AFRICAN DEVELOPMENT BANK GROUP

REPORT ON

"PROMOTION OF NATIONAL AND REGIONAL FISHERIES AND AQUACULTURE TRADABLE/NUTRITIOUS FOOD PRODUCTS FOCUSING ON SMES, LINKAGES WITH ECO-TOURISM, AND MARKET CONNECTIVITY TO THE AFCFTA"

Submitted on 20 January 2025

Citation

This publication should be cited as: Lizzy Muzungaire, Victor Siamudaala, Agness Chileya, Keagan Kakwasha, and Henry Kanyembo 2025. Report on Promotion of National and Regional Fisheries and Aquaculture Tradable/nutritious Aquatic Food Products Focusing on SMEs, linkages with Eco-tourism, and Market Connectivity to the AfCFTA". Penang, Malaysia: WorldFish. <Publication No>.

About WorldFish

WorldFish is an international, not-for-profit research organization that works to reduce hunger and poverty by improving fisheries and aquaculture. It collaborates with numerous international, regional and national partners to deliver transformational impacts to millions of people who depend on fish for food, nutrition and income in the developing world. Headquartered in Penang, Malaysia and with regional offices across Africa, Asia and the Pacific, WorldFish is a member of the CGIAR, the world's largest global partnership on agriculture research and innovation for a food secure future.

Acknowledgments

This work was undertaken as part of the Southern African Development Community (SADC) Project on Improving Fisheries Governance and Blue Economy Trade Corridors in the SADC Region (PROFISHBLUE Project) with WorldFish as the implementing agency. Gratitude goes to the African Development Bank (AfDB) for the funding support. We acknowledge the also the Governments of Tanzania and Zambia for having supported the implementation of the PROFISHBLUE Project within their respective countries. We also acknowledge all the small and medium enterprises for their contribution to this work.

***Photo credit**: Agness Chileya & Lizzy Muzungaire – WorldFish and Arnold Shoko –Aquatic Biosolutions Tanzania*

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Executive Summary

This report provides valuable insights and recommendations for policymakers, practitioners, and other stakeholders seeking to support the development ofsmall and medium-sized enterprises (SMEs) in the aquatic food sector in Southern Africa. The report highlights the importance of targeted capacity-building programs in addressing the specific needs of SMEs to enhance their capacity to deliver nutrient dense aquatic foods to address household food and nutritional insecurity and in turn promote sustainable development in the region. The overall goal of the nutrition component of the PROFISHBLUE project is to enhance the capacity of SMEs to contribute to improved food safety and trade ultimately consumption of aquatic foods in SADC. The initial work during project implementation was to work with SMEs in Tanzania and Zambia to create a nutrition-sensitive and inclusive business model for scaling to the entire SADC based on lessons learnt on leveraging SMEs to deliver nutritional outcomes by making nutrient-dense aquatic foods more available, accessible and affordable to all, especially marginalized rather bottom of the pyramid (BoP) communities, in the region. . A total of sixty-two (62) SMEs, 31 each from Tanzania and Zambia, underwent the Entrepreneurial Development Program (EDP) at three levels namely (i) Enterprise Development; (ii) Food Safety and……and, (iii) Handholding of SMEs to Enhance Access to "Premium Markets" and Financing. This report summarizes the project outputs achieved after implementing activities under the nutrition component of the project. The achieved outputs are reported under two key categories:

1. Enterprise Development Program (EDP) for the Micro, Small and Medium Entrepreneurs (SMEs) in aquatic foods processing and trade (AFPT) focusing on:
    i) Technical and Business Training of SMEs in AFPT) which involved training the 62 SMEs in business planning, risk management, digital marketing, and food safety. During project implementation one SME in

Zambia was after the training inspired and rehabilitated part of her residence into a fish processing facility which was launched by SADC Secretariat in October 2024. The training programs were tailored to the specific needs of SMEs in each country, taking into account the local context and market requirements.

ii) Creation of Business Platforms for Product Development and Linkages which helped the SMEs to create business platforms. A total of 2 business platforms, one in each country, were created in Tanzania and Zambia during project implementation;

iii) Facilitate SMEs to Scale-out Production using Business Development Tools – under this sub-activity the SMEs were trained in different ways to boost their businesses using a business development framework (BDF) comprising Business Development Strategy; Marketing Plan and Customer Relationship.

iv) Develop Partnerships, Financing and Promoting Exportable Fish-based Products where the SMEs where helped to explore formation of business partnerships and where handheld to access financing and premium markets, in addition to supporting the SMEs attend local and international business fairs and events to promote their products.

2. Generation of Knowledge Products and Communication Tools focusing on the following outputs:

    i) Developing a web-based repository for aquatic foods in the region, which has been completed and is ready to be populated with knowledge products;

ii) Developing and disseminating a recipe book on Aquatic Foods – a draft recipe book has been produced and is now undergoing internal review and validation;

iii) Raising awareness on the benefits of consuming aquatic foods – where short videos and blogs have been produced highlighting the role of aquatic foods in human nutrition;

iv) Developing a SADC Policy Paper on promotion of Nutritious aquatic food products by SMEs and market connectivity to AfCFTA – a draft policy brief has been produced is being reviewed and validated.

The project generated significant impacts, including knowledge and skills transfer in business planning and food safety, increased awareness of the nutrition value of aquatic foods, and contributions to national and regional development. Specifically, the project helped to improve the business performance of SMEs, enhance their compliance with food safety standards, and increase their access to regional and international markets. The project also identified lessons learned and proposed a way forward for scaling up the capacity-building program to other SADC member states.

"Innovative SMEs are transforming aquatic food consumption in SADC by making nutrient-dense, safe, and accessible aquatic foods a reality—bridging the gap between food security, business sustainability, and regional trade."

