



MINISTRY OF FISHERIES AND LIVESTOCK

The National Aquatic Animal Health Strategy and Implementation Plan

May 2021



THE NATIONAL AQUATIC ANIMAL HEALTH STRATEGY AND IMPLEMENTATION PLAN

May, 2021

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ACRONYMS

7NDP	Seventh National Development Plan
8NDP	Eighth National Development Plan
AAH	Aquatic Animal health
AfDB	African Development Bank
AMR	Antimicrobial Resistance
ASF	African Swine Fever
AU	African Union
BMP	Best Management Practices
BSC	Balanced Scorecard
CAADP	Comprehensive Africa Agriculture Development Programme
CBPP	Contagious Bovine Plural Pneumonia
COMESA	Common Market for Southern and East Africa
COVID 19	Corona Virus Disease
CpUE	Catch Per Unit Effort
DoF	Department of Fisheries
DNEI	Diseases of National Economic Importance
DVS	Department of Veterinary Services
EUS	Epizootic ulcerative syndrome
FAO	Food and Agriculture Organisation
FINAAHS	First National Aquatic Animal Health Strategy
FMD	Foot and Mouth Disease
IA	Institutional Assessment
IAOD	Institutional Assessment & Organisational Development
ICT	Information Communication Technology
KPI	Key Performance Indicator
M&E	Monitoring and Evaluation
MFL	Ministry of Fisheries and Livestock
MMS	Management Monitoring System
MNDP	Ministry of National Development Planning

NAP	National Adaptation Plan
NAPA	National Appropriate Plans of Action
NAIP	National Agriculture Investment Plan
NPCC	National Policy on Climate Change
OD	Organisational Development
OIE	World Organisation for Animal Health
PESTEL	Political, Economic, Social, Environmental and Legal
PMP/AB	Progressive Management Pathway for Aquaculture Biosecurity
PPID	Policy and Planning Department
RBM	Results Based Management
SADC	Southern Africa Development Community
SDGs	Sustainable Development Goals
SNAP	Second National Agricultural Policy
SWOT	Strengths, Weaknesses, Opportunities and Threats
UN	United Nations
UNZA	University of Zambia
ZAEDP	Zambia Aquaculture Enterprise Development Programme

FOREWORD

Aquatic Animal Health (AAH) is a relatively new field in the broader discipline of Animal Health. Most animal health programmes in Zambia have been skewed towards terrestrial animals leaving aquatic species at a great risk of diseases such as Epizootic Ulcerative Syndrome (EUS) and Tilapia Lake Virus (TiLV) disease. Given the growing aquaculture industry and the huge investment in fisheries to decrease the current fish deficit, it is vital that AAH receives attention to enhance production and productivity in capture fisheries and aquaculture development. The National Aquatic Animal Health Strategy (NAAHS) outlines five strategies the Ministry of Fisheries and Livestock (MFL) will employ to provide aquatic animal health services while its implementation Plan (2021 – 2024) will actualise the five strategies. The plan is aligned to Second National Aquatic Policy (SNAP), Seventh National Development Plan (7NDP), Ministry of Fisheries and Livestock Strategic Plan (2020 – 2024). This strategy will operationalise the Strategic Objective 1 Plan - Animal Health Excellency of the Ministry Strategic.

The Plan sets the pace for implementing AAH strategies in Zambia while leveraging on the World Organisation for Animal Health (OIE), Food and Agricultural Organisation (FAO) and Southern African Development Community (SADC) guidelines. NAAHS is aligned to the Regional Aquatic Animal Health Strategy (2016 - 2026) which aims to improve national and regional aquatic biosecurity and animal health, facilitate aquaculture development and promote increase in aquaculture production and investment. The plan outlines the specific interventions to be undertaken including the results to be generated to achieve sustainable fisheries production and productivity which will contribute to achieving economic diversification, poverty-reduction, and job creation.

The strategy covers areas that are important in realizing the potential of the fisheries sub-sector and is aligned to Zambia's medium to long term aspirations expressed in the 7NDP. It ensures the achievement of medium-term development objectives that will contribute to actualizing the Africa Agenda 2064, Malabo Declaration and the sustainable Development Goals (SDGs) numbers No. 1 - No Poverty, 2 - Zero Hunger, and 3 - Good Health and Well-being.

I wish, therefore, to call upon all stakeholders to actualize the activities in the AAH Strategy to achieve the broad vision set out in the Ministry of Fisheries and Livestock Strategic Plan.

Hon. Prof. Nkandu Luo, MP
MINISTER OF FISHERIES AND LIVESTOCK



Hon. Prof. Nkandu Luo - MP

ACKNOWLEDGEMENT

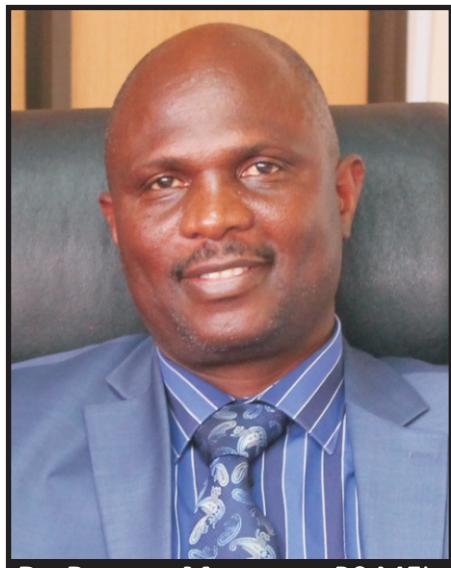
The development of the NAAHs and its Implementation Plan has been achieved by collaborative work that could not have been completed without the concerted efforts of various stakeholders. Special thanks go to the Minister of Fisheries and Livestock, Hon. Prof. Nkandu Luo, MP, for the guidance in developing the Strategy and its Implementation Plan.

During the process of formulating the plan, wide consultations were made with all key stakeholders at National, Provincial and District levels. I wish to acknowledge the invaluable contributions of our key stakeholders during the development of the Strategy and its implementation plan. I also wish to acknowledge the guidance and technical support rendered to the Ministry by the Cabinet Office. Further, I would like to thank the management and staff of the Ministry for their hard work and commitment.

Finally, I wish to thank our Cooperating Partner the African Development Bank (AfDB) who provided financial and technical assistance through the Zambia Aquaculture Enterprise Development Project (ZAEDP) in the process of developing this Strategy. It is my sincere hope that all stakeholders will work towards achieving the targets set in this plan.



Dr. Benson Mwenya, PhD
Permanent Secretary
MINISTRY OF FISHERIES AND LIVESTOCK



Dr. Benson Mwenya - PS MFL

EXECUTIVE SUMMARY

The National Aquatic Animal Health Strategy (NAAHS) and its implementation plan were developed to effectively execute the Ministry of Fisheries and Livestock's mandate to provide fisheries development and Aquatic Animal Health (AAH) Services as highlighted in the Fisheries Act No. 22 of 2011 and Animal Health Act No. 27 of 2010 respectively. Excellent provision of AAH services will contribute to Animal Health Excellency as envisioned in the Ministry of Fisheries and Livestock Strategic Plan for the under the Strategic Objective 1 – Animal Health Excellency and animal Health Strategies in the 7NDP. Additionally, the successful implementation of the plan will lead to enhanced fisheries production and productivity.

The Plan will also serve as a building block for attaining Vision 2030, developing the AAH chapter in the Eighth National Development Plan (8NDP), and the second generation of the National Agriculture Investment Plan (NAIP). Aquatic Animal Health in Zambia has a limited contextualisation in most policy documents which has led to the marginalisation of this discipline in terms of scope, budgetary allocation and establishment of the AAH functional unit. This has led to poor coordination and implementation of AAH programmes resulting in sporadic outbreaks of fish diseases such as Epizootic Ulcerative Syndrome (EUS) and subjecting the country to a high risk of introduction of emerging diseases such as Tilapia Lake Virus (TiLV) disease.

The AAH Strategy and its implementation plan were developed by a multi-disciplinary Committee appointed by the Permanent Secretary for the Ministry of Fisheries and Livestock (MFL). The formulation was based on the guidelines of developing strategic plans provided by Cabinet Office – Management Development Division (MDD) using the Integrated Institutional Assessment (IA), Organisational Development (OD), and Balanced Scorecard (BSC) Strategic Planning Process. The process was based on the WWWW2 model which uses a systematic method of planning to bring a desired future for AAH in Zambia.

Based on this approach, the AAH function in the MFL was analysed for its external and internal environment. The external environment was analysed for its Political, Economic, Social, Technological, Environmental and Legal (PESTEL) development for the period 2010 – 2019. The key developments noted were the strong political will for aquaculture development to reduce the current fish deficit and increasing demand for fish and its products. The following issues were identified: rising numbers of cases of EUS and other fish diseases, marginalisation of AAH, lack of an established AAH function in the MFL, poor uptake of appropriate biosecurity measures among fishers leading to disease outbreaks, climate change and inadequate legal framework to back AAH developments.

The Internal environment for the Ministry was analysed using SWOT analysis and the optimising and mitigation measures outlined. Based on the external and internal analysis, the Ministry developed the Strategic direction for the period 2021 to 2023 to guide the implementation of the AAH programmes to the Ministry's desired future. The Ministry set the vision for AAH as:

"A disease-free fisheries subsector".

To realize this vision and achieve the strategic results, the Ministry commits to the following mission statement:

"To facilitate aquatic animal health services for optimal health, production and productivity"

To attain the vision, the Ministry will in the next three years commit to upholding the following seven (7) core values namely:

- Objectivity
- Integrity
- Consistency
- Teamwork
- Accountability
- Innovation; and
- Transparency.

To operationalise this vision and mission, the Ministry developed three Strategic themes as follows:

- Aquatic Animal Health Excellence;
- Strategic Partnerships; and
- Operational Excellence.

Through these themes, the Ministry will achieve the following strategic results respectively:

- Optimal Aquatic Animal Health, Production and Productivity
- Harmonised Initiatives and Implementation of Programmes, and
- Efficient and Effective Service Delivery.

In order to accomplish its vision and mission and achieve the strategic results, the Ministry will in the next three years commit to pursuing the following five (5) strategic objectives:

- Strategic Objective 1: Enhance Aquatic Animal Health Management,
- Strategic Objective 2: Enhance AAH Research and Development,
- Strategic Objective 3: Enhance collaboration with stakeholders,
- Strategic Objective 4: Improve the AAH institutional capacity, and
- Strategic Objective 5: Operationalise AAH laboratories and support services.

The Implementation Plan provides an implementation framework to translate the Strategic Objectives into specific, measurable, actionable, realistic, and time-bound (SMART) goals to benefit all clients and stakeholders. The framework describes broad actions that the Government, together with its stakeholders, intends to undertake to address key issues related to AAH.

The Department of Veterinary Services (DVS), working in collaboration with the Department of Fisheries (DoF), will spearhead the implementation of the Strategic Plan. The Ministry of Fisheries and Livestock has identified line ministries, training and research institutions, the private sector, farmer organisations, traditional leaders and

development partners as key stakeholders in the implementation of the AAH Strategic Plan. The estimated cost of the Plan is **(ZMW 72,191,584.44 (US\$3,609,579.22))**. The major cost of the Plan will be towards AAH implementation.

The Ministry of Fisheries and Livestock has put in place a Monitoring and Evaluation (M&E) framework based on the principles of the Results Based Management (RBM) to monitor and evaluate the implementation of the NAAHS. The Key Performance Indicators (KPIs) for AAH will be tracked towards the attainment of the outputs and outcomes consistent with the 7NDP and the Ministry of Fisheries and Livestock Strategic Plan. The monitoring of the plan is premised on the Government wide Monitoring and Evaluation framework using the Management Monitoring System (MMS). The evaluations, namely the baseline and final evaluation will be conducted in order to appraise strategies, document lessons learnt, and take corrective measures where needed.

The Ministry of Fisheries and Livestock has also formulated the Balanced Scorecard as a strategic planning and management system that the Ministry will use to communicate the vision, mission, key performance indicators and strategies.

CHAPTER 1

1. INTRODUCTION

1.1. Background

Aquatic Animal Health (AAH) is an emerging discipline in the field of Animal Health in Zambia. It is governed under the Second National Agricultural Policy (SNAP) specifically under the Strategic Objective 1 - to increase agricultural production and productivity and the 7NDP strategies on animal health. The spread of Epizootic Ulcerative Syndrome (EUS) to other fishery areas in Zambia and the emergence of Aquatic Animal Diseases in aquaculture facilities and capture fisheries during the implementation of SNAP and the 7NDP necessitated the development of the National Aquatic Animal Health Strategy (NAAHS).

The strategy aims at supporting the implementation of the national aquatic health systems, the implementation of aquaculture activities under Zambia Aquaculture Enterprise Development Programme (ZAEDP) and operationalization of the Strategic Theme - Animal Health Excellence in the Ministry of Fisheries and Livestock Strategic Plan. To actualise the plan, the Permanent Secretary of the Ministry of Fisheries and Livestock appointed an AAH Technical Committee comprising members from the Ministry, academia, Cooperating Partners and the private sector. The Committee was mandated with the following four (4) Tasks:

- Development of the national strategy on aquatic animal health;
- Ensuring that all Zambia Aquaculture Enterprise Development Plan (ZAEDP) deliverables for AAH (eleven in total) are achieved in a timely manner;
- Provision of high-level technical advice on emerging aquatic animal diseases and Antimicrobial Resistance (AMR); and
- Ensuring that aquatic biosecurity is captured in different policy documents and projects in Zambia prior to commencement or formulation.

As a first step, the committee was tasked to conduct a GAP analysis of AAH management, management audit on the performance of AAH and biosecurity in Zambia, a client and stakeholder survey on AAH and domestication OIE/FAO and SADC guidelines in the AAH strategy.

1.2. Management and Operational Structure

Promotion of AAH is the mandate of the Ministry responsible for animal health through the Department of Veterinary Services working in collaboration with the department responsible for Fisheries. Currently, there is no established functional unit within the MFL to execute and coordinate AAH. In order to effectively implement this function, a committee consisting of representatives from Department of Fisheries (DoF), Department of Veterinary Services (DVS), University of Zambia (UNZA), and other relevant departments, institutions, and Cooperating Partners (Annex 1) was established.

1.3. Rationale

Aquatic Animal Health (AAH) in Zambia has been recognised as "Prevention of fish Diseases" in the SNAP and 7NDP. This limited contextualisation of AAH in most policy

documents and limited competencies within Ministry of Fisheries and Livestock (MFL) has led to the marginalisation of this discipline. Currently, DVS has no budgetary allocation for AAH and as a result, promotion of AAH is nearly entirely dependent on support from Cooperating Partners except for the limited allocation from DoF. The above-mentioned challenges, coupled with the lack of an established functional unit for AAH in the Ministry, have made implementation and coordination of AAH ineffective.

