaculture. The enterprise is dominated by grow-out pond farming of Nile tilapia, followed by African catfish both in monoculture and in polyculture with tilapia. Some districts have hatcheries, mostly for catfish, with very few licensed to produce sex reversed tilapia fingerlings. Some cage fish farming is also practiced in small enclosures.

While the advice given by ZARDI's to farmers or investors prior to establishment of an aquaculture project is generally similar (involving technical knowledge, site selection, development of business plans, resource mobilization etc.), divergent views were provided about the licensing process, types and sequence of licenses/permits, licensing agencies and the costs involved. Moreover, the ZARDI's do not provide standardised information around operational aspects. This illustrates the need to have the roles, mandates, expertise, and information sources within the ZARDI's standardised and well documented.

Licencing challenges noted from consultation with the ZARDI's included high costs, long distance travels for farmers staying far from the ministry, and the lack of publicized steps (process) to guide the farmers/investors. To shorten the process of acquiring licenses/permits, the institutes suggest establishing regional/district centres, as well as feedback mechanisms that can report progress by the issuing agencies/authorities.

The proposal for farmers/investors to use online procedures to process licenses/permits was seconded by the ZARDIs, though one pointed out the need for training.

5.4. Feedback from Producers

From a wide range of consultations, it has been determined that most large-scale production occurs in a limited area, with the following observations as key inputs to the harmonisation of licences and permits:

a) Virtually all the large industrial-scale producers (as defined above) are in the Buikwe area. They are Source of the Nile, Yalelo, and IG Investments. Other smaller producers reside in Mukono and Wakiso.
b) It is estimated that at least 60% of all farmed fish in Uganda is produced in this zone, with 50% coming from Buikwe.
c) Many smaller operators have adopted cage culture practices in these areas.

The feedback around licencing and permits from specific large farms is captured below.

5.4.1. Yalelo

Yalelo started investment operations in 2018 with the identification and land acquisition in consultation with the district and UIA. This was followed by the EIA process approved by NEMA and the required licenses/permits from DFR/DAMD and MWE.

Guided by MAAIF, they have approvals for aquaculture establishment, seed production, water extraction and water discharge. They also have Wetland User permits and are to establish a Water Quality monitoring facility. They operate a full value-chain approach from grow-out in large cages, hatchery/seed production to marketing with outlets in Jinja and Kampala. Their source of seed includes Source of the Nile, Rock Springs and their own.

The company considers the licencing and permitting process as challenging and slow, but useful for the type of investment they are developing. The specific concerns that they raised are:

a) Fish is a fragile and delicate commodity; meaning that biosecurity is a concern that should receive greater attention in permitting.
b) Investors should be required to have a sustainability policy.
c) Farms should have monitoring facilities for compliance.
d) In view of the several other large and small producers in the vicinity, it is not clear who should determine where to locate new investors; the issue of spacing investments in a particular area is a concern.
e) How long and when to rest an area with concentrated cage production should be determined in the permitting framework.

5.4.2. Source of the Nile (SON)

As a pioneer company Source of the Nile went through all the permitting and licencing processes and were guided by various agencies. Comments raised in this regard include:

a) Variations in permits at central and local government levels needs to be harmonised.
b) Delays in issuing import permits for feeds and other delays at border points should be handled more efficiently.
c) Permits at district level should be standardised.

5.4.3. Masese Cage Cluster Farmers

This is a group of individual cage owners operating under the Masese Cage Fish Farmers SACCO (Savings and Credit Cooperative Organisation – a country wide concept that was designed to replace the age-old Cooperative Societies of the 1960s – 1970s.). Jinja District officials had earlier in 2008 promoted cage farming among fisher communities as a way of reducing fishing pressure. No licenses/permits were required as the initial set-ups were primarily demonstrating the feasibility of cage farming by the local communities. Due to theft of caged fish, the pioneers moved their small volume cages nearer to the fish landing from which they could monitor and better access the systems. It is not clear what steps were taken to authorise the new areas, but it seems the cage owners sought technical guidance from NaFIRRI. There are at present at least 50 cage owners of around 450 cages of various sizes; all located within a single bay area.