List of Acronyms

ABiST - Aquaculture Business and Investment Support Team

AFCFTA - African Continental Free Trade Agreement

AFO - Aqua Farm Organization

AFPT - Aquatic Foods Processing and Trade

AWFISHNET - Africa Women's Fish Processors and Traders Network

BDF – Business Development Framework

BDS - Business Development Services

BoP – Bottom of the Pyramid

BRELA - Business Registration and Licensing Agency

CARDESSA - Comprehensive Africa Agriculture Development Programme - Regional Staple Crops Programme

CBT - Cross Border Trade

CEEC - Citizens Economic Empowerment Commission

DITF - Dar es Salaam International Trade Fair

EDP - Enterprise Development Program

FAO - Food and Agriculture Organization

FIS - Fisheries Information Systems

HACCP - Hazard Analysis and Critical Control Points

IFAD - International Fund for Agricultural Development

IFPRI - International Food Policy Research Institute

IOC - Indian Ocean Commission

IPs - Implementing Partners

MSMEs - Micro, Small and Medium Enterprises

NMB - National Microfinance Bank

OACPS - Organization of African, Caribbean and Pacific States

PACRA - Patents and Companies Registration Authority

PPPs - Public-Private Partnerships

PROFISHBLUE - Program for Improving Fisheries governance and Blue economy trade corridors

RECs - Regional Economic Communities

RISDP - Regional Indicative Strategic Development Plan

SADC - Southern African Development Community

SBS - Tanzania Bureau of Standards

SIDO - Small Industries Development Organization

SMEs - Small and Medium-sized Enterprises

SPSS - Statistical Package for the Social Sciences

SPS - Sanitary and Phytosanitary Measures

TAFIRI - Tanzania Fisheries Research Institute

TANTRADE - Tanzania Trade Development Authority

TAWFA - Tanzania Women Fish Workers Association

TBS - Tanzania Bureau of Standards

UNNECA - United Nations Economic Commission for Africa

USAID - United States Agency for International Development

ZABS - Zambia Bureau of Standards

ZANACO - Zambia National Commercial Bank

ZDA - Zambia Development Agency

ZEDF - Zambia Export Development Fund

ZICB - Zambia Industrial Commercial Bank

1. Introduction

This report was prepared by WorldFish as part of the Program for Improving Fisheries Governance and Blue Economy Trade Corridors (PROFISHBLUE Project) which is funded by AfDB and managed by SADC Secretariat and implemented by multiple implementing partners (IPs). SADC Secretariat contracted WorldFish as an IP to implement three sub-components of the project namely:

i. Promote genetic improvement and aquaculture programs | regional hatchery support and training;
ii. Digital fisheries information systems (FIS) for value chain actors and knowledge sharing platform and;
iii. Promotion of national and regional fisheries and aquaculture tradable/nutritious food products focusing on SMEs, linkages with eco-tourism, and market connectivity to the African Continental Free Trade Area (AfCFTA).

The focus of this report is on progress achieved in the implementation of the sub-component **"Promotion of national and regional fisheries and aquaculture tradable/nutritious food products focusing on SMEs, linkages with eco-tourism, and market connectivity to the African Continental Free Trade Area (AfCFTA)."** The report covers the following key milestones:

a. Training workshops and creating a business platform for fish-based products development;
b. Support to SMEs for scaling out fish-based diet production using business development tools;
c. Developing partnerships, financing and promoting exportable fish-based products; and;
d. Generation of Knowledge products and communication tools.

The report is divided into three parts namely:

a) Part 1 provides **Context of the PROFISHBLUE Project** with a focus on the Nutrition Component "Promotion of national and regional fisheries and aquaculture tradable/nutritious food products focusing on SMEs, linkages with eco-tourism, and market connectivity to the AfCFTA" and the aforementioned milestones;

b) Part 2 describes the **Enterprise Development Program (EDP) for the Micro, Small and Medium Entrepreneurs (SMEs)** in aquatic foods processing and trade (AFPT) implemented by WorldFish with a focus on:

   i. Training of the MSMEs in the technical and business aspects of AFPT;
   ii. Creating Business Platforms for Product Development and Linkages;
   iii. Support to SMEs for Scaling-out Production using Business Development Tools;
   iv. Develop Partnerships, Financing and Promoting Exportable Fish-based Products

c) Part 3 is on the **Generation of Knowledge Products and Communication Tools** describing achievements made under the following:

   i. Developing a web-based repository for aquatic foods in the region
   ii. Developing and disseminating a recipe book on Aquatic Foods;
   iii. Raising awareness on the benefits of consuming aquatic foods and;
   iv. Developing a SADC Policy Paper on promotion of Nutritious aquatic food products by SMEs and market connectivity to AfCFTA;

d) Part 4 is on **Impact Generated** by the Project;

e) Part 5 on **"Scaling Up the EDP for SMEs in AFPT in SADC"** describing the process and training curriculum to be used by SADC to scale out the program to other member states in the region to "Promote national and regional fisheries and aquaculture tradable/nutritious food products by SMEs" using lessons from the two pilot countries of Tanzania and Zambia.

f) Part 6 is the **Discussion and Conclusion** which describes *inter alia*:
   i) the opportunities and challenges faced by the SMEs within the context of the objectives of the PROFISHBLUE Project and the proposed way forward;
   ii) Challenges faced by WorldFish in executing the assignment and the mitigation measures undertaken to steer the project on course and ensure it delivers on the key milestones and;
   iii) Conclusion

The project did not seek to establish new SMEs but instead worked with existing SMEs to increase their entrepreneurial capacity by helping them seize and optimize existing business opportunities and resolve constraints they face in their business operations.

The work undertaken by WorldFish on behalf of SADC under the PROFISHBLUE Project has demonstrated that SMEs are a critical vehicle for delivering nutritious fish-based food products in the region through improved domestic and cross border trade. To achieve this however, there is a need to continuously facilitate SMEs to formalize their enterprises and enter the formal economy; build the technical and business skills of the SMEs in fish processing and fish trade respectively; create enhance to SMEs in AFPT on trade facilitation mechanism offered by Regional Economic Communities (RECs) and the AfCFTA and, various business development services and incentives offered by their respective Governments.