Further, the legal framework does not provide for emerging issues of AAH. The intensification of aquaculture, climate change, introduction of new aquatic species/non-indigenous fish species (such as crayfish, Carp, and Oreochromis niloticus) and environmental pollution provide an opportunity to widen the scope to AAH. To address these deficiencies in AAH management, this Strategy will enhance management, Research and Development, resource mobilisation, review of the legal and policy framework and establishment of an AAH functional in the MFL.

This Strategic Plan will serve as a building block for the attainment of vision 2030. It will also be the basis for the development of the next generation of National Agriculture Investment Plan (NAIP), the Agriculture Chapter in the Eighth National Development Plan (8NDP), and the Ministry of Fisheries and Livestock Strategic Plan (2022–2026).

1.4. Methodology

The development of the AAH Strategic Plan was spearheaded by a multi-disciplinary Committee appointed by the Permanent Secretary of the Ministry of Fisheries Livestock. The formulation of the plan was based on the Integrated Institutional Assessment (IA), Organisational Development (OD), and Balanced Scorecard (BSC) Strategic Planning Process. The process is based on the WWWH²¹ model which uses a systematic method of planning to bring a desired future for the AAH in Zambia. The IA involved assessing the management of the AAH function in the last five years², conducting an internal capability assessment to establish distinctive capabilities of the AAH function as well as analysing the macro-environment using SWOT and PESTEL³.

The IA facilitated generation of information for OD which involved the determination of the strategic direction for the management of the AAH function. The assessment was conducted through a performance assessment, review of Literature and by conducting a client/ stakeholder Survey. A Balanced Scorecard was developed to communicate what the Ministry will accomplish in AAH, align the strategies and prioritize strategies and activities that the Ministry will undertake in AAH. The Ministry circulated the draft strategy to stakeholders for comments, after which the comments were incorporated and the strategy was finalised.

¹ The WWWH² model is outlined as follows: **W** - Determines **where** the institution is; **W** – Assess **Why** the institution is where it is; **W** – Determines Where the institution wants to be; **H** – Determines **How** the institution will get to the desired future.

² The Ministry of fisheries and Livestock (MFL) consider the period last five year (2015 – 2019) to assess the past performance of the AAH. Where data was available, MFL considered the period (2010 – 2019) and where data was limited the ministry considered the period (2017 – 2019).

³ PESTEL – analysed the AAH function for the Political, Economic, Social, Technological, Environmental, and Legal environment.

CHAPTER 2

1. ENVIRONMENTAL ANALYSIS

1.1. External Environmental Analysis

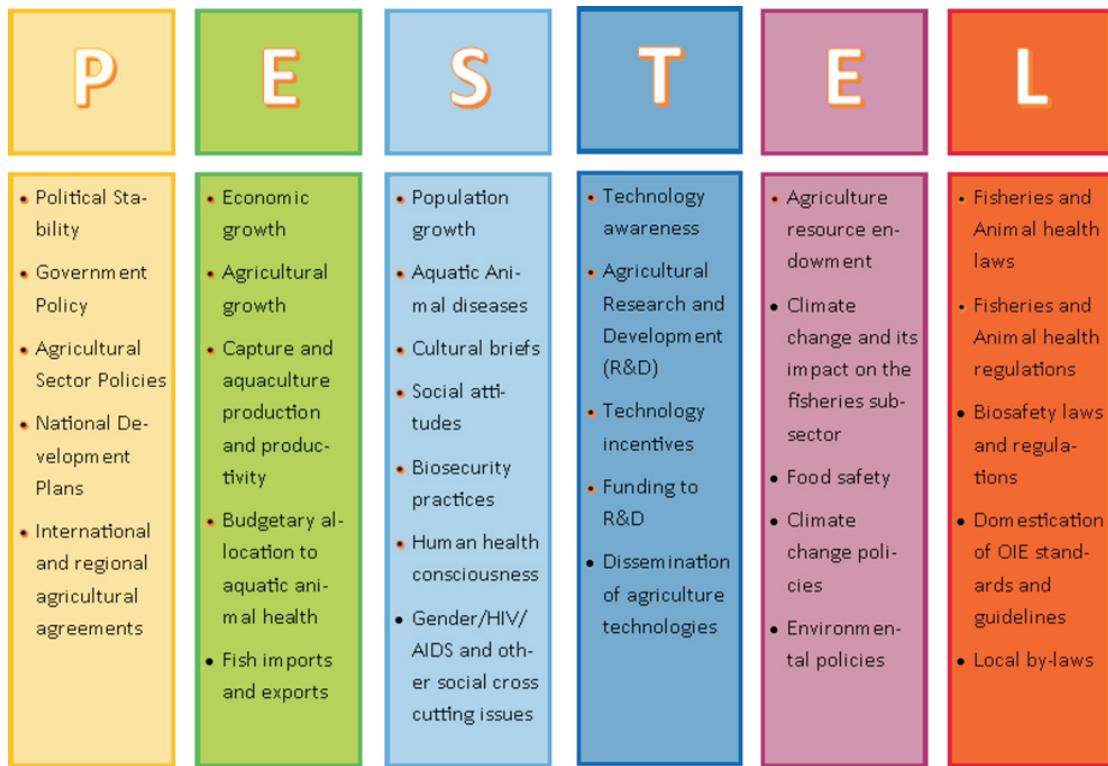


Figure 1 : Vertical Block list indicating the five pillars used during the PESTEL Analysis

The PESTEL (Figure 1) was used to analyse the external developments that had or may have an impact on the operations of the AAH function in the Ministry. The following developments were noted during the period under review:

1.1.1. Political Developments

Zambia is a landlocked country and has enjoyed relative political stability since independence in 1964. The country is currently ranked 18th out of 54 African countries on the Mo Ibrahim Index of African Governance (Mo Ibrahim foundation, 2018), making it an attractive destination for aquaculture investment. Further, there has been strong political will to support aquaculture development in order to reduce the current fish deficit in the country.

The Ministry of Fisheries and Livestock (MFL) was created on 18th September 2015 to make the delivery of Fisheries and Livestock programmes more responsive to the needs of the nation resulting in a growing interest by farmers and other Cooperating Partners to participate in livestock, fisheries and aquaculture value chains. To enhance fisheries development, Government is implementing the SNAP and the 7NDP and is currently developing a National Animal Health Policy and National Fisheries and Aquaculture Policy in which AAH will be classified as a discipline separate from terrestrial Animal Health.

Zambia is also a signatory to the 2014 Malabo Declaration and has also adopted regional and international agricultural protocols under the United Nations (UN), African Union (AU), Common Market for Southern and East Africa (COMESA), and Southern Africa Development Community (SADC) that aim at promoting fisheries development in Africa. Zambia actively participated in the development of the Regional Aquatic Animal Health Strategy (2016-2026) and the SADC Regional Aquaculture Strategy and Action Plan (2016-2026) which aim to improve national and regional aquatic animal health and biosecurity, and facilitate aquatic development thus promoting increased aquaculture production and investment.

During the implementation of SNAP and 7NDP, several issues have emerged in the AAH and to address these issues, Government is developing a Fisheries Stand-alone National Development Policy. NAAHS will operationalise the AAH strategies outlined in the Ministry of Fisheries and Livestock Strategic Plan.

In order to optimize on these developments, the MFL will undertake the following interventions:

- i. Enhance AAH services to support fisheries and aquaculture development;
- ii. Develop and operationalise the National Fisheries and Aquaculture Policy;
- iii. Promote the development of AAH within the framework of Comprehensive Africa Agriculture Development Programme (CAADP) and in line with other regional and international agreements; and
- iv. Establish an AAH functional unit in the MFL.

2.1.2. Economic Developments

Fish consumption and production trends in Zambia

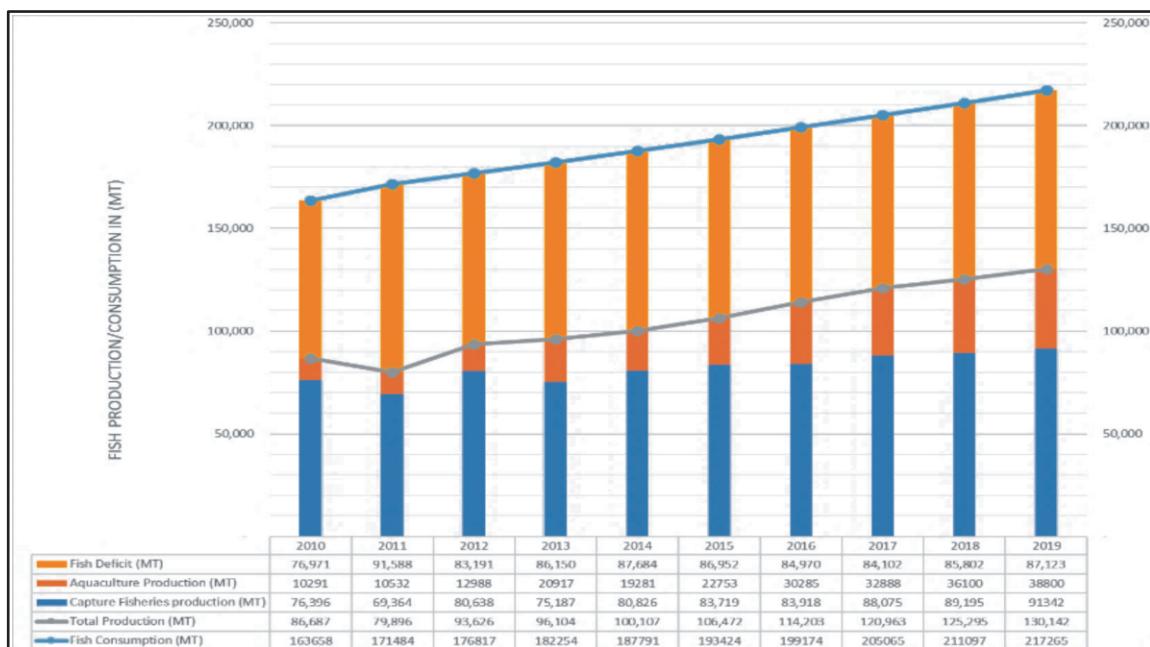
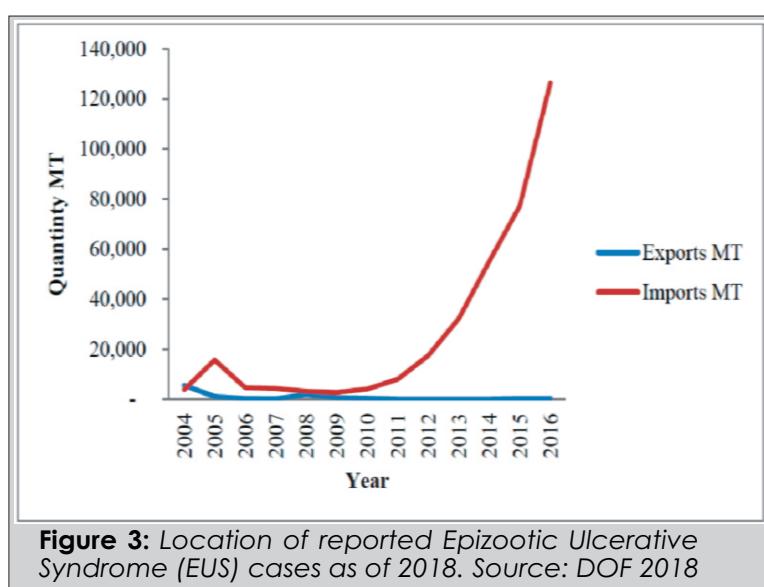


Figure 2: Fish Consumption and Production Trends (2010–2019). Source: Department of Fisheries (DoF) annual Reports

Fish provides for 55% of animal protein in the diet in Zambia and it is extremely important for micronutrients in rural and urban areas (Genschick, Kaminski, Kefi, & Cole, 2018). Tilapia and small pelagic fish species locally known as Kapenta are the most highly consumed fish types in Zambia. Fish consumption per capita is high in rural areas especially in Luapula, Northern, Southern, and Western Provinces where there are established fisheries. Over the years, fish consumption has increased from 163,658MT in 2010 to 217,265MT in 2019 (DoF, 2019), and annually, demand outstrips production resulting in an annual fish deficit of about 84,000 MT (DoF, 2018) (Figure2).

The fish catches from capture fisheries have been fluctuating annually between 76,393 MT in 2010 and 91,342 MT in 2019 (DoF, 2018). The higher catches are attributed to increasing fishing effort as a result of the growth in human population. However, the recorded increased production has come at a cost such as reduced catch per unit effort (CpUE) which has resulted in reduction of return per fisher as the number of fishers increases. Generally, stocks are perceived to be declining by the unsustainable methods of fishing, some of which are destructive, viz. the use of monofilament and mosquito nets, the throwing of poisonous substances such as *Trephosia vogelii* that would kill virtually all the fish in water bodies account for the increase in the production over the years. On the other hand, aquaculture production increased from about 10,291 MT in 2010 to about 38,800 MT in 2019 mainly due to good Government policies leading to the implementation of programmes such as the Zambia Aquaculture Enterprise Development Programme (ZAEDP). The good political will and enhanced fisheries extension services has led to an increased in the participation of small-scale fish farmers in aquaculture.



Due to the current fish deficit, Zambia is a net importer of fish mainly from China and Namibia. In terms of tonnage, the fish entering Zambia increased from 77,199 MT in 2015 to 126,345 MT in 2016 (Fig 3). However, only 23.1 percent of imported fish is consumed within Zambia (World Fish, 2017). The rest of the imported fish ends up in the Democratic Republic of Congo (DRC) by informal trading through Kasumbalesa border post. Fish exports, on the other hand, have been declining (Figure 3).

Analysis of the budgetary allocations and disbursements to AAH (2015 – 2019)

Government has prioritised prevention and control of animal diseases to mitigate the socio-economic impact resulting from loss of animals owned by small scale farmers. Since the creation of the Ministry of Fisheries and Livestock, Government has provided sufficient budgetary allocation and disbursement to control and prevent

animal diseases aimed at supporting programmes such as vaccination campaigns, disease diagnostics and control, construction of infrastructure such as Provincial laboratories and dip tanks, and prevention of Diseases of National Economic Importance (DNEI) such as FMD, ASF and CBPP (MNDP, 2018).