The main licencing and permitting issues that were identified, include:

a) All cage owners operate under one aquaculture establishment permit.
b) The District and Municipal Council have supported the group by waving local taxes (e.g., trading fees).
c) Each new owner pays an amount to become a member of the SACCO.
d) Traders are contacted whenever some owners are ready to sell their fish; the markets are mostly in Kenya, South Sudan, and Rwanda.
e) Inputs (feeds, nets from China) are taxed by URA. Local feeds are of low quality but are available from animal feeds dealers.
f) Online licensing is not possible as cage owners do not have access to the internet and cannot use the technology.

5.4.4. Seed Producers and Hatchery Operators

Out of the consultative activity, four recognised seed producers and/or hatchery operators were consulted (Tororo Rock Springs, Source of the Nile, Yalelo, and Green Fields). Most of these operators combine grow-out and seed production for sale to neighboring small-scale pond producers without going through licensing procedures.

6. ZONING AND OTHER ENVIRONMENTAL CONSIDERATIONS

While this PESCA project relates primarily to permitting and licencing, it is important to report on the concept of zoning (particularly in relation to the regional context of Lake Victoria) and related environmental aspects as this affects the way aquaculture will develop in the future. In doing so, cognisance has been taken of the work and guidelines of the Lake Victoria Fisheries Organisation (LVFO), and particularly their assessment in identification of potential sites for feasibility studies towards establishment of Aquaculture Parks in Uganda.

Depending on how major commercial scale operators are defined, there are up to four operators of scale concentrated in a 20 - 30 km radius along the shores of Lake Victoria. Scattered amongst these are smaller scale producers. Some of these producers are in proximity to areas in which water displacement is high because of the Nile River that exits the lake. Although the larger establishments realise the need and advantages to moving cages and allowing farmed sites to lay fallow, it is essential that farming develops within the assimilative capacity of the water resources. It has been noted that such carrying capacity studies will form part of the work by the forthcoming TrueFish project, but permits and licencing must be aligned thereto, taking into consideration other factors such as the distance between operators, scale in relation to water displacement and ambient water quality conditions. Equally, zonation will become important for land-based aquaculture as the sector intensifies and makes use of common water and other resources. Accurate depiction of aquaculture zones in GIS format is an essential tool to aid licencing and permitting in the future.

There are other environmental concerns to consider in the development sphere of aquaculture, such as the removal of gazetted buffer zones to establish commercial agriculture and industrial facilities that directly impact water quality in receiving waters such as lakes. There have been widespread occurrences of algal blooms (mostly toxin producing *Microcystis* species) which render fish quality and safety at risk, besides the effects of deoxygenation of inflows into aquaculture facilities.

In Uganda, land-based aquaculture is intricately linked to wetlands. These wetlands are either directly used to house pond farming systems and hatcheries, or water is abstracted,

and effluent is discharged back into the wetlands. Aquaculture can impact on wetlands directly through water quality and quantity degradation, as well as through the spread of fish disease, alien fish species and novel genetic traits.

Although NEMA is mandated to play a leading role in environmental protection, the production target of one million tons of fish in five years will necessitate DFR to adopt a more active role in advocacy for environment concerns related to water resources. This is where Best Management Practices (BMP's) and Multi Stakeholder Innovation Platforms (MSIP's) should be used as a starting point for institutionalizing inter-ministerial structures to address and resolve challenges that require intervention from various government organs.

7. THE COST OF COMPLIANCE

The permitting costs indicated in the Fish (Aquaculture) Rules of 2020 (Draft 2021) are indicated in section 4.2.2. Pending the promulgation of the Fisheries and Aquaculture Bill (2020), the following permits and costs apply in terms of the Fish (Aquaculture) Rules:

Aquaculture Establishment Certificate at 100 000 UGX

a) Fish Seed Production Certificate at 100 000 UGX
b) Fish Breeding Permit at 500 000 UGX
c) Fish Export Permit at 50 000 UGX plus 100 UGX per kg for more than 10 kgs
d) Fish Import Permit at 50 000 UGX plus 75 UGX per kg for more than 10 kgs
e) Fish Transfer Permit at 50 UGX per kg for more than 10 kgs
f) Fish Feed Import Permit at 50 000 UGX plus 5 UGX per kg
g) Fish Seed (fingerling/fry) Import Permit at 50 000 UGX plus 5 UGX per fingerling/fry
h) Industrial Fish Feed Manufactures annual certification at 1 000 000 UGX

In addition to these fees a payment of 5000 UGX is required for an application form.