Part 1

2. Context of the Nutrition Component of the PROFISHBLUE Project

This section provides a high-level context of the PROFISHBLUE project and why it matters to SADC.

2.1 Description of the PROFISHBLUE Project

The overall goal of the PROFISHBLUE project which was launched on 30th March 2022 in Gaborone, Botswana by AfDB and SADC Secretariat alongside the IPs is "to promote sustainable management and use of fisheries resources within the blue growth context in the SADC region in order to improve food security, reduce poverty levels through employment opportunities, facilitate intra-regional trade, and enhanced adaptive capacity of fish value chain communities against climate change and other external shocks." The project has three major technical components described in Table 1. AfDB is financing the project through a grant of US$ 9.2 million to SADC. The project has a strong alignment with SADC's Regional Indicative Strategic Development Plan (RISDP) 2020 - 2030 and; AfDB's Feed Africa Program and Improve the Quality of Life for the People of Africa. The project contributes to the following Sustainable Development Goals - SDG 2 on "End hunger, achieve food security and improved nutrition and promote sustainable agriculture"; SDG 5 on "Achieve gender equality"; SDG 13 on "Take urgent action to combat climate change and its impacts" and SDG 14 on "Conserve and sustainably use the oceans, seas and marine resources for sustainable development."

Table 1: Technical Components for the PROFISHBLUE Project

Project Component	Key Components	Component Contracted to WorldFish
Improving collaborative governance of transboundary fisheries and genetic resources	• Develop 3 regional Blue Economy Strategy and multi-sector investment plans with a focus on aquatic foods and integrated livelihoods (Lake Malawi/Niassa/Nyasa, Lake Tanganyika, and Mozambique Channel) • Soft infrastructure support to regional vessel monitoring, control and surveillance mechanisms in inland lakes and coastal regions (e.g. GPS -based fishing fleet tracking systems) Promote genetic improvement and aquaculture programs | regional hatchery support and training Conduct joint fisheries assessments and vessel frame surveys (riparian systems) • Digital fisheries information systems (FIS) for value chain actors and knowledge sharing platform Assess and improve on watershed management plans, map-out biodiversity hotspots for protection, and promote multi-user zoning by-laws for ecosystems service synergies	1. Promote genetic improvement and aquaculture programs/regional hatchery support and training 2. Digital fisheries information systems (FIS) for value chain actors and knowledge sharing platform
Policy harmonization and trade facilitation towards intra-regional trade	i. Replicate the 'One Stop Border Post' program for fish products across 7 bordering countries (Malawi, Zambia, Zimbabwe, Mozambique, Comoros, Madagascar and United Republic of Tanzania) ii. Support cold-room storage networks and trade corridors for women and youth SME and support market information infrastructure (e.g. INFOSA) and ICT iii. Provide business development services, accelerator, and incubation/investment	Promotion of national and regional

	support for women and youth small-to-medium-enterprises (SMEs) in fish trade and eco-tourism iv. Harmonize fish value chain standards, quality control, and packaging for sanitary conditions, sanitary and phytosanitary measures (SPS), and chain of custody rules/eco certification v. Promotion of national and regional fisheries and aquaculture tradable/nutritious food products focusing on SMEs, linkages with eco-tourism, and market connectivity to the African Continental Free Trade Area (AfCFTA) and; vi. Create an enabling environment for investment and PPPs in the blue economy sectors	fisheries and aquaculture tradable/nutritious food products focusing on SMEs, linkages with eco-tourism, and market connectivity to the AfCFTA

The sub-component "Promotion of national and regional fisheries and aquaculture tradable/nutritious food products focusing on SMEs, linkages with eco-tourism, and market connectivity to the AfCFTA" is designed to strengthen the availability and accessibility of nutritious aquatic food products to communities in the SADC region; and to enable transformation through the aquatic food systems framework to address food and nutrition security of SADC nations, as well as to improve supply chain, markets and policy instruments to build resilient stakeholders across the food system. The project has identified SMEs as an important stakeholder in transforming aquatic food systems, with particular focus on women and youth SMEs in the region.

In terms of project implementation this sub-component was implemented in two member states of Tanzania and Zambia. Lessons and experience gained from the two countries were used to develop a framework for scaling out the activities under this sub-

component, especially the Enterprise Development Programme (EDP) for the SMEs in AFPT.

The direct beneficiaries of this sub-component are:

i. SMEs in terms of technical and business skills gained and; improved access to markets and financing and; improved networking among the SMEs through business platforms and;

ii. Households through increased access to diverse fish-based food products leading to improved household food and nutrition security. The beneficiaries at households are women in reproductive ages and children in the first 1000 days of life will benefit from the increased consumption of fish which is high in protein and micronutrients.

2.2 Why Small and Medium Entrepreneurs

Globally, SMEs have been identified as the lifeblood of any well-functioning economy (Hansen et al, 2020). Agri-food SMEs are critical for the well-functioning of nutritious food systems as they act as important nodes in a network of small to medium-scale producers, processors, aggregators, distributors, and retailers that collectively manage the flow of nutritious foods in the "farm-to-plate" system in a typical rural-urban food system (FAO, 2024; Reardon et al, 2021; Hansen et al, 2020). This is more apparent in developing regions in Africa and South Asia where most food consumed is purchased, aggregated, processed, transported, wholesaled, and retailed by SMEs (Reardon et al., 2021). Relying on this observation development programs have designed interventions to improve the profitability of SMEs on the understanding that increasing profitability of SMEs could increase market-level availability and affordability of nutritious foods among low-income consumers especially in developing countries and in turn increase purchase and consumption of these nutritious foods, thereby improving diet and nutrition-related outcomes (Maredia et al, 2023). According to Readon et al (2019b) SMEs

may influence the availability, acceptability, affordability, and nutritional content of foods in the marketplace as they are the majority in the retail food sector in developing countries, especially in low-income neighborhoods. FAO and IFPRI (2021) identified training SMEs on how to improve the nutritive value of food and raising awareness on the value of nutrition among low-income consumers are critical for SME success in improving nutrition.