Little importance was placed on AAH to support activities such as fish disease surveillance and monitoring, AAH research and development, aquatic biosecurity, border inspections, movement controls, and capacity building. This was as a result of non-reports of fish diseases and limited competences. With the appearance of fish diseases, some funds were made available to the Department of Fisheries (DoF) for EUS surveillance and monitoring.

Currently Zambia has seen mass investment in aquaculture. The investment led to the growth of the aquaculture industry on various water bodies such as Lake Kariba where a number of commercial enterprises have been established. These include: Yalelo Limited, Kariba Harvest, ZamFresh, Hechi Kay Enterprises. This growth has resulted in other diseases being reported by some fish farms such as streptococcosis and lactococcosis (Bwalya et al, 2020). Support from the Government through Zambia Aquaculture Enterprise Development Project (ZAEDP) and other initiatives has resulted in the growth in the number of small to medium aquaculture enterprises. This calls for more funding to develop the AAH programmes to prevent the introduction and spread of disease pathogens. AAH programmes that need immediate support and implementation include biosecurity which has been proposed by various international and regional bodies such as World Organisation for Animal Health (OIE), FAO and SADC. These biosecurity approaches require domestication to suit the local environment and to be in conformity with the Animal Health Act No. 27 of 2010, Fisheries Act No.22 of 2011 and other relevant Acts.

Fish disease Situation in Zambia

The growth of the aquaculture industry coupled with the increased frequency of live fish movements will inevitably favour transmission of fish diseases. EUS and bacterial infections are currently the major diseases of significance that are often documented in Zambia (WorldFish, 2018). EUS is endemic in the Zambezi River of Western province where the first outbreak of the disease occurred in 2007 (FAO, 2007).

By 2009, the entire Zambezi River was affected with its tributaries on the upper part. Over the years, EUS has been recorded in other river systems within the country such as the Kafue (DoF, 2010), the upper Congo catchment in the Bangweulu Swamps (Huchzermeyer et al. 2018) and the Chambeshi River as shown in Fig 4 (DoF, 2018).

Following, an outbreak of EUS in Malawi in August 2020 (SADC, 2020), the risk of EUS spreading to water bodies associated with the Luangwa River basin in the Eastern Province of Zambia is high. On commercial fish farms, fish mortalities are recorded in the warmer months of the year from November to March. These mortalities have been attributed to Streptococcus, Lactococcus and Saprolegnia species as reported from diagnostic laboratories (WorldFish, 2018).

In commercial aquaculture enterprises, there has been progressive increase in the number of disease pathogens that have been isolated and identified. Since 2014, bacteria such as *Streptococcus agalactiae* and *S. Inae* have been isolated from Nile tilapia on Lake Kariba (Bwalya et al., 2020). In 2015 and 2016, *Lactococcus*

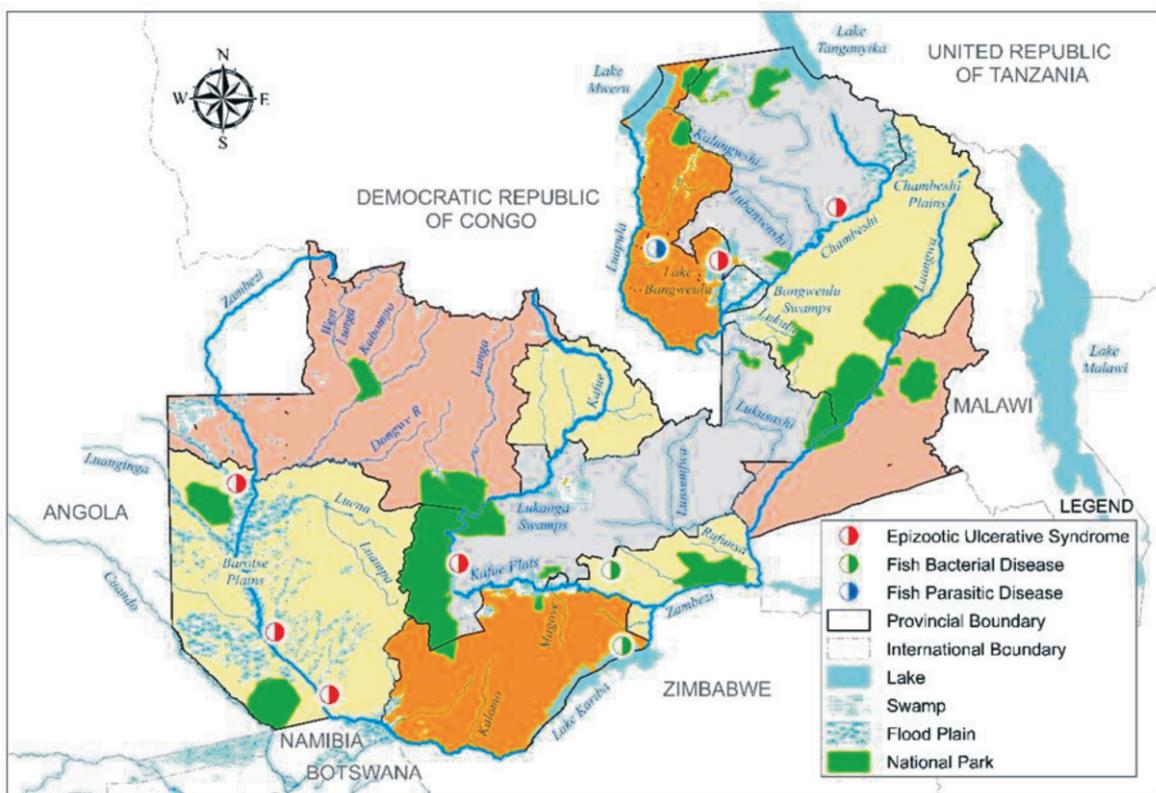


Figure 4: Location of reported Epizootic Ulcerative Syndrome (EUS) cases as of 2018. Source: DOF 2018

garvieae was reported to have caused massive mortalities during summer months of the year (Bwalya et al., 2020). Other opportunistic infections caused by *Aeromonas hydrophila* and *Aeromonas veronii* have been recorded on farms with poor husbandry practices. Fish diseases such as Tilapia Lake Virus (TiLV) disease, which has the potential to devastate the growing aquaculture industry in Zambia, could be introduced into the country via importation of fish. The increasing international trade in live aquatic animals such as ornamental fish, brood stock, and other aquatic species such as Nile tilapia and crayfish have the potential to introduce new diseases, predate, outperform, and hybridise with local species leading to loss of genetic material.

The Ministry will mitigate these challenges by:

- I. Developing and implementing a training programme on disease diagnostics, good husbandry and management practices (including nutritious feed, good genetic stocks, aeration, and good water quality);
- II. Strengthening enforcement of “prescription only” use of antimicrobials after a proper diagnosis of bacterial infection;
- III. Domesticate FAO/OIE Progressive Management Pathway for Aquaculture Biosecurity (PMP/AB) and OIE AAH code
- IV. Strengthen the enforcement of biosecurity measures:

- V. Develop and implement a surveillance plan on important diseases such as EUS, TiLV and Streptococcus;
- VI. Strengthen the implementation of the AAH information management and early warning system;
- VII. Enhance the mitigation measures for climate change related factors, drivers and pathways for aquatic animal disease emergence;
- VIII. Develop and implement a resource mobilization strategy for AAH;
- IX. Enhance extension Services in AAH;
- X. Enhance fish border control and movement. This will call for the strengthening of bilateral agreements with neighboring countries and
- XI. Facilitate the establishment of AAH quarantine facilities.

2.1.3. Social Developments

The fisheries sub-sector supports around 1,000,000 people in Zambia, with more than 72,000 working as fishers (WorldFish, 2017). The prime fishery areas in Zambia are Western, Southern, Luapula, Northern and North-Western Provinces. Outbreaks of aquatic animal diseases in these areas will have a high socio-economic impact which will lead to loss of source of livelihoods, resulting in increased numbers of economically insecure individuals and households. The ensuing poverty would make individuals and households themselves more likely to experience acute stress and resort to risky coping strategies such as prostitution. This would in turn give rise to moral decay, an increase in cases of HIV/AIDS and Gender Based Violence (GBV). Fish diseases have a major impact on productivity due to direct loss through mortality and indirect loss through reduced feed efficiency and decreased growth rate. The outbreak of EUS in 2007 on the Zambezi river basin affected various susceptible fish species and decimated fish populations especially in the Western Province. Due to lack of awareness of the disease the local people associated it to superstitious beliefs, asserting that the area chiefs may have offended their ancestors.

The attitudes of fishers and fish farmers in most established fisheries has led to poor biosecurity practices which may result in the spread of the fish disease. Poor hygiene in most fishing areas has resulted in caused outbreaks of human diseases such as Cholera leading to loss of productivity and closure of fishing areas. Lack of sensitisation and poor management of AAH has the potential to collapse the growing aquaculture industry. Mortalities, quality downgrading of fish due to unsightly skin lesions and reduced growth rate are all possible causes of economic loses.

The Ministry will put the following mitigation measures in place:

- I. Develop and implement a communication strategy on AAH;
- II. Promote gender mainstreaming and other cross cutting issues in aquaculture and fisheries development;
- III. Capacitate Fisheries co-management structures in AAH;
- IV. Foster behavioural change to promote biosecurity measures; and
- V. Enhance nutrition mainstreaming.

2.1.4. Technology Developments

There has been very little technological development in the area of AAH in Zambia primarily due to lack of support to AAH Research and Development (R&D). Advances in biotechnology have made a significant impact in reducing disease risk for aquaculture development at global level. Numerous rapid methods have been developed for the detection of pathogens in fish and their environment through immuno-and molecular diagnostics. As such methods become more reliable and more widely used, their impact will continue to grow. To reduce the impact of fish diseases, it is necessary to address health constraints based on scientifically proven and recommended ways.

It is therefore imperative that research to develop best management practices, improve local fish breeds and prophylactics (probiotics and vaccines) to suit Zambia's conditions should be prioritized. In order to yield desired results, a causative pathogen list needs to be developed, trends of disease analysed, and transmission routes understood. Vaccination is one of the most important approaches to the prevention and control of infectious diseases of fish (Assefa A, Abunna F, 2018).

In Zambia, strides have been made in this area, where an auto-vaccine has been developed against a problematic bacterium known as L.garvieae that causes high mortalities in farmed Nile tilapia on Lake Kariba (Bwalya et al, 2020). More research employing such technologies will enhance the protection of fish in aquaculture farms against infection with a whole range of pathogens. Other useful studies whose findings would adequately inform aquatic health practitioners on the best antibiotics to use against specific bacterial infections have been conducted in the country. This has helped reduce the scientific knowledge gap concerning the identification of bacteria associated with diseased Nile Tilapia and the establishment of their antibacterial resistance patterns (Sakala 2017, MSc. dissertation).

Despite these efforts, the low adoption rates of AAH technologies remain a major constraint due to inadequate extension service delivery to small scale farmers. The major factors affecting extension service delivery include low extension officer to farmer ratio (1:2,000) for Veterinary and Fisheries services, inadequate understanding and conflicting extension methodologies, inadequate of extension planning tools, inadequate and underperforming livestock service centres, inadequate in-service training for front line staff, lack of clarity of farmer categories, poor coordination of extension service providers, and I inadequate of extension facilities for front line staff (MOA; MFL, 2017).

Another area the Ministry is exploring is the utilization of technology in information management systems, climate change adaptation and resilience, monitoring and evaluation and early warning systems. The main challenges in technological development include limited competencies among staff and high cost associated with equipment and obtaining of technologies.

The Ministry will optimise on these developments by:

- I. Establishing collaboration with Smart Zambia Institute (Szi) and other Development Partners in technological development;

- II. Investing in AAH Research and Development;
- III. Establishing AAH Laboratories and supporting laboratories and research stations in areas with high fisheries and aquaculture activity;
- IV. Enhancing partnerships with local, regional and international universities and research institutions to promote AAH Research and Development;
- V. Promoting Aquaculture Best Management Practices (BMP);
- VI. Establishing AAH information management and early warning systems;
- VII. Supporting research-extension linkages;
- VIII. Enhancing AAH extension and advisory service delivery; and
- IX. Supporting the development of the e-extension system.

2.1.5. Ecological/Environmental

Zambia has great potential for capture fisheries and aquaculture production as the country is endowed with abundant water bodies and land. However, the distribution of these natural resources differs across the three agro-ecological zones with the Northern regions being endowed with water resources while the Central, Eastern, Southern and Western regions are semi-arid to arid. The country has 14 established fishery areas and is able to produce fish from aquaculture in all the ten provinces.

Although Zambian water bodies have high fish biodiversity, the fisheries sub-sector continues to depend on the use of the indigenous O. andersonii and the exotic nile tilapia (O. niloticus) for production. More than 90% of aquaculture production is from facilities producing O. niloticus. This dependence on exotic species for aquaculture production entails that there will be continued importation of genetic material, which is a threat to the ecological integrity of Zambia's aquatic ecosystems. Additionally, importation of genetic material poses the risk of introducing new diseases into the country. The Government through the ZAEDP is working on the genetic improvement of O. andersonii exploiting the growth potential of the fish.

The major threat to sustainable fisheries development is Climate Change. The country has been experiencing climate induced hazards which include erratic rains, dry spells and droughts, seasonal and flash floods, and extreme temperatures. Some of these hazards, especially droughts and floods have increased in frequency and intensity over the past few decades and have adversely impacted food and water security, water quality, and livelihoods of the people, especially in rural communities. Zambia experienced the worst drought in four decades during the 2017–2018 farming season (Caritas, 2020). The drought adversely affected capture fisheries and aquaculture production leading to the worst recorded agriculture sector annual growth rate of -31.9%. The drought mostly affected the Southern parts of the country, resulting in food insecurity, death of livestock, water shortages, and destruction of fish habitats in natural waters.

Recent climate trends based on records from 1960 to 2003 indicate that mean annual temperature has increased by 1.3oC, since 1960, an average rate of 0.34oC per decade. Other climate driven changes include salinity, pH, oxygen levels, and circulation in natural water bodies. On the other hand, the mean rainfall over Zambia has decreased by an average rate of 1.9 mm/month (2.3%) per decade since 1960. The future trends in the country are towards a higher average temperature, a

possible decrease in total rainfall and some indication of heavy events of rainfall (CTC, 2015).

As aquatic animals are ectothermic, any increase and/or decrease in temperature of their aquatic habitat will have a significant effect on their body metabolism. This could also include influences on susceptibility/resistance to diseases (IPPC, 2007). An increase in fish disease incidences has been observed at warmer temperatures which are more favourable for most bacterial pathogens. On the other hand, cold weather is usually associated with EUS and Saprolegnia infections. With the increase in fish disease occurrence, farmers are more likely to start using antimicrobials for both prophylaxis and/or therapeutic purposes, which raises the likelihood of development of Antimicrobial Resistance (AMR).