It has been determined that to commission an ESIA study for a medium scale aquaculture project amounts to 15 - 25 million UGX depending on location and other factors. For a large-scale project the estimated cost could range between 30 and 70 million UGX but may be higher for proposed projects in ecologically sensitive areas. Besides these costs, it has been determined that the indicative cost of an ESIA certificate amounts to 0.1% of the investment costs.

The costs of water related permits (water abstraction and wastewater discharge) depend on estimates of the water quantities and qualities.

Although the permitting costs for an aquaculture project is not prohibitive, it is dominated by the cost for having an impact study commissioned towards obtaining an ESIA certificate. The non-requirement for an ESIA for a small to medium scale project means that smaller projects are not necessarily burdened with these costs. However, there is no scale differentiation for the permits listed above, meaning that a smaller project proportionately pays larger amounts for permits.

8. BEST PRACTICES IN HARMONISING LICENCES AND PERMITS

The following best practices should be reviewed and adopted towards greater harmonisation of aquaculture licences and permits in Uganda.

8.1. Inter-Ministerial Task and Permitting Team

As lead government agency for aquaculture, the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) should take a lead to establish an inter-ministerial committee to deal with aquaculture authorisations. This committee should primarily consist of MAAIF, the Ministry of Water and Environment and the Ministry of Local Government, with secondary participation from the Ministry of Trade and Industry, as well as specific district and local authorities as required.

This committee should focus on addressing the streamlining of permitting and licencing for aquaculture but could equally deal with sector challenges such as trade, resource use and more. A practical term of reference should be established for the committee to ensure its effective operation and it should remain accountable to the aquaculture sector.

Such a “single window” approach has worked well in countries such as Chile where a single application has been developed for the approval of the range of sub activities that make up aquaculture operations (refer to the Chilean Aquaculture Concessions and Authorisations Regulations). In Mexico, a special government office for aquaculture development handles all the required permits, while in Madagascar a special administrative unit resolves both permitting and sector investment challenges.

8.2. Market and Investment Forces

The viability of the aquaculture sector depends on a demand for fish, whether local or international. The dynamics of this demand, especially sales price, determines the economic viability and will inform the case for any investment into the sector, whether at subsistence or commercial scale. For this reason, the permitting and licencing system must allow for ease of trade and ease of investment to grow the sector.

To ease the trade of fish a harvested and slaughtered aquaculture product should only be subject to food safety and sanitary standards as well as the standard trade rules that would apply to any other food product. Likewise, inputs such as feed and equipment should not be burdened by the requirements for licences and permits outside of that which would regulate import and trade of any other goods and services. Due to the potential impact of live fish, these should be regulated by a permitting system.

Governing bodies responsible for permitting should work closely with any government body, bank, NGO and private firm that wishes to invest in the sector, as these investments are required to grow the sector. Equally, individuals that are investing their own funds and time should be supported through the permitting process insofar as this is possible.

8.3. Norms and Standards

The Fish (Fishery and Aquaculture Products) Quality Assurance Rules of 2017 (see Section 4.2.5) already provide a strong baseline of norms and standards, which may require minor technical review. These norms and standards seek to protect the farming resources (water and environment), while ensuring safe aquaculture products for consumers.

Good norms and standards are an advanced means of sector regulation, provided they are adopted by sector role players. Such codes of practice or standards, incentives and disincentives relieve the pressure on the permitting systems. Adoption thereof should be encouraged by means such as creating a dependency on the renewal of annual production permits (i.e., the permit to farm annually is issued based on performance against norms and standards), possible tax incentives, strong promotion of the norms through sector associations and promotion thereof in the market so that market forces can self-determine the need for aquaculture products that meet a specific standard.

8.4. Online Permitting Systems

Progress made by BSA in developing an online permitting system is discussed in Section 5.2. Two key challenges remain with online permitting and licenses in Uganda:

a) Many smaller and rural farmers have limited access to online systems and may not have been exposed to the set of skills required to use online systems.

b) While the permitting system and the number of permits that are required remains unresolved, such a system will be complicated.

Despite these challenges, an integrated online system that coordinates the permitting requirements is advisable but should not be used in a manner that excludes people without online access or skills in the use of online systems. The content of the online system should be an extension to the coordination achieved in an inter-ministerial task and permitting committee and should consider the permitting framework contained in the specific recommendations below.