2.3 The African Continental Free Trade Area

The launch of the African Continental Free Trade Area (AfCFTA) in March 2018 has created an opportunity for the business community, including SMEs, to harness market and trade opportunities locally, regionally, and internationally. Regional trade is a critical lever that can unlock significant benefits as it promotes economic growth through broader market access, food security by increasing the availability of and access to food through a variety of channels and increased incomes from trade, which boosts consumers' purchasing power, allowing them to consume more and better-quality and safe food.

2.4 Potential for Fish Trade in the SADC Region

Intra-regional fish trade has potential in addressing the region's food and nutrition insecurity, as well as poverty reduction, by enabling movement of fish from countries of surplus to those with deficit (Mussa et al, 2027). Fish and fish products have a crucial role in nutrition and global food security, as they represent a valuable source of nutrients and micronutrients important for diversified and healthy diets. Moreover, in lower-income countries, the importance of fish is enhanced by the fact that it contains many of the vitamins and minerals required to address some of the most severe and widespread nutritional deficiencies (IFAD, 2019) [1]. The movement of goods through trade is a major economic derivative of the blue economy (UNECA, 2020). Trade between Southern

African Development Community countries is high (Behar & Edward, 2011). Fish Trade is a major commodity exchange that makes fish to be the cheapest source of animal protein in Eastern and Southern Africa, particularly within the Great Lakes Region (IOC, 2012). SADC recognizes fish and fish products as one of the ten (10) regional value chains in the agro-processing cluster closely linked to the SADC Industrialization Strategy (UNECA, 2024; SADC, 2023). From the point of view of generating regional value added and to support food security, intra-regional trade in fish products should be encouraged and expanded (IOC, 2012). SADC States have prioritized improvement of the lives of their people by increasing access to safe and adequate food, recognizing that a healthy, well-fed population will be better equipped to build a better future (CARDESSA, 2015). A major challenge to SADC is increasing human population with SADC's population of 377 million predicted to double by 2050 resulting in *inter alia* increased demand on already stretched food and nutrition resources (Hlatshwayo & Kefi, 2023). This recognition creates enormous trade opportunities for SMEs in the region. Despite this undoubted potential SMEs in the region are not able to optimize this potential as they face multiple constraints such as:

i. Inadequate formalization of their enterprises which hinders them from accessing financing and premium markets in the formal economy;
ii. Fragmented supply chains
iii. Inadequate business and managerial skills

Part 2

3. Capacity Building of SMEs in Enterprise Development

3.1. Overview of the Capacity Building Program

The Project employed a multi-faceted approach to build the capacity of SMEs in Tanzania and Zambia. This included comprehensive training workshops spanning 5-9 days, field excursions to facilitate hands-on learning, and motivational talks from successful peers and industry experts. Additionally, SMEs benefited from targeted coaching and mentorship sessions, both in-person and online, which addressed specific challenges and areas for improvement. Furthermore, the project supported SMEs' participation in conferences and expositions, enabling them to network with peers, share knowledge, and stay updated on industry trends.

3.2. Framework for the Capacity Building Program

The framework that was used to implement the Enterprise Development Program (EDP) is shown in Figure 1 below.