The risk of aquaculture contributing to AMR arises from the use of animal manure in fertilising ponds and the use of antibiotics in feed which could eventually be transmitted to humans along the food chain. AMR in aquaculture causes slow therapeutic response, recurrence of disease and therapeutic failure. Consequential effects of AMR are drugs being ineffective in the treatment of diseases in human beings.

To address the challenges associated with climate change, the Government adopted the National Policy on Climate Change (NPCC) in 2016. Climate change has been documented to be one of the driving factors in the emergence of aquatic animal diseases in aquaculture. this being influenced by ecosystem change.

To mitigate against these developments, the Ministry shall:

- I. Mainstream climate change in AAH in line with the NPCC and the PMP/AB;
- II. Promote climate smart AAH investments and increase climate change adaptive capacity of fishers and fish farmers;
- III. Promote the use of local fish species (*Oreochromis andersonii*, *O. macrochir*, etc) in aquaculture through a genetic improvement programme;
- IV. Foster collaborations with research and academic institutions (at national and global level) in educating farmers/producers on the problems of over-reliance on antimicrobial use which include: bacterial resistance to antimicrobials becoming widespread in aquaculture, possibility of the resistant bacteria getting transferred to humans through food handling and consumption, environmental issues.
- V. Implement programmes aimed at antimicrobial residue monitoring and AMR surveillance in aquaculture.

2.1.6. Legal Developments

The principal legislation that governs AAH services is the Animal Health Act No. 27 of 2010 and is supported by the Fisheries Act No. 22 of 2011. In both Acts, AAH is recognised as "Prevention of fish diseases". This makes enforcement of AAH skewed towards prevention of fish diseases. There are inadequate regulations to govern AAH and Government relies on OIE guidelines. However, the OIE regulations have not yet been domesticated to conform to the Animal Health Act No. 27 of 2010. The Ministry also implements AAH programmes in line with the food safety legislation and local

authority by-laws.

In order to optimize on these developments, the MFL will undertake the following interventions:

- I. Review and harmonize the Animal Health Act No. 27 of 2010, the Fisheries Act No. 22 of 2011 and other relevant laws;
- II. Domesticate OIE/FAO guidelines;
- III. Develop AAH regulations;
- IV. Collaborate with the Ministry of health and other relevant stakeholders to implement the food safety legislation;
- V. Implement AAH Services in line with local authority by-laws;
- VI. Mainstream AAH regulations in the export; and
- VII. Import of fish and fish products in line with national trade legislation.

2.2. Clients and Stakeholder Analysis

An analysis of MFL's clients regarding AAH revealed that their needs were as follows:

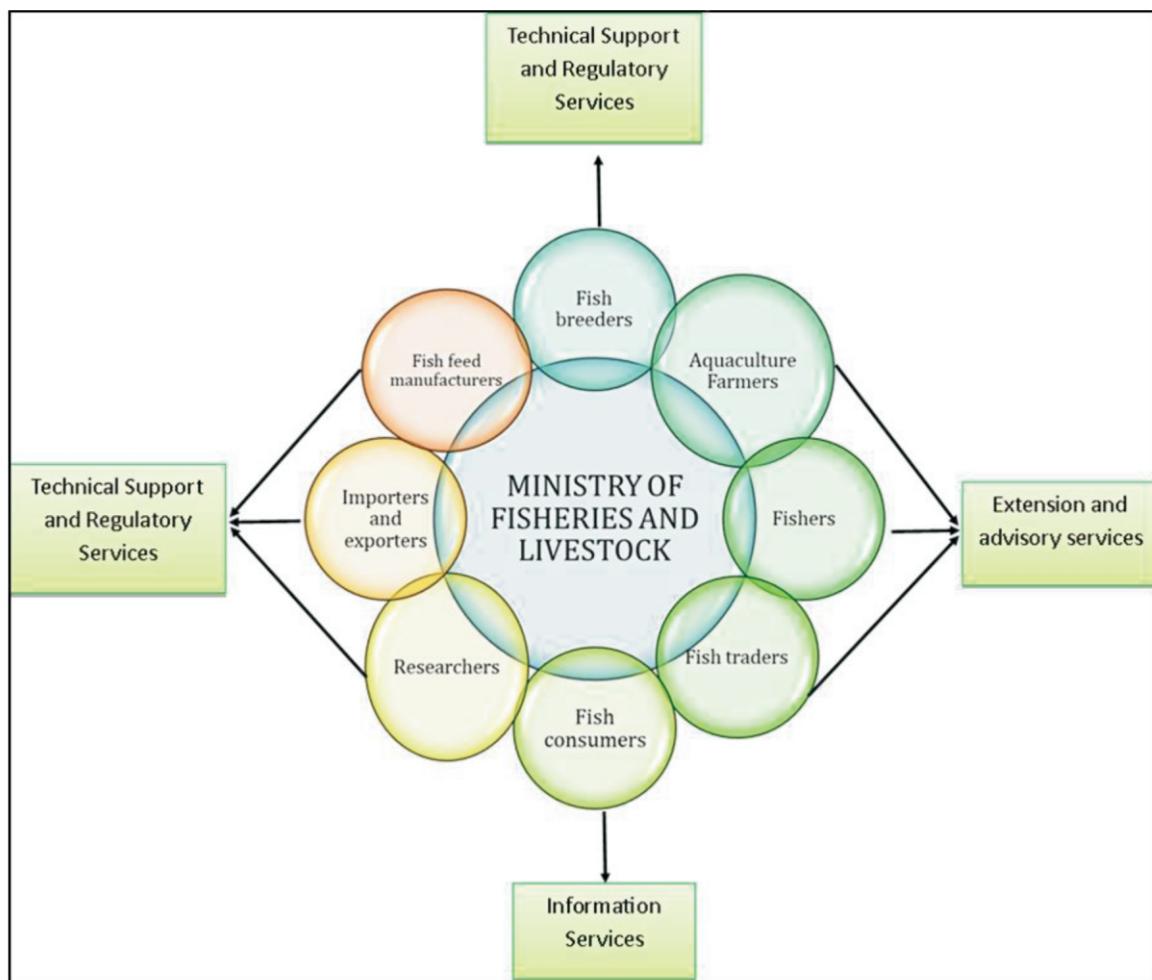


Figure 5: The Chart outlining the clients for AAH for the MFL and their needs

2.2.1. Stakeholder Analysis

The stakeholder analysis revealed that the major interests of stakeholders are as follows:

Table 1: Stakeholders and their Interests

Stakeholders	Expectations
International organisations	<ul style="list-style-type: none"> - Transparency and efficiency in reporting on AAH - Efficient delivery of AAH services
Regional bodies	<ul style="list-style-type: none"> - Collaboration on AAH programmes - Adherence to international best practices
Government agencies	<ul style="list-style-type: none"> - Collaboration on AAH programmes - Effective and efficient execution of mandate and streamlining of roles and responsibilities - Adherence to international best practices
Academic and research institutions	<ul style="list-style-type: none"> - Collaboration on AAH research and training
private sectors/Industry	<ul style="list-style-type: none"> - Collaboration on AAH programmes - Efficient delivery of AAH services
Aquaculture Associations	<ul style="list-style-type: none"> - Efficient delivery of AAH services - Availability of information on AAH
Village committees	<ul style="list-style-type: none"> - Efficient delivery of AAH services - Collaboration on AAH programmes - Availability of information on AAH
Transporters	<ul style="list-style-type: none"> - Efficient delivery of AAH services - Availability of information on AAH
Traditional leaders	<ul style="list-style-type: none"> - Efficient delivery of AAH services - Availability of information on AAH

2.3. Internal Environmental Analysis

2.3.1. Management Audit

An audit of the internal operations of the Ministry's AAH function reviewed a number of challenges that would need to be addressed if the Ministry were to realise its vision. The major challenges identified were as follows:

- I. Inadequate number of staff;
- II. Inadequate office and laboratory infrastructure and equipment;
- III. Ineffective monitoring and evaluation mechanisms;
- IV. Inadequate coordination among the lead departments;
- V. Inadequate funding;
- VI. Ineffective operational systems; and
- VII. Inadequate skills among some members of staff.

2.3.2. Institutional Capability Assessment

The Ministry conducted an institutional capability assessment which provided an in-depth analysis of the AAH function status, identified gaps, and provided appropriate interventions for input into the preparation for the AAH Strategic Plan and Balanced Scorecard. It was established that the MFL had challenges in the seven areas relating to the Strategy, Structure, Systems, Staff, Skills, Shared values and Style of leadership and management.

Since the creation of the Ministry of Fisheries and Livestock in 2015, the Ministry has been operating without a strategic plan and has been implementing Animal health programmes based on the 7NDP. The lack of strategic direction for the AAH function means the ministry has been implementing animal health programmes outside the scope of national development plans which compromises the attainment of the vision 2030. The lack of an established functional unit for AAH in the Ministry of Fisheries and Livestock has resulted in, lack of systems, inadequate allocation of resources and ineffective service delivery. (The whole paragraph is contradicting itself. There is need to make it more succinct as the 7NDP is a scope of National Development Plans, so how is MFL implementing AAH programmes outside the scope of NDPs) In recent years, the ministry has trained staff in both the Department of Veterinary Services (DVS) and Department of Fisheries (DoF) with support of the University of Zambia and other Cooperating Partners. This has created some competency in the ministry to meet the needs of the sub-sector. The major challenge for the effective coordination of the trained staff is the lack of the shared values and a functional unit. The identified challenges will need to be addressed by the Ministry to effectively implement the NAAHS.

A SWOT analysis further identified the factors within and outside the Ministry that would facilitate or hinder the implementation of the identified interventions for AAH. The analysis revealed the following:

I. Strengths

The assessment identified the strengths or factors within the Ministry that would facilitate implementation of the proposed interventions to address the observed challenges. The following are the strengths and related optimization measures:

Table 2: Strengths and optimising measures

SWOT Analysis	
Strength	Optimization Measures
i) Political will	Enhance implementation of AAH/formation of functional unit
ii) Human resource - Increasing number and expertise	Can be pulled to form a functional unit in AAH
iii) Availability of existing laboratories	Conducting diagnosis of aquatic animal diseases at decentralised levels

II. Weaknesses

The Internal Analysis also identified weaknesses or factors within the ministry that would hinder the implementation of the proposed interventions. The following are the weaknesses and related mitigation measures:

Table 3: Weakness and mitigating measures

Weakness	Mitigation Measures
<ul style="list-style-type: none"> i) Conflicting provisions in the Fisheries and Animal Health Act ii) Lack of established AAH functional unit iii) Lack of funding to AAH(DVS) iv) Inadequate equipment in labs v) Lack of AAH Policy vi) Poor coordination and collaboration among various players vii) Lack of quarantine facilities 	<ul style="list-style-type: none"> i) Harmonisation of the existing acts ii) Establish a functional unit/system for AAH iii) Request for budgetary allocation iv) Procure and collaborate with other institutions to supplement v) Formulation of AAH Policy vi) Enhance stakeholder consultation of AAH vii) Construction of quarantine facilities in strategic areas

III. Opportunities

The assessment also identified opportunities or factors outside MFL that may facilitate the implementation of the identified interventions. These factors, if optimized, will improve the performance of the Ministry. The following are the opportunities and related optimisation measures:

Table 4: Opportunities and Optimisation measures

Opportunities	Optimisation Measures
<ul style="list-style-type: none"> i) Increased support from cooperating partners ii) Regional collaboration between academic and governmental institutions promoting expertise sharing 	<ul style="list-style-type: none"> i) Increase funding, training and research in AAH ii) Technical Assistance and institutional collaboration

IV. Threats

In addition to the opportunities, there are threats or factors outside the control of MFL that may affect the implementation of the proposed interventions. The identified threats and their related mitigation measures are presented below:

Table 5: Threats and mitigating measures

Threats	Mitigation Measures
<ul style="list-style-type: none"> i) Transboundary diseases through shared water bodies ii) Weak border controls iii) Introduction and spread of emerging diseases 	<ul style="list-style-type: none"> i) Development of early warning systems ii) Enhance disease screening at border points iii) Development of emergency preparedness plan

CHAPTER 3

3. STRATEGIC DIRECTION

Having analysed the internal and external environment, the Ministry has set out an Operational Framework to guide the execution of its AAH mandate on programming, decision-making and resource allocation during the period 2021–2023 as follows:



Figure 6: Upwards arrow indicating the process of achieving Vision of the AAH

3.1. Vision

"A disease-free fisheries sub-sector"

Through this vision, the Ministry will be dynamic and innovative in its operations. Further, it will build confidence and trust among its stakeholders through upholding good morals and the highest standards of professional ethics, integrity and fairness.

3.2. Mission Statement

To realize the vision and achieve the strategic results, the strategy demands commitment to the following mission statement:

"To facilitate aquatic animal health services for optimal health, production and productivity"

3.3. Core Values

To attain the Vision, the Ministry commits to upholding the following seven (7) core values:



Figure 7: The seven (7) Core Values for the AAH function

I. Objectivity

We are open and base our advice and decisions on unbiased and rigorous analysis of scientific evidence.

II. Integrity

We put the obligations of the public service above our personal interest, and conduct ourselves in a manner that is beyond reproach.

III. Consistency

We always follow laid down procedures in the execution of our duties.

IV. Teamwork

We collaborate to achieve a common goal in the most efficient and effective manner

V. Accountability

We are responsible to Government and the public for decisions and actions taken, and submit to whatever scrutiny is appropriate to us

VI. Innovation

We apply new ideas and methods ethically for better solutions in our execution of public service.

VII. Transparency

We are open about the decisions and actions taken regarding public service delivery.

3.4. Strategic Themes and Strategic Results

The Ministry has identified three (3) strategic themes (areas of focus) to address the identified challenges. This will lead to specific strategic results being realised once the challenges in the respective themes have been addressed. The focus in the three areas will ultimately lead to the attainment of the vision for AAH Services. The strategic themes and the corresponding strategic results are as follows:

Table 6: Translation of strategic themes into strategic Results

Strategic Themes	Strategic Results
Aquatic Animal Health Management and Research for Development	<ul style="list-style-type: none"> - Optimal Aquatic Animal Health for enhanced production and productivity - Enhanced information generation for evidenced based decisions and policies
Strategic Partnerships	<ul style="list-style-type: none"> - Harmonized initiatives and implementation of programmes
Operational Excellence	<ul style="list-style-type: none"> - Efficient and effective service delivery

3.4.1. Strategic Theme 1:Aquatic Animal Health Management and Research for Development

Under this theme, improvement in AAH services, continuous and enhanced Research and Development will be prioritised. Emphasis on this should result in optimal aquatic animal health, enhanced production and productivity. It will also result in enhanced information generation for evidenced based decisions and policies.