8.5. Extension Services

Any legislation and permitting system is only as good as its implementation. In the case of Uganda, it is strongly advised that a single national permitting framework (i.e., the number, format and content of aquaculture permits and licences) be created and that implementation be done at district level by Fisheries Officers. For this to be successful, Fisheries Officers need to be well trained, not only in the content of the permitting framework, but also in the administration thereof, so that the administrative information can be centrally collected at national level.

Extension services play a vital role in the success of this system in that they will often be the point of contact with the people and organisations that require aquaculture permits and licences. These services must be trained in both an understanding of aquaculture from a technical point of view and in the requirements of the permitting framework.

8.6. Strong Producer Associations

Strong producer associations play a vital role in both the implementation of a permitting framework, but also in the sector's adoption of norms and standards associated with permit and licence compliance and in the sharing of information with producers around the requirements. Given this important role, producer associations should be provided with direct support by government after assessment of their support needs. It has been shown globally that strong associations give rise to a sector that is better informed in relation to regulatory requirements, while alignment to such requirements is advanced.

8.7. Education and Awareness

In addition to the roles of extension services and producer associations, efforts must be made in general creation of awareness. This should be focussed on creating public awareness and support for fisheries conservation, management, development, and sustainable use. Basic short programmes at schools are an effective means to create awareness, while the dissemination of basic information at fish landing sites and in fish markets are effective channels of awareness and education.

8.8. Grading Licence Needs by Scale

The scaling or lack thereof in various regulatory frameworks has been pointed out in this report. A clear single division needs to be made to determine what constitutes small, medium, and large-scale aquaculture. From the information that has been gathered for this report, the following scaling system could be considered:

a) Micro scale, subsistence, and artisanal fish farming includes facilities that can produce less than 10 tons of fish per annum.
b) Medium scale fish farming includes facilities that can produce from 10 to 50 tons per annum.
c) Large scale fish farming includes facilities that can produce from 50 to 200 tons per annum.
d) Industrial scale fish farming includes facilities that can produce over 200 tons per annum.

Note the term “facilities” as the meaning an operation that has the potential to produce fish regardless of the actual production. This is grounded in the fact that the facility itself can cause an impact to the environment whether the production is reached or not. Moreover, standard production capacities for ponds and cages can be used to calculate the production potential of a facility. Applicants will need to state their intended production volume, which should be evaluated against the scale and type of facility.

Permitting and licencing costs should remain zero for micro scale, subsistence, and artisanal fish farming albeit that they should not be exempted from obtaining permits.

Medium, large, and industrial scale permitting costs should be determined on the approximate gross value of sales. With other words, using the average farmgate sales price of fish should be used to calculate gross sales value through multiplication. A percentage of this value (i.e., 1%) should be used as a baseline to determine permitting costs. In this manner the system does not discriminate against small producers while parity is achieved around the permit and licences costs for very large producers.

8.9. Transparency and Timelines

The permit and licence framework is currently suffering from changes to legislation and incomplete drafts of various instruments. As indicated in the specific recommendations below, these matters require specific attention, which will allow for a uniform permitting system. This system must be transparent for all sector role-players to ensure that it is adopted, while the encouragement of investment will rely heavily on specific permit turnaround times. With a functional inter-ministerial committee and well-equipped district fisheries officers that can implemented permit administration, a timeline of a few days for the issue of permits should be achievable.

8.10. Standardised Licencing Conditions

For each licence and permit a predetermined standard set of conditions needs to be devised, which conditions can be supplemented based on the specific nature of the production facility. Circumstances under which permits may be revoked needs to be clearly stated on all issued permits and licences.

8.11. Compliance and Enforcement Systems

The traditional “command and control” mechanisms around enforcement of permit conditions place manpower and resource strain on authorities that need to monitor for such compliance. Systems should be devised in which producers are encouraged to take greater control through self and sector-based monitoring and compliance. One means of achieving this is though economic instruments, such as subsidies and tradeable permits (an example being the Philippines' Fisheries Code of 1998). In countries such as Japan the producer association plays an overarching role in ensuring that members comply with norms and standards.