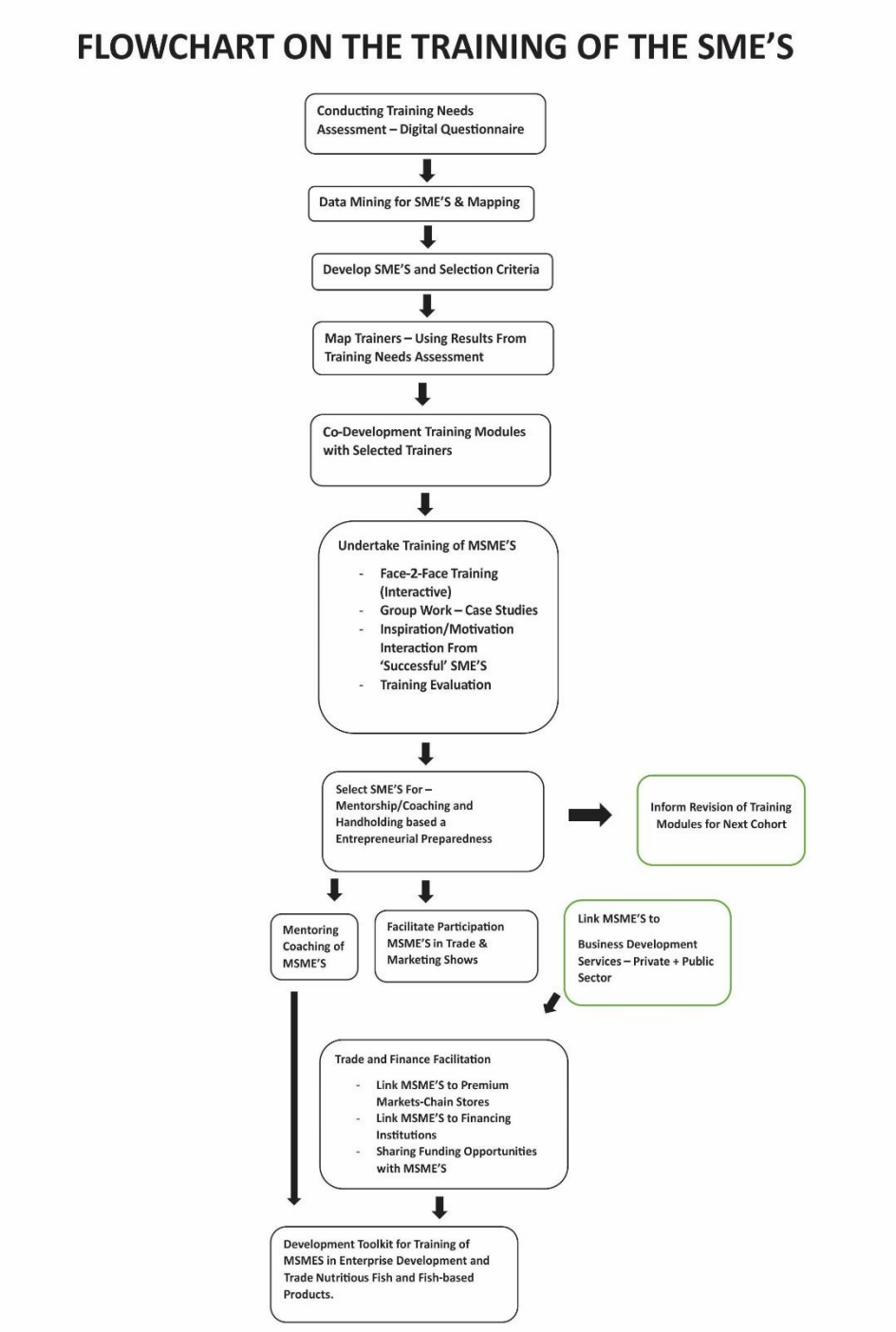

Figure 1: Flow Chart of the Capacity Building Process

3.3. Data Mining to get a Scope of the SMEs involved in Aquatic Food Processing: Potential project Beneficiaries

To have an informed status of the landscape, the project undertook a mapping exercise to identify and understand SMEs operating in the value addition node of the fisheries value chain within the two pilot countries, Tanzania and Zambia. This baseline study aimed to gather information on the actors involved i.e., their geographical location, gender (male/female/youth), products, production volumes, and other relevant attributes. The project explored existing databases at the Ministries responsible for fisheries and other agencies working in the aquatic foods space.

In Zambia, the SMEs databases were mainly obtained from the Zambia Aquaculture Enterprise Development Project (ZAEDP) as well as the Africa Women's Fish Processors and Traders Network (AWFISHNET); both datasets domiciled within the Ministry of Fisheries and Livestock. In the case of Tanzania, SMEs were similarly sourced from the Ministry of Livestock and Fisheries, subsidiary organizations in the name of AWFISHNET, Aqua Farm Organization (AFO), and the Tanzania Women Fish Workers Association (TAWFA).

The mapping exercise revealed distinct characteristics of SMEs in Tanzania and Zambia. Notably, Tanzanian SMEs tend to operate in groups, such as cooperatives, with 10-15 members per group. This cooperative model allows for knowledge sharing and skill transfer among members, fostering sustainability and motivation. Under the PROFISHBLUE project, training and capacity-building initiatives targeted group leaders, who in turn, disseminated the knowledge and skills to their group members. This approach amplified the project's impact, benefiting over 310 members, represented by

the 31 group leaders who attended the training. In contrast, Zambian SMEs primarily operate as sole proprietors.

A questionnaire was designed to collect the necessary data, which was administered primarily through online platforms such as email and WhatsApp. The same questionnaire was used in both countries. The collected data was analyzed to identify SMEs suitable for training and capacity-building initiatives under the project. The information gathered also informed the design of follow-up capacity building initiatives for the project. A sample of the sampling questionnaire is attached in Annex 1.

3.3.1. General Overview of the SMEs in Aquatic Foods in Tanzania and Zambia

Presently, innovative processing of aquatic foods in the two countries is dominated by SMEs as large value-chain actors still predominantly focus on traditional fish products of producing and selling fresh or frozen whole products. Despite this dominance, the SMEs in the Aquatic Food System (AqFS) have not been supported to grow their enterprises as the case is with their counterparts in other agri-food value chains; such as crops and livestock enterprises. Historically, support to aquatic foods has focused on stimulating production of smallholder aquaculture farmers and artisanal fisher folks; with little attention given to post-harvest processors and traders. The situation is slowly changing as most governments in the region have recognized AqFS as an economic sector. Previously, support to SMEs in fisheries and aquaculture was biased to activities centered on production, and most if it was non-market oriented, with little or no attention given to processing and marketing, especially in the context of formalized fish trade. This has contributed to the existing situation of thin data and reports on sustainable entrepreneurship in fisheries and aquaculture in the region.

Based on the classification by Hansel et al (2020) and Reardon et al (2021) the SMEs engaged in Tanzania and Zambia are typically home-based "transitional enterprises" in urban areas operating in both midstream and downstream stages of the food market landscape. These SMEs are involved in the processing and trade (mostly as retailers) of aquatic foods. Previously, the SMEs hardly had any product differentiation as they processed and sold similar products such as sun-dried and smoked fish.

3.3.2. Characteristics of the SMEs

Based on the data collected, the AFPT-based SMEs in both Tanzania and Zambia are small (micro) food processing entrepreneurs who are still in the nascent stage of enterprise development. These entrepreneurs operate in both midstream and downstream segments of the aquatic food systems as buyers of fish from upstream entrepreneurs such as fisher folks and aquaculture farmers in business-to-business (B2B) transactions and then sell their processed products mostly directly to the final consumers in a business-to-consumer (B2C) transaction. The SMEs transform fish into various products using simple home-based processing technologies, and storage facilities and sell their products to a network of friends, neighbors, and others using direct marketing. They also use digital platforms such as Facebook and WhatsApp to market their products to other clients. They depend on clients to pick up the products from them or they deliver products using personal transport. Most of the SMEs have financed the operations of their enterprises from personal savings or loans from family and friends and relied heavily on sales for their business sustainability. The SMEs are generally located in peri-urban areas and cities.

At the time of project implementation, the SMEs did not have proper management systems such as record keeping systems, financial management systems, inventory tracking systems, etc. Most of the SMEs were not aware of the benefits of investing in

food quality and safety. The SMEs in Zambia did not have strong linkages with suppliers of fish as the fish processors tend to source their inputs on the open market. In contrast, the SMEs in Tanzania have created backward linkages through the creation of out-grower schemes which they provide with technical support services. The SMEs in both countries face challenges regarding access to markets and affordable finance.