3.4.2. Strategic Theme 2: Strategic Partnerships

This involves enhancement of strategic stakeholder partnership in order to ensure harmonized initiatives and implementation of AAH programmes and activities.

3.4.3. Strategic Theme 3: Operational Excellence

Under this theme, a philosophy of continuous improvement will be encouraged through improving resource mobilisation and management, improving procedures, processes, human resources, equipment and infrastructure. The focus on Operational Excellence is expected to result in efficient and effective service delivery.

3.5. Strategic Objectives, Intended Results, Measures, Targets and Strategies

To accomplish its mission, strategic results and vision, the ministry will in the next three years commit to pursuing five (5) strategic objectives with their associated intended results, measures, targets and strategies. The strategic objectives demonstrate the continuous improvements that the ministry will need to undertake to get the desired results in the areas of focus as follows:

3.5.1. Strategic Objective 1: Enhance Aquatic Animal Health Management

Strategies:

- I. Strengthen institutional collaboration;
- II. Develop a system for establishing and updating a national pathogen list;
- III. Domesticate FAO/OIE Progressive Management Pathway for aquaculture biosecurity (PMP/AB) and OIE AAH Code;
- IV. Strengthen the enforcement of biosecurity measures;
- V. Develop and implement a surveillance plan on important diseases such as EUS, Streptococcus and TiLV disease;
- VI. Support and implement a trace back system;
- VII. Enhance AAH extension services;
- VIII. Promote the adoption of climate smart fisheries and aquaculture technologies in line with the NPCC and the PMP/AB;
- IX. Strengthen implementation of an early warning system;
- X. Develop and implement an Anti-Microbial Resistance (AMR) plan on AAH;
- XI. Develop a network of national public and private diagnostic laboratories; and
- XII. Develop and implement a stakeholder management plan.

The above interventions will result in Improved disease diagnosis, improved AAH management and compliance, enhanced disease prevention and control, increased awareness levels among clients, and reduced risk of AMR.

3.5.2. Strategic Objective 2: Enhance AAH Research and Development

Strategies:

- I. Conduct research on climate smart AAH technologies;
- II. Strengthen extension research linkages in AAH;
- III. Enhance core and adaptive research in AAH (Research around vaccine development will be promoted);
- IV. Establish a functional AAH laboratory and improve support to AAH Laboratories in areas with active fisheries and aquaculture activities;
- V. Develop and culture disease resistant strains of indigenous fish;
- VI. Enhance information generation for evidence-based decision making and policy
- VII. Enhance and strengthen partnerships with local, regional and international laboratories in AAH; and
- VIII. Establish and evaluate localised Best Management Practices (BMPs).

Focus in this intervention should result in increased scientific knowledge in AAH, development of appropriate climate smart technologies and promotion of adaptive AAH research.

3.5.3. Strategic Objective 3: Enhance collaboration with stakeholders.

Strategies:

- I. Develop and implement a management plan in consultation with stakeholders; and
- II. Promote Public Private Partnerships in AAH management

The above measures are likely to result in increased stakeholder satisfaction and awareness levels as well as increased stakeholder participation.

3.5.4. Strategic Objective 4: Improve the AAH Institutional capacity

Strategies:

- I. Establish a functional AAH unit within the MFL;
- II. Improve financial capacity for AAH;
- III. Strengthen the AAH legal and regulatory framework;
- IV. Improve human resource capacity in AAH;
- V. Develop AAH Monitoring and Evaluation framework;
- VI. Develop and implement a communication strategy on AAH
- VII. Enhance cross cutting issues in the implementation of AAH (Gender, HIV/AIDS, COVID 19, environmental protection, behavioural change, human nutrition); and
- VIII. Support curriculum revision in training institutions and professional bodies to mainstream AAH;

Focus on improving the AAH institutional capacity will lead to efficiency and effectiveness in service delivery.

1.5.5. Strategic Objective 5: Operationalise AAH Laboratories and support services

Strategies:

- i. Develop and implement a Master Plan for operationalisation of AAH laboratories and support services; and
- ii. Develop and implement annual procurement plans for the operationalisation of AAH laboratories and support services.

Tables 8 - 10 provide a detailed log-frame of the Ministry indicating the strategic themes, strategic results, strategic objectives, intended results, measures, targets and strategies.

Table 7: Table outlining Aquatic Animal Health Management Strategic Theme, Strategic Results, Strategic Objectives, Intended Results, Measures, Targets and Strategies for achieving the objectives

Strategic Theme 1: Aquatic Animal Health Management and Research for Development				
Strategic Result 1: Optimal Aquatic Animal Health for Enhanced Production and Productivity				
No	Intended Result	Measure	Plan target	Strategy
1	Strategic Objective 1: Enhance Aquatic Animal Health Management			
	Enhanced Disease diagnosis	Number of laboratories	1 laboratory at Central Veterinary Research Institute (CVRI) upgraded to AAH reference centre laboratory by 2022	<ul style="list-style-type: none"> - Strengthen Institutional Collaboration - Develop a system for establishing and updating a national pathogen list
	Improved AAH management and compliance	percentage of facilities compliant to biosecurity measures	100 % facilities compliant to biosecurity standards	<ul style="list-style-type: none"> - Domesticate FAO/OIE Progressive Management Pathway for Aquaculture Biosecurity (PMP/AB) and OIE AAH code - Strengthen the enforcement of biosecurity measures
			1 Surveillance plan on EUS, TiLV disease, Streptococcosis and other emerging diseases developed and implemented	<ul style="list-style-type: none"> - Develop and implement a surveillance Plan on AAH on important diseases such as EUS, TilV disease, Streptococcosis and other emerging diseases.
	Enhanced extension service delivery to fishers and fish farmers	Percentage of farmers receiving AAH services	60% farmers receiving AAH services by 2023	<ul style="list-style-type: none"> - Enhance AAH extension services
	Enhanced disease prevention and control	Number of incidences of aquatic animal diseases	Reduced incidences of aquatic animal diseases by 2023	<ul style="list-style-type: none"> - Promote the adoption of climate smart fisheries and aquaculture technologies in line with the NPCC and the PMP/AB - Strengthen implementation of an early warning system
	Reduced risk of Anti-microbial resistance	Level of Anti-microbial residues.	Anti-microbial residues below maximum residue level limit in at least 90% of samples tested annually	<ul style="list-style-type: none"> - Develop and implement an Anti-Microbial Resistance (AMR) plan on AAH
	Data on AAH from public and private laboratories	Percentage of reports on AAH issues by 2023	100% public and private laboratory reporting on AAH issues by 2023	<ul style="list-style-type: none"> - Establish a regulatory framework for the network of public and private diagnostic laboratories.
	Provision of real time data from Stakeholders	Number of stakeholders reporting on AAH	15 stakeholders reporting on the management of AAH	<ul style="list-style-type: none"> - Develop and implement a stakeholder management plan

Table 8: Table outlining Aquatic Animal Health Research for Development Strategic Theme, Strategic Results, Strategic Objectives, Intended Results, Measures, Targets and Strategies for achieving the objectives

Strategic Theme 1: Aquatic Animal Health Management and Research for Development				
Strategic Result 2: - Enhanced information generation for evidenced based decisions and policies				
No	Intended Result	Measure	Plan target	Strategy
Strategic Objective 2: Enhance AAH Research and Development				
	Enhanced AAH research and development	No. of climate smart technologies developed	2 climates Smart AAH technologies developed by 2023	Conduct research on climate smart AAH technologies
		No. of climate smart technologies adapted	2 climate smart AAH technologies adopted by 2023	-Enhance core and adaptive research in AAH
		No. extension research platforms strengthened		-Strengthen extension research linkages in AAH
	Improved indigenous fish species	No. of indigenous species improved	3 indigenous species improved by 2023	Develop and culture disease resistant strains of indigenous fish
	Evidence based decisions making and policies generated	No. of AAH policy brief	1 policy brief of AAH management	Enhance information generation for evidence-based decisions making and policy
	Strengthened Partnerships in AAH	No. of Partnerships actualised	4 Partnerships actualised (2 local, 1 regional and 1 international)	Enhance and strengthen partnerships with local, regional, and international laboratories in AAH
	Localisation of BMPs	No. of BMP trials conducted by 2023	5 BMP trials conducted by 2023	Establish and evaluate localised Best Management Practices (BMPs)

Table 9: Table outlining Strategic Partnerships Strategic Theme, Strategic Results, Strategic Objectives, Intended Results, Measures, Targets and Strategies for achieving the objectives

Strategic Theme 2: Strategic Partnerships				
Strategic Result: Harmonized Initiatives and Implementation of Programmes				
No	Intended Result	Measure	Plan target	Strategy
3	Strategic Objective 3: Enhance Collaboration with Stakeholders			
	Increased stakeholder satisfaction levels	Percentage satisfaction levels	60 % stakeholder satisfaction levels attained	<ul style="list-style-type: none"> - Develop and implement a management plan in consultation with stakeholders - Promote Public Private Partnerships in AAH management
	Increased awareness levels among stakeholders	Percentage awareness	60 % stakeholder awareness levels attained	
	AAH PPPs established	Number of PPPs established	1 PPP established annually	

Table 10: Table outlining Operational Excellence Strategic Theme, Strategic Results, Strategic Objectives, Intended Results, Measures, Targets and Strategies for achieving the objectives

Strategic Theme 3: Operational Excellence				
Strategic Result: Efficient and Effective Service Delivery				
No	Intended Result	Measure	Plan target	Strategy
4	Strategic Objective 4: Improve the AAH Institutional capacity			
	Enhanced management and coordination of AAH	No. of AAH functional unit created	AAH functional unit established by 2023	- Establish anAAH functional unit within the MFL
	Increased resource base	Percentage of funding to AAH	20% increase in funding for AAH from the disease control allocation (DVS and DoF)	- Improve financial capacity for AAH
	Enhanced legal framework	AAH mainstreamed in the National Animal Health Policy	AAH mainstreamed in the National Animal Health Policy by 2022	- Strengthen the AAH legal and regulatory framework
		No. of Act harmonised	The Fisheries Act No. 27 of 2010 and the Animal Health No. 22 of 2011 harmonised by 2023	
		Percentage of AAH services conducted according to the client service charter	100% of AAH services conducted according to the client service charter annually	
	Improved skills and competencies in AAH	No. of staff trained	60 staff trained in AAH by 2022	- Improve Human Resource Capacity
	Improved programme implementation	Percentage of AAH programmes implemented	80% AAH programmes implemented annually	- Develop AAH Monitoring and Evaluation framework
	Increased awareness levels	Percentage of client awareness level	60 % client awareness levels attained by 2023	- Develop and implement a communication strategy on AAH
	Crossing cutting issues mainstreamed in AAH	No. of cross cutting issues mainstreamed in AAH	5 cross cutting issues mainstreamed in AAH (Gender, environment, HIV/AIDS, COVID 19, behavioural change) by 2023	- Enhance cross cutting issues in the implementation of AAH
5	STRATEGIC OBJECTIVE 5: Operationalise AAH Laboratories and support services			
	AAH laboratories and support services operationalisation	No. Laboratories operationalised	AAH Laboratory in Kafue operationalised by 2023	- Develop and implement a Master Plan for operationalisation of AAH laboratories and support services
		No. Laboratories operationalised	7 AAH laboratories in areas with high fisheries and aquaculture potential operationalised by 2023	
		Number of procurement plans developed	1 AAH Procurement Plan developed	- Develop and implement annual procurement plans for the operationalisation AAH laboratories and support services

CHAPTER 4

4. ENABLING FACTORS

The successful implementation of this AAH Strategic plan and Balanced Scorecard is centred on the following pre-conditions and assumptions:

4.1. Pre-Conditions

These are enabling factors within the control of the Ministry for successful implementation of the AAH Strategic Plan. MFL envisages the following pre-conditions:

- I. Visionary Leadership;
- II. Supportive policy and legal frameworks;
- III. Effective Management;
- IV. Adequately skilled and experienced Staff;
- V. Ownership of the Strategic Plan and BSC by all members of staff and
- VI. Adequate operational tools and systems.

4.2. Assumptions

These are enabling factors outside the control of the Ministry needed for successful implementation of the Plan. The following are the assumptions:

- I. Political Will;
- II. Adequate and timely funding;
- III. Continued support from Stakeholders;
- IV. Stable socio-economic and political environments and
- V. Adequate staffing at all levels.

CHAPTER 5

5. IMPLEMENTATION FRAMEWORK

The implementation framework will translate the Strategic Objectives outlined in section 3.5 into specific, measurable, actionable, realistic, and time-bound (SMART) goals to benefit all clients and stakeholders. The framework describes broad actions that the Government, together with its stakeholders, intends to undertake to address key issues related to AAH.

To achieve this, the MFL has put in place an implementation framework. The Department of Veterinary services (DVS) will collaborate with the Department of Fisheries (DoF) and other stakeholders in the implementation of the NAAHS. The following institutional framework will be established:

5.1. Institutional Arrangement

Vertical and horizontal coordination among key players in the fisheries sub-sector is essential for the successful implementation of the NAAHS. The Ministry will, therefore, ensure the effective participation of all stakeholders at international, regional, national, provincial and District levels.

5.1.1. Line Ministries

The MFL will oversee and implement the NAAHS. It will ensure the provision of the following AAH core public services: extension services, laboratory infrastructure, quarantine facilities, diseases prevention and control services, provision of skilled and competent staff, border control and inspection facilities, among others. In addition, the Ministry will also provide policy direction and technical support on the implementation of the NAAHS to the Provincial and District administration. It will also collaborate with other line Ministries according to their mandates to implement the strategy.

5.1.2. Training and Research Institutions

The Ministry will strengthen collaboration with local, regional, and international training and research institutions. Effective implementation of this strategy requires that individual and institutional capacities of the various stakeholders in the sector are strengthened. To this end, curricula in schools, colleges and higher institutions of learning will be reviewed to contribute to the knowledge and life skills development of learners. Adoption of technologies and knowledge transfer, in-service training, study tours, and exchange visits by farmers, learners and experts will be promoted at local and international level.

5.1.3. Private Sector

The Ministry will commit to creating an enabling business and investment climate for the private sector to thrive and create opportunities for Public-Private Partnerships. Further, it recognizes the essential role played by the private sector to undertake

investment in the AAH Services and will continue to support such initiatives for economic diversification and job creation.