9. SPECIFIC RECOMMENDATIONS

The importance of legal, procedural, and planning frameworks designed to facilitate sustainable aquaculture development is emphasized in the FAO Code of Conduct for Responsible Fisheries. In this regard, the following specific recommendations are made through this work to assist with the harmonisation of the licenses & permits for aquaculture production in Uganda.

9.1. Enactment of the Fisheries and Aquaculture Bill (2020)

Although parliamentary timelines will determine when the new Fisheries and Aquaculture Bill is promulgated, this enactment is vital toward supporting several subordinate regulatory frameworks. In the absence of the promulgation the revision of the permitting and licencing system is futile given that this should be done under the auspices of the new Act.

9.2. Re-issue Regulations and Rules in terms of the Act

It is recommended that the amendments that will be required to the other regulatory frameworks once the Fisheries and Aquaculture Bill is promulgated be prepared in draft and in anticipation for the promulgation. In this manner the time between enactment and having the regulations revised will be shortened. This exercise should seek to remove as many draft frameworks as possible.

9.3. Simplify Permitting Schedules

The current draft permitting schedules should be simplified to the following only:

a) A single Aquaculture Establishment Certificate which is subject to the issue of a Certificate of Approval of an Environmental and Social Impact Assessment (ESIA), as well as water use permits, if these are required. This single permit should have subcategories for:
    i. Fish seed production and hatcheries
    ii. Production system types (i.e., cages, ponds, tanks etc.)
    iii. Fish slaughtering, processing, and distribution which includes sanitary measures

iv. Fish sales which include sanitary measures
v. Feed production
vi. Use of medications, treatments, and other chemicals

b) A single live fish moving permit, which permit may be issued singularly (i.e., in the case of import or export) or annually (i.e., in the case of national movement). This single permit should have subcategories for:
   i. National movement of live fish
   ii. Import of live fish
   iii. Export of live fish

In all instances the full list of information requirements related to each subcategory must be clearly defined on the permit application forms, while the full list of permit allowances and conditions (including conditions of repeal) need to be stipulated. With this simplified system it will result in the need of two integrated aquaculture permits in addition to the ESIA certificate and water use approvals.

9.4. Simplified National Guidelines

The permitting system above, if adopted, needs to be detailed in a national guideline. This should be detailed in the Aquaculture Codes of Practise as they are finalised, but also disseminated widely through the sector by means of producer associations and possibly as an information document through feed suppliers, given that most fish farmers depend on feed.

9.5. Complete a Zonation Exercise

The FAO through the newly commenced True-Fish project has started with an exercise for the zoning of areas in Lake Victoria according to production capacity. The findings of this exercise should be adopted towards long-term sustainability of the sector. Once complete, zoning frameworks can be established for other areas also.

9.6. Cater for Smaller Farmers

The recommended scaling and permit costing system in Section 8.8 should be considered for adoption. In this manner small, rural, subsistence and artisanal farmers will not be unduly charged for permits.

9.7. Standardised Permits and Licences at District Level

The Directorate of Fisheries Resources (DFR) and its Department of Aquaculture Management and Development (DAMD) must consult with district and local authorities to establish a standardised list of local permits that apply to aquaculture operations. This standardised list must be made know to all district authorities and fish farmers, with a clear indication that only the listed permits apply.

9.8. Procedural Training at Local, District and Regional Level

As indicated, the permitting framework and central administration should remain a national mandate, but the execution of this mandate should be dealt with at district level. For this to be done effectively fisheries officers at local, district and regional level must receive extensive training on both the content and administration of permitting systems, while the national inter-ministerial committee should provide ongoing oversight.

10. GUIDELINES FOR INVESTORS

Formulating precise guidelines for aquaculture investors at this stage is futile given the pending enactment of the of the Fisheries and Aquaculture Bill (2020), the number of subsidiary regulations that are in draft and the need for simplification of the permitting and licencing system. These investor guidelines should be developed around the completed regulatory framework.

11. CONCLUSION

A philosophy that is getting increasing attention is the ecosystem approach to aquaculture. The purpose of the ecosystem approach is to promote the sustainable development of interlinked ecosystems and to manage the aquaculture sector in a way that does not jeopardize the wider ecosystem. Simplifying the permitting and licencing system as indicated in this report will contribute toward adoption of a more conducive system for investors and farmers.

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