The SMEs offer diverse fish-based products compared to large commercial fish producers who historically focus on producing tilapia fish which is sold either as fresh or frozen fish. In contrast, the SMEs have multiple food innovations on offer as displayed in the food atlas (attached here); making SMEs more innovative than commercial aquaculture enterprises. This product innovation is contributing significantly to consumption of fish and fish products across the various segments of populations in SADC – affluent, middle class and the bottom of the pyramid.

3.4. Training Needs Assessment

In order to design training program which would be robust in addressing the core challenges of the actors, the project started by undertaking a training needs assessment (TNA) exercise. The TNA was carried out within the month of May 2024 in Tanzania and September 2023 in Zambia. In both countries the TNA helped WorldFish to:

a. Understand the SMEs in terms of business formalization; types and volumes of products produced; source of raw materials and the markets where the SMEs sell their products; revenue and cost structures
b. Understand the challenges faced by the SMEs;
c. Design a fit-for-purpose training program aligned to "Enabling transformation through the aquatic food systems framework to address food and nutrition security of SADC nations"

d. Develop, in combination with experiences during and post-training, a Training Guide for SMEs in Aquatic Food Systems in SADC and;
e. Develop a Policy Brief to inform SADC Secretariat and member states on essential policy measures to support SMEs in regional fish trade.

The TNA conducted in Tanzania and Zambia identified key areas for capacity building among Small and Medium-sized Enterprises (SMEs) in the FPT in AqFS in the two countries.

Identified Training Needs

TNAs conducted in Tanzania and Zambia identified key areas for capacity building among small and medium-sized enterprises (SMEs). Notably, the training needs across both countries showed a high degree of similarity, highlighting common challenges and opportunities for growth. The recommended training topics converge on several critical areas, including business development, food safety, and trade requirements. These initiatives aim to enhance the capacity of SMEs, ultimately contributing to improved food safety, increased trade, and sustainable business growth.

Key subject areas which were recommended from the TNA are as tabulated in Table 2 below:

Table 2: Topics recommended from the TNA-Tanzania & Zambia

Production/Entrepreneurship	Product Development	Trade Facilitation
Entrepreneurship	Food production and preservation	Product standards and labeling for domestic and export markets
Business planning and management	Food quality characteristics & Nutritional contents of aquatic food products	Export procedures & documentation
Risk management	Food spoilage	Trade opportunities under RECs and AfCFTA
Digital marketing/e-commerce & e-payment	Food hygiene and safety	International trade facilitation
Financial management	Good Manufacturing Practices (GMPs)	Product standards for domestic & international markets
Human resources management	Hazard Analysis and Critical Control Points (HACCP)	Digital platforms for trade facilitation
Operations management	Packaging and labeling + Branding	Partnerships & collaboration for trade development

3.5. Selection of the SMEs for the Training

The SMEs included in the training were selected from existing databases as highlighted in section 3.3 above. The selection process for SMEs to participate in the training program was guided by several factors. Firstly, the number of participants was limited to 30 per country, due to financial constraints. However, within this limit, a deliberate effort was made to ensure gender inclusivity, providing a fair share of opportunities to men, women, and youth.

3.5.1. Gender Composition

Interestingly, the aquatic foods value addition/processing industry in both Tanzania and Zambia is dominated by women. The proportion of women selected for training was 77.4% in Tanzania and 71.0% in Zambia, with an overall total of 74.2% women across the two countries. Youth participants accounted for just 16.1% (9.7% in Tanzania and 19.4% in Zambia), with the remaining participants being older adults. The dominance of women

participants displayed in both countries stems from the fact that generally the processing value chain node is widely dominated by women (with baseline data exhibiting about 86% and 57% women in Tanzania and Zambia respectively). On the other hand, the project had 9.7% youth beneficiaries in Tanzania and 19.4% in Zambia. Refer to Figures 3 & 4 below for gender disaggregated data of the SMEs trained, while Figure 2 provides a summary of the gender disaggregated data across the two countries.