5.1.4. Farmer Organisations

The Ministry will collaborate with fishers and fish farmer associations to regulate and promote AAH Services. It recognizes the support provided by such organizations through initiatives such as extension services, veterinary services, co-management structures, creating awareness on AAH, and sensitization to fishers and fish farmers in fish conservation in natural water bodies and biosecurity measures.

5.1.5. Traditional Leaders

The Ministry will collaborate with traditional leaders to promote AAH services in their chiefdoms. It recognizes that traditional leaders are the custodians of customary law, traditional values, and norms that govern traditional societies such as chiefdoms and villages.

5.1.6. Development Partners

The Ministry will continue to collaborate with Development Partners to achieve Sustainable Development Goals Number 1, 2, and 3 through the implementation of the NAAHS. It is expected that the Development Partners will continue to provide financial resources through grants, guarantees and Technical Assistance.

5.2. Implementation Plan

The AAH Implementation plan will be implemented over a three-year period (2021 – 2023). The plan outlines a clear linkage of the strategic objectives, measures, activities, and strategies, upon which the Key Performance Indicators (KPIs) are measured. It also provides for annual targets, implementing Departments, and the estimated costs over the implementation period. The plan stipulates the schedule of implementation of activities and the associated cost for each year for the period 2021 to 2023.

Detailed implementation schedules of each objective, planned activities and the costs are outlined in annex 1.

5.3. Cost Estimate of the Plan

The total cost of implementing activities for each strategic objective in the Implementation plan is estimated at **(ZMW72,191,584.44 (US\$ 3,609,579.22))**. The distribution of the total cost according to each strategic theme and strategic Objective is summarised in table 11 while annex 1 outlines the year by year budget for the implementation plan over the period 2021 to 2023.

Table 11: The Estimated cost of the implementation Plan

NO	STRATEGIC THEME/STRATEGIC OBJECTIVE	Estimated Cost (ZMW)	Percentage Allocation %
1	Strategic Theme 1: Aquatic Animal Health Management and Research for Development Strategic Result: - Optimal Aquatic Animal Health for enhanced Production and Productivity/Enhanced information generation for evidenced based decisions and policies	42,114,852.22	58%
	Strategic objective 1: enhance aquatic animal health services	32,917,148.07	46%
	strategic objective 2: enhance research and development	9,197,704.80	13%
2	Strategic Theme 2: strategic partnerships Strategic Result: Harmonized initiatives and Implementation of Programmes	1,056,412.56	1%
	Strategic objective 3: enhance collaboration with stakeholders	1,056,412.56	1%
3	Strategic Theme 3: operational excellence Strategic Result: efficient and effective service delivery	29,020,319.01	40%
	Strategic objective 4: Improve the AAH Institutional capacity	13,619,608.13	19%
	Strategic objective 5: Operationalise AAH Laboratories and support services	15,400,319.01	21%
	Total	72,191,584.44	100%

CHAPTER 6

6. MONITORING AND EVALUATION

The Monitoring and Evaluation (M&E) Framework of the FINAAHS implementation plan is premised on the principles of Results Based Management (RBM). The plan has drawn its results from the Strategic Plan for the Ministry of Fisheries and Livestock which articulated a series of results to be achieved towards attaining Animal Health Excellence as envisioned in the 7NDP and vision 2030. In particular, the Key Performance Indicator (KPI) for AAH will be tracked towards the attainment of the outcomes.

Monitoring level arrangements will be such that the Ministry will consistently report on the indicators in Strategic Plan for the Ministry of Fisheries and Livestock and the higher-level indicators in the 7NDP, while implementing departments performing their functions in an interrelated and integrated manner towards attainment of the plan outcomes will generate, collect, and document performance data that will be useful for measuring progress and reporting. The Government has established the Government Wide M&E system and responsibilities of all actors in the practice of M&E activities to contribute to the measurement of the overall development progress in the country.

6.1. Monitoring – Processes and Tools

The process of M&E will be undertaken at departmental, ministerial, cluster, and national levels. Departments will undertake input monitoring to ensure that targeted investments are made to produce the planned outputs which are expected to generate development outcomes. The various departments will work together by consolidating their contributions to the ministerial outputs and outcomes to enable measurement of AAH service delivery under the objective Animal Health Excellence in Ministry of Fisheries and Livestock Strategic Plan.

The Ministry will consolidate outputs and outcomes from the departments and work together with other ministries in the economic cluster to report progress on AAH in the 7NDP. At cluster level, the information generated on AAH will be analysed against the set target and the information will be validated to assess the performance indicators for AAH. In addition, specific evaluations will be undertaken to support generation of qualitative and quantitative information to ascertain impact and effectiveness and sustainability of the strategies in the AAH Strategic Plan.

The tools to support the planned M&E process will include the use of implementation plan, monthly monitoring templates, annual budget, project monitoring frameworks, outcome indicator template, annual review framework, and periodic surveys. These tools will facilitate the production of reports at monthly, quarterly, annual, and other intervals. The M&E function is expected to be undertaken through the Government supported Management Monitoring System (MMS).

Through this system the Ministry will routinely collect, analyse, and store data and information and will continually document programmes performance by updating

output and outcomes that will be consolidated to support the monitoring and evaluation of the FINAAHS. The M&E function will be facilitated at national, provincial, district and camp levels.

6.2. EVALUATION

As the AAH implementation plan is based on the RBM, evaluation of the AAH strategies will be entrenched through continuous collaboration with stakeholders. Emphasis will be placed on the need for periodic evaluation of programmes in order to appraise strategies, document lessons learnt and take corrective measures where needed. Evaluation will also help reinforce AAH programme implementation in areas where positive trends are identified so as to maximise benefits and realise value for money. To this end, the following evaluations will be undertaken during the plan period:

- Baseline survey – The baseline survey of the AAH will be undertaken to collect data with the view to indicate the situation obtaining at the beginning of the strategic plan. It will also provide baseline information for new programmes that have been included in the plan. This will be valuable for subsequent evaluations that will be used to determine the appropriateness of the implementation process and more importantly determine the impact of the planned strategies.
- Final Evaluation – The final evaluation will be undertaken a year after the expiry of the plan period. The evaluation will determine the extent to which the broad objectives would have been achieved, both process and impact evaluation will be undertaken. A process evaluation will be undertaken to assess the way in which the plan was implemented while impact evaluation, on the other hand, will entail assessing the long-term results or change in the social economic status.

CHAPTER 7

7. BALANCE SCORECARD

The Balance scorecard for the AAH is a strategic planning and management system that the Ministry will use to communicate the vision, mission, key performance indicators and strategies. It will be used to measure and monitor progress towards the strategic objectives of AAH. It will also provide the Ministry with the framework of linking the various components of planning, management and financial stewardship and a strategic map to visualise and communicate how value is created in AAH.

Annex 2 outlines the Balance scorecard for the AAH in the Ministry.

ANNEX 1: Composition of The Aquatic Animal Health Technical Committee

S/N	Name	Position	Institution	email
1	Dr. Harris Phiri	Acting Director	Department of Fisheries / Ministry of Fisheries and Livestock	harrisphr@live.com
2	Dr. Paul Fandamu	Deputy Director	Department of Veterinary Services/ Ministry of Fisheries and Livestock	pfandamu@gmail.com
3	Mr. Kondwani Gondwe	Principal Policy Analyst	Policy, Planning and Information Department / Ministry of Fisheries and Livestock	Kondwani.Gondwe@mfl.gov.zm
4	Mrs. ZynganiChirambo –	Principal Fisheries Officer	Department of Fisheries / Ministry of Fisheries and Livestock	cmg704@gmail.com
5	Dr. Mwansa Songe	Senior Veterinary Officer	Central Veterinary Research Institute / Ministry of Fisheries and Livestock,	drsonge@yahoo.com
6	Dr. Maputa Kamulete	Senior Veterinary Officer	Department of Veterinary Services HQ / Ministry of Fisheries and Livestock,	maputak@gmail.com
7	Ms. Loziwe N. Chilufya	Senior Fisheries Research Officer	Central Fisheries Research Institute (CFRI) / Ministry of Fisheries and Livestock	loziwen@yahoo.com loziwec@gmail.com
8	Dr. Chanda Chitala	Veterinary Officer	Central Veterinary Research Institute / Ministry of Fisheries and Livestock	cchitala@yahoo.co.uk
9	Dr.Nawa Mabuku	Senior Epidemiosurveillance Officer	National Livestock Epidemiology and Information Centre/ Ministry of Fisheries and Livestock	nawamabuku@gmail.com
10	Prof. Hang'ombe Bernard Mudenda	Senior Lecturer – Microbiology /Center Leader	UNZA / Africa Centre of Excellence for Infectious Diseases of Humans and Animals (ACEIDHA)	<u>mudenda68@yahoo.com</u>
11	Dr. Kunda Ndasse	Lecturer / PHD candidate	Lusaka Apex Medical University / UNZA	ndashe.kunda@gmail.com
12	Dr. Rose Basiita	Scientist- Aquaculture	WorldFish	<u>b.komugisha@cqiar.org</u>
13	Mr. Mulolwa Simposya	Executive Manager	Aquaculture Development Association of Zambia	<u>mulolwa62@gmail.com</u>

ANNEX 2: Implementation Plan for the First National Aquatic Animal Health Strategic Plan 2021 – 2022

Table 12 : The 2021 implementation Plan for the AAH Strategic Plan

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)						
							Q1	Q2	Q3	Q4							
STRATEGIC THEME 1: Aquatic Animal Health Management and Research for Development																	
STRATEGIC OBJECTIVE 1: Enhance Aquatic Animal Health Management																	
Strengthen institutional collaboration	Enhanced disease diagnosis	1 laboratory at Central Veterinary Research Institute (CVRI) upgraded to AAH reference centre laboratory by 2022 (30% achieved)	1 EUS Satellite laboratory	Facilitate collaboration with national, regional and international research institutions	1 collaborative activity undertaken	DVS				255,959.20							
Develop a system for establishing a National pathogen list.				Develop National criteria for listing emerging and re-emerging pathogens	National Criteria developed	DVS/ Dof				203,588.76							
Domesticate FAO/OIE Progressive Management Pathway for aquaculture biosecurity (PMP/AB) and OIE AAH code	Improved AAH management and compliance	100 % facilities compliant to biosecurity standards (30% achieved)	No Data	Defining the Biosecurity Strategy using the PMP/ABconcept	Biosecurity risks defined	DVS/ Dof				3,500,000.00							
				Enhance national biosecurity and preparedness	Biosecurity preparedness enhanced	DVS/ Dof				4,381,578.17							

YEAR: 2021										
Strategy	Intended Result	Yearly Target (outcome)	Baseline		Activity Output	Dept	Activity Schedule			Budget (ZMW)
			2019	Q1			Q1	Q2	Q3	
Strengthen enforcement of biosecurity measures	Develop and implement a surveillance Plan on AAH on important diseases such as EUS, TilV disease, Streptococcus and other emerging diseases developed and implemented (100% achieved)	No data	Establish a pathogen risk analysis system	1 pathogen risk analysis system established	DVS/DoF					47,700.73
		1 Surveillance plan on EUS, TilV disease, Streptococcus and other emerging diseases developed and implemented (100% achieved)	No data	develop surveillance plan	1 plan developed	DVS/DoF				599,817.52
	National Animal Identification and Traceability (NAITs) system supported in AAH	No Data	Stakeholder consultations	5 stakeholder meeting conducted	DVS/DoF					255,959.20
	Support and implement an AAH traceback system	Development of application	1 application development	DVS/DoF						1,000,000.52

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
Enhance AAH extension services	Enhanced extension service delivery to fishers and fish farmers	60% farmers receiving AAH services by 2023 (20% achieved)	No data	Strengthen the capacity of extension workers	240 extension officers trained in AAH	DVS/DoF					270,306.21
Promote the adoption of climate smart fisheries and aquaculture technologies in line with the NPCC and the PMP/AB				Promote the adoption of local fish species (<i>Oreochromis andersonii</i> , <i>O. Macrochir</i>) in aquaculture.	2 local fish species adopted by fish farmers	DVS/DoF					467,315.63
Strengthen implementation of an early warning system				Reduced incidences of aquatic animal diseases by 2023	No data						
Develop and implement an Anti-Microbial Resistance (AMR) plan on AAH				Establish a pathogen risk analysis system	1 pathogen risk analysis system established	DVS/DoF					95,401.47
				Anti-microbial residues below maximum residue level (limit in at least 90% of samples tested annually)	Conduct Anti-microbial drug residue analysis	1 national survey on Tetracycline drug residues conducted	DVS/DoF				405,459.32

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
Establish a regulatory framework for the network of public and private diagnostic laboratories.	Data on AAH from private laboratories	100% private laboratory reporting on AAH issues by 2023 (30% achieved)	No data	Conduct sensitisation workshop on regulations and reporting mechanisms on AAH issues	Integration of private laboratories into reporting AAH issues	DVS/ Dof				513,411.20	
Develop and implement a stakeholder management plan	Provision of real time data from Stakeholders	15 stakeholders reporting on the management of AAH	No data	Establishment of a stakeholder data base for AAH	1 stakeholder database established	DVS/ Dof				1,000,000.52	

Objective 1 sub - Total

12,996,498.46

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity Output		Dept	Activity Schedule			Budget (ZMW)					
				Q1	Q2		Q3	Q4							
STRATEGIC THEME 1: Aquatic Animal Health Management and Research for Development															
STRATEGIC OBJECTIVE 2: Enhance Research and Development															
Promote the development of climate smart AAH technologies in line with the NPCC and the PMP/AB	Enhanced AAH research and development	2 climate smart AAH technologies developed by 2023	No data	Promote the use of local fish species (<i>Oreochromis andersonii</i> , <i>O. macrochir</i> and <i>O. tanganicae</i>)	2 climate smart technologies developed	DVS/ Dof				342,627.68					
Enhance core and adaptive research in AAH	Strengthen extension research linkages in AAH	2 climate smart AAH technologies adopted by 2023	No data	Promote genetic improvement in indigenous fish species	1 indigenous fish species (<i>O. andersonii</i>) being improved	DVS/ Dof				513,941.52					
Strengthen extension research linkages in AAH	Strengthen extension research planning meeting held annually	Strengthen extension research linkages in AAH	No data	1 of extension research planning meeting held annually	DVS/ Dof					118,823.56					
	1 Extension research platform strengthened by 2023	No data		1 Extension research platform strengthened	DVS/ Dof					365,660.49					