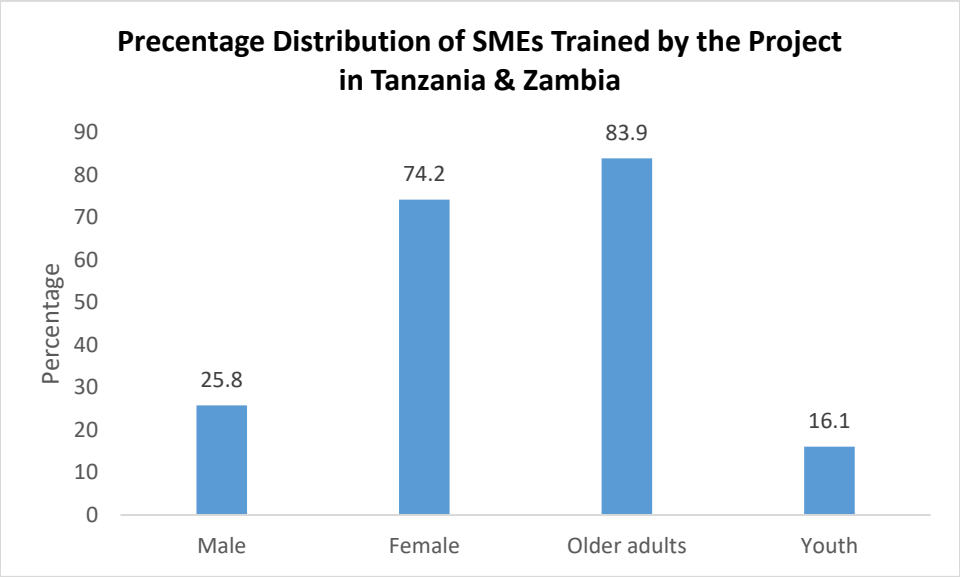

Figure 2: Gender & Age distribution of SMEs Trained in both Tanzania & Zambia

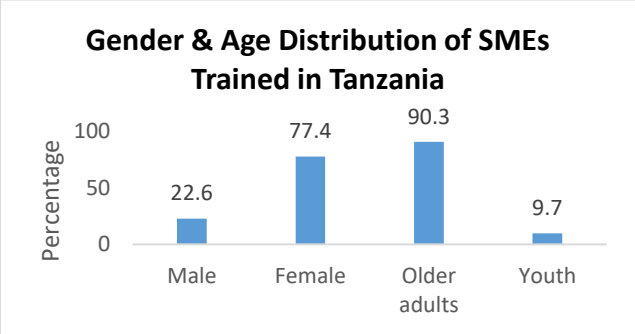

Figure 3: Gender & Age data of SMEs Trained in Tanzania

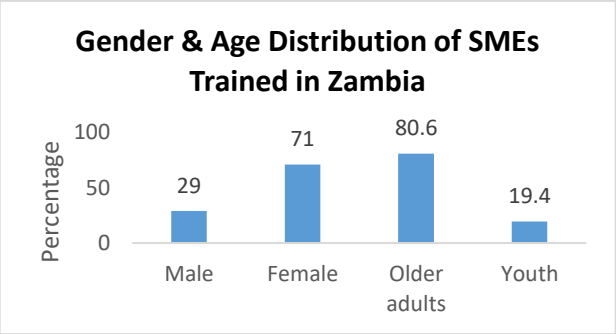

Figure 4: Gender & Age data of SMEs Trained in Zambia

3.5.2. Spatial Location of the Selected SMEs

The number of SMEs that were selected for training and their spatial location is shown in Figure 5 for Tanzania and Zambia respectively. In Tanzania, Mwanza accounted for the highest number of SMEs (32.3%), followed by Dar es Salaam (25.8%). Mwanza is the major producer of freshwater fish mainly from Lake Victoria and its islands while Dar es Salaam is the major source of marine fish from the Indian Ocean. In the case of Zambia, most of the SMEs (64.5%) originate from Lusaka and the Copperbelt (16.1%) provinces which are the major fish markets in the country.

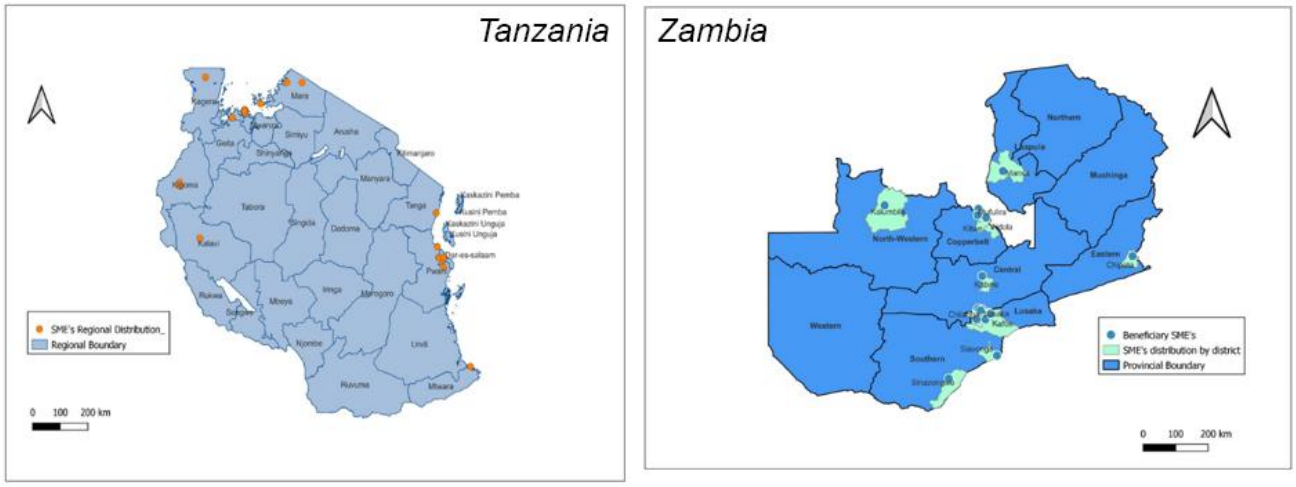

Figure 5: Spatial Distribution of SMEs in Tanzania and Zambia (Maps courtesy of Henry Kanyembo –WorldFish)

3.5.3. Criteria used in selecting SMEs

To select the SMEs, a set of criteria was applied, grouped into four main themes:

- ***Business Fundamentals***: Official registration, minimum three years of experience in processing aquatic foods, and reliable contact information.

- ***Social Impact***: Women-led or co-owned SMEs, collaboration with cooperatives, especially those with a higher percentage of female members.
- ***Market and Production***: Processing goods for local and/or export markets, minimum of three members to ensure diversification within the SMEs.
- ***Growth Potential***: Potential to scale out production soon to diverse location to impact various communities.

Using Hansen et al (2020) classification of SMEs, the SMEs that were selected for the EDP can best be described as transitional SMEs. Three characteristics were evaluated during the selection process, mainly gender composition, stage of growth and business formalization.

Stage of Growth of the SMEs

To determine the stage of growth of the SMEs the project used selected proxy indicators as detailed below:

Formal Registration/Compliance of Enterprise

The SMEs were requested through the questionnaire to provide their registration status with competent authorities in the two pilot countries. While there may be slight variations, processes/procedures expected of SMEs formalization in Tanzania and Zambia are pretty much similar. According to regulations in both countries, SMEs in the food industry are required to have the following registration:

i. Business Registration and Licensing Agency (BRELA) in the case of Tanzania and Patents and Companies Registration Authority (PACRA) for Zambia. This is the authority responsible for registration of businesses, cooperatives/associations/societies, or any such entity within the country. It is a

pre-requisite for other requirements such as a Trading Permit, Tax Clearance, Public Health Permit, Product Certification, and opening of a business bank account among others.