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
Develop and culture disease resistant strains of indigenous fish	Improved indigenous fish breed	3 indigenous breeds improved by 2023	No data	Conduct selective breeding breeding of indigenous fish	3 indigenous breeds improved	DVS/ Dof					654,241.89
Enhance and strengthen partnerships with local, regional, and international laboratories in AAH	Strengthen Partnerships actualised (2 local, 1 regional and 1 international)	4 Partnerships actualised (2 local, 1 regional and 1 international)	2 (1 international, 1 local)	Conduct stakeholder collaboration	4 partnerships strengthened	DVS/ PPID/ DOF					182,830.25
											Objective 2 sub - Total 2,178,125.38

Strategy	Intended Result	Yearly Target	Baseline		Activity Output	Dept	Activity Schedule			Budget (ZMW)					
			2019	Q1			Q1	Q2	Q3						
STRATEGIC OBJECTIVE 3: Enhance Collaboration with Stakeholders															
STRATEGIC RESULT 3: Harmonized initiatives and Implementation of Programmes															
Develop and implement a management plan in consultation with stakeholders	Increased stakeholder satisfaction levels attained (20% achieved)	60 % stakeholder satisfaction levels attained (20% achieved)	No data	Undertake stakeholder mapping exercise	stakeholder mapping exercise undertaken	DVS/ Dof				176,068.76					
	Increased awareness levels among stakeholders	60 % stakeholder awareness levels attained (20% achieved)	No data	Develop stakeholder management plan	stakeholder management plan develops	DVS/ Dof				176,068.76					
Promote Public Private Partnerships (PPPs) in AAH	AAH PPPs established	1 PPP established annually	No data	Establishment of PPPs in AAH	3 PPP established	PPID/ DVS/ Dof				117,379.17					
							Objective 3 sub- Total			469,516.69					

STRATEGIC THEME 3:		Operational Excellence						Strategic Objective 4: IMPROVE THE AAH INSTITUTIONAL CAPACITY		Strategic Result 5: Efficient and Effective Service Delivery		Budget (ZMW)
Strategy	Intended Result	Yearly Target	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule			Q1 Q2 Q3 Q4		
Establish a functional AAH unit within the MFL	Enhanced management and coordination of AAH	AAH function established by 2023	No data	Creation of an AAH function in the MFL	AAH function created	DVS/DoF					164,373.45	
Improve financial capacity for AAH		20% increase in funding for AAH from the disease control allocation (DVS and DoF) by 2023 (6% achieved)	No data	Strengthen resource mobilisation for AAH	20% increase in funding for AAH from the disease control allocation (DVS and DoF)	DVS/DoFin /PPID/DoF					82,186.72	
Strengthen the AAH legal and regulatory framework	Enhanced legal framework	AAH mainstreamed in the National Animal Health Policy by 2022	No data	Mainstream AAH in the animal health policy	5 Consultative meetings	DoF/DVS					244,563.15	

STRATEGIC THEME 3: Operational Excellence									
Strategy	Intended Result	Yearly Target	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule		Budget (ZMW)
							Q1	Q2	Q3 Q4
The Fisheries Act No. 27 of 2010 and the Animal Health No. 22 of 2011 harmonised by 2023	Fisheries Act No. 27 of 2010/Animal Health No. 22 of 2011	Conduct a legal review	DVS/ PRID/ DoF	2 legal reviews conducted	1,000,000.00				
30% of AAH services conducted according to the client service charter annually	No data	Develop an AAH client Service Charter	DVS/ DoF	An AAH client Service Charter developed	176,068.76				
Improved skills and competencies in AAH	60 staff trained in AAH by 2022	Develop a comprehensive training Plan (Short- and long-term training – Needs assessment)	DVS/ DoF/ HRA	comprehensive training Plan developed	176,068.76				

Strategy	Intended Result	STRATEGIC THEME 3: Operational Excellence			Activity Output	Dept	Activity Schedule			Budget (ZMW)
		Yearly Target	Baseline 2019	Activity			Q1	Q2	Q3	
				Support curriculum revision in Training institutions and professional bodies to mainstream AAH	Curriculum Review supported	DVS/ Dof /HRA				117,379.17
				Conduct a baseline for AAH	AAH Baseline survey conducted	DVS/ Dof /PPID				1,176,068.76
Develop AAH Monitoring and Evaluation framework	Improved programme implementation	80% AAH programme implemented annually (20% achieved)	No data	Capacity building officers in Management Monitoring System (MMS)	30 officers trained in MMS	DVS/ Dof /PPID				250,034.38
		60 % client awareness levels attained by 2023	No survey undertaken	Undertake awareness programmes on AAH	1 awareness programmes on AAH undertaken	DVS/ Dof				998,117.60

Strategy	Intended Result	Yearly Target	Operational Excellence		Activity Output	Dept	Activity Schedule			Budget (ZMW)
			Baseline	2019			Q1	Q2	Q3	
Enhance cross cutting issues in the implementation of AAH	Crossing cutting issues mainstreamed in AAH	5 cross cutting issues mainstreamed in AAH (Gender, environment ,HIV/AIDS, COVID 19, behavioural change) by 2023	No data	Mainstreaming crossing issues in AAH Services	Crossing cutting issues mainstreamed in AAH	DVS/ PPID				80,022.92
										Objective 4 sub- Total 4,464,883.68

Strategy	Intended Result	STRATEGIC THEME 3: Operational Excellence		Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
		Yearly Target	Baseline				Q1	Q2	Q3	Q4	
STRATEGIC OBJECTIVE 5: Operationalize AAH Laboratories and support services											
Develop and implement a Master Plan for operationalization AAH laboratories and support services	AAH laboratories and support services operationalisation	AAH laboratory in Kafue operationalised by 2023	No data	Develop a Master Plan for AAH Infrastructure and Equipment Development	AAH Master plan for Kafue laboratory developed	DVS/DoF/T SB					7,553,632.07
Develop and implement a Master Plan for operationalization AAH laboratories and support services	AAH laboratories and support services operationalisation	7 AAH laboratories in areas with high fisheries and aquaculture potential operationalised by 2023	1 (Mpulungu)	Develop a Master Plan for AAH Infrastructure and Equipment Development	AAH Master plan for the 7 laboratories in areas of high fisheries and aquaculture potential developed	DVS/DoF/T SB					7,553,632.07

Table 13 : The 2022 implementation Plan for the AAH Strategic Plan

Strategy	Intended Result	Yearly Target (outcome)	Baseline e 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)						
							Q1	Q2	Q3	Q4							
STRATEGIC THEME 1: Aquatic Animal Health Management and Research for Development																	
STRATEGIC OBJECTIVE 1: Enhance Aquatic Animal Health Management																	
Strengthen institutional collaboration	Enhanced disease diagnosis	1 laboratory at CVRI upgraded to AAH reference centre	1 EUS Satellite laboratory	Facilitate collaboration with national, regional and international research institutions	1 collaborative activity undertaken	DVS					255,959.20						
Develop a system for establishing a National pathogen list.		laboratory laboratory by 2022 (60% achieved)	Collate data from public and private laboratories	National pathogen list developed	DVS						1,401,946.90						
Domesticate FAO/OIE Progressive Management Pathway for Aquaculture Biosecurity (PMP/AB) and OIE AAH code	Improved AAH management and compliance	100 % facilities compliant to biosecurity standards (60% achieved)	No data	Implementation of national biosecurity systems (2022)	1 sensitisation programme undertaken	DVS/ DoF					1,026,822.40						
			No data	Enhance national biosecurity and preparedness	Biosecurity preparedness enhanced	DVS/ DoF					2,190,789.08						
			No data	Establishment of sustainable national	National biosecurity and health sustained	DVS/ DoF					1,708,972.06						

YEAR: 2021										
Strategy	Intended Result	Yearly Target (outcome)	Baseline e 2019	Activity	Activity Output	Dept	Activity Schedule			Budget (ZMW)
							Q1	Q2	Q3	
Strengthen enforcement of biosecurity measures	Support and implement an AAH traceback system	National Animal Identification and Traceability (NAITS) system supported in AAH	No data	Establish a pathogen risk analysis system	1 pathogen risk analysis system established	DVS/ Dof				47,700.73
Promote the adoption of disease	Enhanced disease incidences	Reduced	No data	Promote the adoption of 2 local fish species	2 local fish species	DVS/ Dof				467,315.63

Strategy	Intended Result	Yearly Target (outcome)	Baseline in 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
climate smart fisheries and aquaculture technologies in line with the NPCC and the PMP/AB	prevention and control	of aquatic animal diseases by 2023	local fish species (<i>Oreochromis andersonii</i> ; <i>O. Macrochir</i>) in aquaculture.	adopted by fish farmers							
Strengthen implementation of an early warning system			No data	Establish a pathogen risk analysis system	1 pathogen risk analysis system established	DVS/ Dof				95,401.47	
Develop and implement an Anti-Microbial Resistance (AMR) plan on AAH	Reduced risk of Anti-microbial resistance	Anti-microbial residues below maximum residue level (limit in at least 90% of samples tested annually)	No data	Conduct Anti-microbial drug residue analysis	1 national survey on Tetracycline drug residues conducted	DVS/ Dof				202,729.66	
Establish a regulatory framework for the network of public and private	Data on AAH from private laboratories	100% private laboratory reporting on AAH issues by 2023 (60% achieved)	No data	Conduct review workshop on regulations and reporting mechanisms on AAH issues	Integration of private laboratories into reporting AAH issues	DVS/ Dof				256,705.60	

Strategy	Intended Result	Yearly Target (outcome)	Baseline e 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
STRATEGIC OBJECTIVE 2: Enhance Research and Development											
Promote the development of climate change in AAH in line with the NPCC and the PMP/AB	Enhanced AAH research and development	2 climate smart AAH technologies developed by 2023	No data	Promote the use of local fish species (<i>Oreochromis andersonii</i> , <i>O. macrochir</i> and <i>O. tanganicae</i>)	2 climate smart technologies developed	DVS/ Dof					342,627.68
Enhance core and adaptive research in AAH		2 climate smart AAH technologies adopted by 2023	No data	Promote genetic improvement in indigenous fish species	1 indigenous fish species (<i>O. andersonii</i>) being improved	DVS/ Dof					513,941.52
Strengthen extension research linkages in AAH		2 climate smart AAH technologies adopted by 2023	No data	Strengthen extension research linkages in AAH	1 of extension research planning meeting held annually	DVS/ Dof					365,660.49
Strengthen extension research linkages in AAH			No data	1 Extension research platform strengthened by 2023	1 extension research platforms strengthened	DVS/ Dof					365,660.49

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
STRATEGIC OBJECTIVE 2: Enhance Research and Development											
Establish a functional AAH laboratory and improve support to AAH Laboratories in areas with high fisheries and aquaculture potential	AAH laboratories in areas with high fisheries and aquaculture potential functional by 2023	7 AAH laboratories in areas with high fisheries and aquaculture potential functional by 2023	No data	Conducting AAH credible laboratory diagnosis	AAH diagnostics conducted	DVS/DoF					1,433,382.52
Develop and culture disease resistant strains of indigenous fish	Improved indigenous fish breed	3 indigenous breeds improved by 2023	No data	Conduct selective breeding breeding of indigenous fish	3 indigenous breeds improved	DVS/DoF					654,241.89
Enhance information generation for evidence based decisions making and policy	Evidence based decisions making and policies generated	1 policy brief by 2022	No data	Conduct policy studies on BMPs	Policy briefs developed	DVS/DoF/PPID					256,970.76

YEAR: 2021		STRATEGIC THEME 2: Strategic Partnerships		Baseline		Activity Output		Dept		Activity Schedule		Budget (ZMW)
Strategy	Intended Result	Yearly Target	2019	Activity	2019	Q1	Q2	Q3	Q4	Q1	Q2	Q3 Q4
STRATEGIC OBJECTIVE 3: Enhance Collaboration with Stakeholders												
STRATEGIC RESULT 3: Harmonized initiatives and Implementation of Programmes												
Develop and implement a management plan in consultation with stakeholder	Increased stakeholder satisfaction levels attained (40% achieved)	60 % stakeholder satisfaction levels attained (40% achieved)	No data	Develop stakeholder management plan	stakeholder management plan develops	DVS/ DoF	DVS/ DoF	DVS/ DoF	DVS/ DoF	176,068.76		
Promote Public Private Partnerships (PPPs) in AAH	AAH PPPs established annually	1 PPP established annually	No data	Establishment of PPPs in AAH	3 PPP established	DVS/ DoF/ PPID	DVS/ DoF/ PPID	DVS/ DoF/ PPID	DVS/ DoF/ PPID	117,379.17		
										Objective 3 sub- Total	293,447.93	

Strategy	Intended Result	Yearly Target	Baseline	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)						
							2019	Q1	Q2	Q3	Q4						
STRATEGIC THEME 3: Operational Excellence																	
STRATEGIC OBJECTIVE 4: IMPROVE THE AAH INSTITUTIONAL CAPACITY																	
Establish a functional AAH unit within the MFL	Enhanced management and coordination of AAH	AAH function established by 2022	No data	Creation of an AAH function in the MFL	AAH function created	DVS/DoF					164,373.45						
Improve financial capacity for AAH	Increased resource base	20% increase in funding for AAH from the disease control allocation (DVS and DoF) by 2023 (12% achieved)	No data	Strengthen resource mobilisation for AAH	10% increase in funding for AAH	DVS/DoF					82,186.72						
Strengthen the AAH legal and regulatory framework	Enhanced legal framework	AAH mainstreamed in the National Animal Health Policy by 2022	No data	Mainstream AAH in the animal health policy	AAH mainstreamed in the Animal Health Policy	DVS/DoF					244,563.15						

Strategy	Intended Result	Yearly Target	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
		The Fisheries Act No. 27 of 2010 and the Animal Health No. 22 of 2011 harmonised by 2023	Fisheries Act No. 27 of 2010/Animal Health No. 22 of 2011 of 2011	Conduct a Provincial consultative meetings	10 Provincial consultative meetings held	DVS/DoFP/PID					2,500,000.00
		100% of AAH services conducted according to the client service charter annually	No data	Develop an AAH client Service Charter	An AAH client Service Charter developed	DVS/DoF					176,068.76
		Improved skills and competencies in AAH	30 staff trained in AAH by 2022	Develop and implement a training programme on disease diagnostics	AAH implementation Plan developed	DVS/DoF/HRA					499,647.12
	Improve Human Resource Capacity		No data	Support curriculum revision in Training institutions and professional bodies to	Curriculum Review supported	DVS/DoFH/RA					117,379.17

Strategy	Intended Result	Yearly Target	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
Develop AAH Monitoring and Evaluation framework	Improved programme implementation	40% AAH programmes implemented annually	No data	Capacity building officers in Management Monitoring System (MMS)	30 officers trained in MMS	DVS/PPID					250,034.38
Enhance cross cutting issues in the implementation of AAH	Crossing cutting issues mainstreamed in AAH	5 cross cutting issues mainstreamed in AAH (Gender, environment HIV/AIDS, COVID 19, behavioural change) by 2023	No data	Mainstreaming crossing issues in AAH Services	Crossing cutting issues mainstreamed in AAH	DVS/PPID					80,022.92

Objective 4 sub- Total

4,114,275.68

STRATEGIC OBJECTIVE 5: Operationalise AAH Laboratories and support services					
STRATEGIC RESULT 5: Efficient and Effective Service Delivery					
Develop and implement annual procurement plans for the operationalisation AAH laboratories and support services	AAH laboratories and support services operation utilisation	1 AAH Procurement Plan developed	No data	Develop annual procurement plans	annual procurement plans developed
				DVS/DoF/PSU	58,689.59
				Objective 5 sub- Total	58,689.59
				2022 Total Annual Budget	19,016,591.82

Table 14 : The 2023 implementation Plan for the AAH Strategic Plan

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)						
							Q1	Q2	Q3	Q4							
STRATEGIC THEME 1: Aquatic Animal Health Management and Research for Development																	
STRATEGIC OBJECTIVE 1: Enhance Aquatic Animal Health Management																	
Strengthen institutional collaboration	Enhanced disease diagnosis	1 laboratory at CVRI upgraded to AAH reference centre laboratory by 2022 (100% achieved)	1 EUS Satellite laboratory	Facilitate collaboration with national, regional and international research institutions	1 collaborative activity undertaken	DVS				255,959.20							
Develop a system for establishing a National pathogen list.				Collate data from public and private laboratories	National pathogen list developed	DVS				1,401,946.90							
Domesticate FAO/OIE Progressive Management Pathway for Aquaculture Biosecurity (PMP/AB)and OIE AAH code				100 % facilities compliant to biosecurity standards (100% achieved)	Implementation of national biosecurity systems (2022)	DVS/ DoF undertaken				1,026,822.40							
					Enhance national biosecurity and preparedness	Biosecurity preparedness enhanced	DVS/ DoF			2,190,789.08							

Strategic Performance Report - Q1-Q4 2021									
Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity Output	Dept	Activity Schedule		Budget (ZMW)	
						Q1	Q2	Q3	Q4
Strengthen enforcement of biosecurity measures	Support and implement an AAH traceback system	National Animal Identification and Traceability (NAITS) system supported in AAH	No data	Establishment of sustainable national biosecurity and health	National biosecurity and health sustained	DVS/DoF			1,708,972.06
Enhanced extension service delivery to fishers and farmers	Enhance AAH extension services	60% farmers receiving AAH by 2023	No data	1 pathogen risk analysis system established	1 pathogen risk analysis system established	DVS/DoF			47,700.73
		Technical Backstopping		Development of application	1 application development	DVS/DoF			479,908.76
		Strengthen the capacity of extension workers		Test and implementation of the system	1 application tested and implemented	DVS/DoF			479,908.76
		240 extension officers trained in AAH		10 Backstopping visits undertaken	DVS/DoF				355,995.20
		270,306.21				DVS/DoF			

YEAR: 2021	Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
								Q1	Q2	Q3	Q4	
Promote the adoption of climate smart fisheries and aquaculture technologies in line with the NPCC and the PMP/AB	Enhanced disease prevention and control	Reduced incidences of aquatic animal diseases by 2023	No data	Promote the adoption of local fish species (<i>Oreochromis andersonii</i> , <i>O. Macrochir</i>) in aquaculture.	2 local fish species adopted by fish farmers	DVS/ Dof					467,315.63	
Strengthen implementation of an early warning system			No data	Establish a pathogen risk analysis system	1 pathogen risk analysis system established	DVS/ Dof					95,401.47	
Develop and implement an Anti-Microbial Resistance (AMR) plan on AAH	Reduced risk of Anti-microbial resistance	Anti-microbial residues below maximum residue level (limit in at least 90% of samples tested annually)	No data	Conduct Anti-microbial drug residue analysis	1 national survey on Tetracycline drug residues conducted	DVS/ Dof					202,729.66	
Establish a regulatory framework for the network of	Data on AAH from private laboratories	100% private laboratory reporting on AAH issues by 2023	No data	Conduct sensitisation workshop on regulations and reporting	Integration of private laboratories into	DVS/ Dof					256,705.60	

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
public and private diagnostic laboratories	(100% achieved)		mechanisms on AAH issues	reporting AAH issues							
Develop and implement a stakeholder management plan	Provision of real time data from Stakeholder	15 stakeholders reporting on the management of AAH	No data	Establishment of a stakeholder data base for AAH	1 stakeholder database established	DVS/ DoF				479,908.76	
											Objective 1 sub - Total 9,720,370.43

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
STRATEGIC OBJECTIVE 2: Enhance Research and Development											
Promote the development of climate change in AAH in line with the NPCC and the PMP/AB	Enhanced AAH research and development	2 climate smart AAH technologies developed by 2023	No data	Promote the use of local fish species (<i>Oreochromis andersonii</i> , <i>O. macrochir</i> and <i>O. tanganyicae</i>)	2 climate smart technologies developed	DVS/DoF					342,627.68
Enhance core and adaptive research in AAH	Strengthen extension research linkages in AAH	2 climate smart AAH technologies adopted by 2023	No data	Promote genetic improvement in indigenous fish species	1 indigenous fish species (<i>O. andersonii</i>) being improved	DVS/DoF					513,941.52
			No data	Strengthen extension research linkages in AAH	1 of extension research planning meeting held annually	DVS/DoF					118,823.56
			No data	1 Extension research platform strengthened by 2023	1 extension research platforms strengthened	DVS/DoF					365,660.49

Strategy	Intended Result	Yearly Target (outcome)	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
Develop and culture disease resistant strains of indigenous fish	Improved indigenous fish breed	3 indigenous breeds improved by 2023	No data	Conduct selective breeding of indigenous fish	3 indigenous breeds improved	DVS/ DoF				654,241.89	
Enhance information generation for evidence based decisions making and policy	Evidence based decisions making and policies generated	1 policy brief by 2022	No data	Conduct policy studies on BMPs	Policy briefs developed	DVS/ DoF/ PRID				256,970.76	
Enhance and strengthen partnerships with local, regional, and international laboratories in AAH	Strengthen Partnerships in AAH	4 Partnerships actualised (2 local, 1 regional and 1 international)	2 (1 international, 1 local)	Conduct stakeholder collaboration	8 partnerships strengthened	DVS				60,943.42	
Establish and evaluate localised Best Management Practices (BMPs)	Localisation of BMPs	5 BMP trials conducted by 2023	No data	5 BMP trials conducted by 2023	5 trials on BMPs conducted	DVS/ DoF				356,470.67	
Objective 2 sub - Total							2,669,679.98				

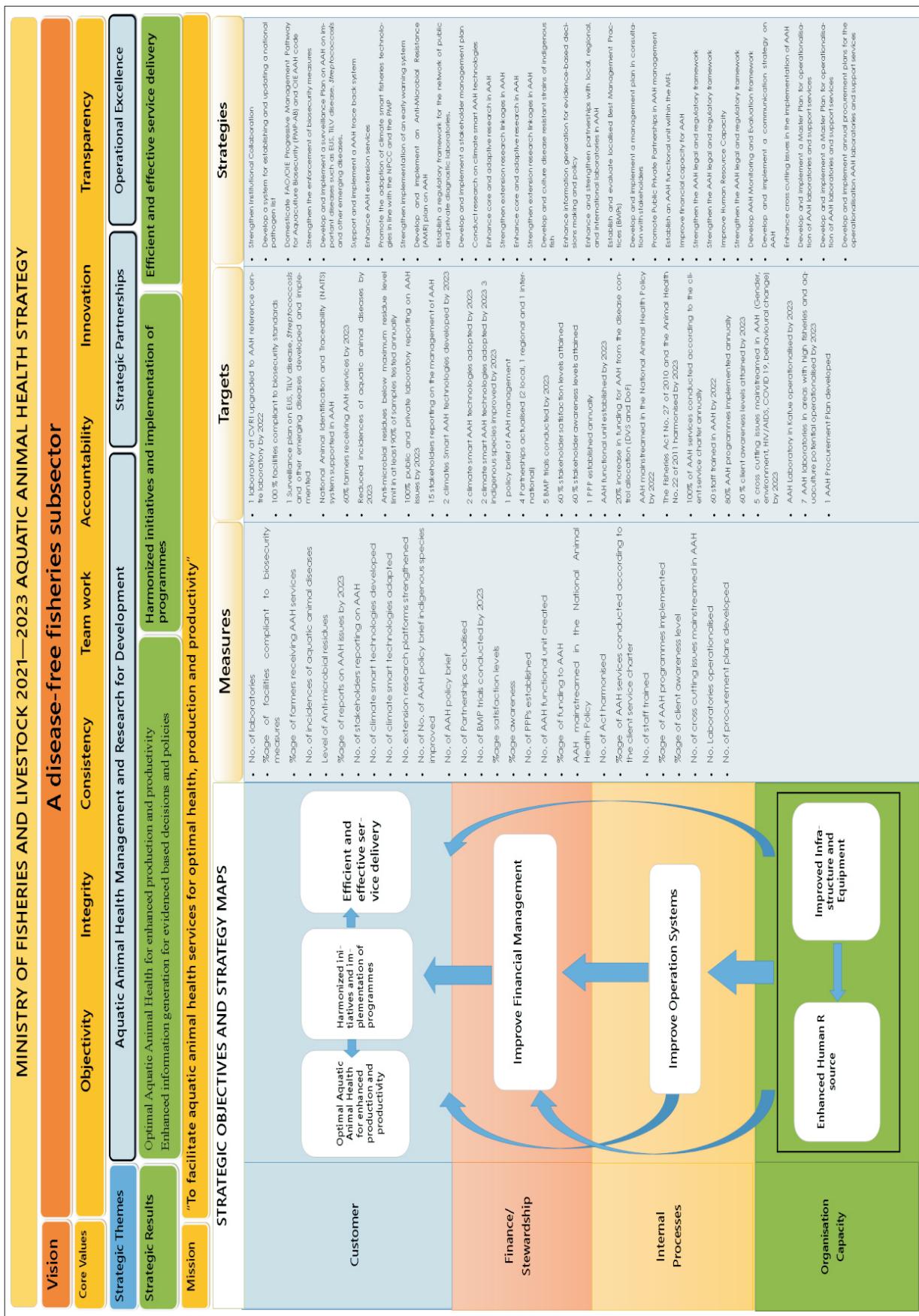
Strategy	Intended Result	Strategic Theme 2:	Strategic Partnerships	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZNW)
								Q1	Q2	Q3	Q4	
STRATEGIC OBJECTIVE 3: Enhance Collaboration with Stakeholders												
Develop and implement a management plan in consultation with stakeholder	Increased stakeholder satisfaction levels attained (60% achieved)	60 % stakeholder satisfaction levels attained (60% achieved)	No data	Develop stakeholder management plan	stakeholder management plan develops	DVS/DoF					176,068.76	
Promote Public Private Partnerships (PPPs) in AAH	AAH PPPs established	1 PPP established annually	No data	Establishment of PPPs in AAH	3 PPP established	DVS/DoF/PPID					117,379.17	
							Objective 3 sub- Total	293,447.93				

Strategy	Intended Result	Yearly Target	Baseline		Activity Output	Dept	Activity Schedule				Budget (ZMW)			
			2019	2019			Q1	Q2	Q3	Q4				
STRATEGIC THEME 3: Operational Excellence														
STRATEGIC OBJECTIVE 4: IMPROVE THE AAH INSTITUTIONAL CAPACITY														
Establish a functional AAH unit within the MFL	Enhanced management and coordination of AAH	AAH function established by 2022	No data	Creation of an AAH function in the MFL	AAH function created	DVS/DoF	164,373.45							
	Improve financial capacity for AAH	20% increase in funding for AAH from the disease control allocation (DVS and DoF) by 2023 (20% achieved)	No data	Strengthen resource mobilisation for AAH	10% increase in funding for AAH	DVS/DoF	82,186.72							
	Strengthen the AAH legal and regulatory framework	AAH mainstreamed in the Enhanced legal framework	No data	Mainstream AAH in the animal health policy	AAH mainstreamed in the Animal Health Policy	DVS/DoF	244,563.15							

Strategy	Intended Result	Yearly Target	Baseline 2019	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
STRATEGIC THEME 3: Operational Excellence	The Fisheries Act No. 27 of 2010 and the Animal Health No. 22 of 2011 harmonised by 2023	Fisheries Act No. 27 of 2010/A nimal Health No. 22 of 2011 of 2023	Drafting amendment bills	10 Provincial consultative meetings held	DVS/ DoF/ PPID					1,500,000.00	
	100% of AAH services conducted according to the client service charter annually	No data	Develop an AAH client Service Charter	An AAH client Service Charter developed	DVS/ DoF					176,068.76	
	Improved skills and competencies in AAH	60 staff trained in AAH by 2022	Develop and implement a training programme on disease diagnostics	AAH implementation Plan developed	DVS/ DoF/ HRA					499,647.12	
	Improve Human Resource Capacity	No data	Support curriculum revision in Training institutions and professional bodies to mainstream AAH	Curriculum Review supported	DVS/ DoF/ HRA					117,379.17	

Strategy	Intended Result	Yearly Target	Baseline	Activity	Activity Output	Dept	Activity Schedule				Budget (ZMW)
							Q1	Q2	Q3	Q4	
STRATEGIC THEME 3: Operational Excellence											
Develop AAH Monitoring and Evaluation framework	Improved programme implementation	80% AAH programmes implemented annually	No data	Support to the implementation of the Management Monitoring System (MMS)	12 Monthly reports produced by the MMS	DVS/ PPID					500,068.76
		Conducting selected surveys on AAH	No data	AAH M&E system developed		DVS/ PPID					500,068.76
			No data	Conduct a endline survey for AAH	AAHendline survey conducted	DVS/ DoF/ PPID/					1,176,068.76
			No data		Mainstreaming crossing issues in AAH Services	Crossing cutting issues mainstreamed in AAH	DVS/ PPID				80,022.92
		Enhance cross cutting issues in the implementation of AAH	5 cross cutting issues mainstreamed in AAH (Gender, environment , HIV/AIDS, COVID 19, behavioural change) by 2023	Crossing cutting issues mainstreamed in AAH	No data						Objective 4 sub- Total 5,040,447.58

ANNEX 3: Balanced Scorecard for Aquatic Animal Health Strategy for the Ministry of Fisheries and Livestock



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