It was noted with concern that the general trend among SMEs in both countries is that the businesses are far from conforming to registration guidelines. Of the 31 SMEs selected for training in Tanzania, only 11 (35%) were formally registered by BRELA in Tanzania and Zambia on the other hand had 14 (45%) registered by PACRA. Lack of formal registration exhibited by the majority of the SMEs across both countries severely limits their ability to trade, as it is a prerequisite for tax registration, product certification, and ultimately access to credit. Consequently, these unregistered SMEs are restricted from accessing premium markets and exporting their products across borders. They are therefore largely stuck in the infancy stage of their businesses, hindered from achieving growth and expansion into export markets. Unfortunately, the baseline study revealed a concerning lack of insurance cover among SMEs; with none of the surveyed enterprises in both countries holding insurance policies. Insurance is crucial for SMEs as it not only mitigates risks and enhances resilience but also serves as a prerequisite for accessing credit facilities and investments. To address this gap, the project emphasized promoting insurance awareness and education among SMEs, incorporating insurance-related topics within the training content and capacity-building initiatives.

Product Certification - From the SMEs who attended the training, only one (3%) out of 31 had their products certified by the Tanzania Bureau of Standards (TBS); and two (6%) by the Zambia Bureau of Standards in Zambia (ZABS). Undoubtedly, this certification gap severely deters their growth prospects,

limiting access to premium markets (domestic and international); given such markets usually demand product certification as a guarantee of quality. As a result, these SMEs are constrained from realizing their full potential, struggling to expand their customer base.

Business Ownership

From the baseline data gathered, there are three types of business ownership in the two pilot countries. These are sole proprietorship, partnerships, and cooperatives. Tanzania generally employs a partnership and/or cooperatives model; with over 171 aqua foods processing groups registered under the databases of the Ministry responsible for fisheries; and that of the Tanzania Women Fish Workers Association. In the case of Zambia, over 90% of businesses operate on a sole proprietorship basis. While there are a few cooperatives within the fisheries sector in the country, these are more for the case of cage fish farmers.

3.6. Mapping of Trainers

To ensure the highest quality of results, a rigorous selection process was undertaken to identify the most competent facilitators for each of the three areas of focus i.e. i) Business Development Strategies, ii) Product Development, and iii) Trade Facilitation. The project employed a rigorous and transparent process to select capacity building experts for SMEs in aquatic food systems. To ensure the highest level of expertise, the project tapped into a pool of competent organizations and institutions with a proven track record in the field. The selection process began with creating a database of available experts across the country, with the ministries responsible for fisheries being the first point of contact. Project national focal point persons played a crucial role in identifying experts within the ministries.

In Tanzania, the Small Industry Development Organization (SIDO), the country's competent authority responsible for SME development, was appointed as the main agency to handle capacity building for the project. To supplement SIDO's expertise, specialized knowledge was sought from institutions with relevant resources, including the Ministry of Livestock and Fisheries, Tanzania Fisheries Research Institute (TAFIRI), University of Dar es Salaam (UDSM), BRELA, TBS, TDA, TANTRADE, Government Chemist Laboratory Authority (GCLA), Tanzania Chamber of Commerce, and public and private financial institutions such as the National Microfinance Bank of Tanzania (NMB).

In Zambia, facilitators were selected from a range of institutions, including Fisheries and Line ministries (Fisheries and Livestock, Small and Medium Enterprise Development, Commerce Trade and Industry), University of Zambia (UNZA), Zambia Bureau of Standards) ZABS, Zambia Development Agency (ZDA), public and private financial institutions (e.g. Zambia National Commercial Bank – ZANACO, Zambia Industrial Commercial Bank – ZICB, Citizens Economic Empowerment commission – CEEC), private consulting firms, and local chain stores. Throughout the selection process, the project ensured that the chosen experts possessed the requisite skills, knowledge, and experience to provide high-quality capacity-building services to SMEs in aquatic food systems. The selection criteria included *inter-alia*:

- Competence and expertise in the specific area of capacity building
- Proven track record of successfully delivering similar capacity-building initiatives in the past
- Reliable references from previous clients or partners

3.7. Co-Development of Training Manuals and Schedules with the Trainers

WorldFish worked with the trainers identified in section 3.8 to co-develop a comprehensive and fit-for-purpose training manual for the SMEs. The training covered technical, business and financial aspects of fish-processing enterprises as described below. The training was designed to help the SMEs to *inter alia*:

i) Create business platforms for product development;
ii) Scale-out their production using business development tools
iii) Build capacity to process and package fish-based food products to be marketed across SADC and;
iv) Develop partnerships for financing.

The EDP was implemented in two SADC member states, Tanzania and Zambia. Lessons from the two countries shaped the formulation of the training manuals and knowledge products that can be readily adapted by the other 14 SADC member states. Training manuals can be accessed here for the Tanzania training program while in Zambia there were two separate manuals developed for the Product Development & Trade Facilitation and another for the Business Development of training program.

3.7.1. Components of the Training

This training was focused on the technical aspect of food processing as well as trade facilitation strategies. The third component was on Business Development Tools. Under Business development, the training was designed to enhance the entrepreneurial capacity of the SMEs and facilitate them, as "Food Entrepreneurs" to access formal markets at domestic and regional markets and deliver nutritious and safe fish-based products, including consumers at the bottom of the pyramid (BoP). The training modules used during the training in both countries can be accessed in Annexes 2 & 3 for Tanzania and Zambia respectively.

3.8. Training of SMEs

The approach used to train the SMEs was a workshop format. Trainings were conducted under three (3) key workshops namely: i) Business Development Tools, ii) Product Development, and iii) Trade Requirements for domestic, regional, and international markets. To maximize utilization of limited resources (financial, human, and time) the three workshops were conducted back-to-back over a six (6) to nine (9) days period. They were implemented in a row; one following the other. This way, it also reduced travel fatigue for participants and resource persons. Other costs such as transport allowances were equally reduced as this would only be expended once. All trainees from all parts of the country convened at a central location i.e Dar es Salaam and Kafue for Tanzania and Zambia respectively. While Zambia implemented two cohorts of trainings of 15 trainees in October 2023 and another 16 in May 2024, Tanzania trained all 31 SMEs at once in June 2024.

The training workshop was a pivotal component of the project, designed to equip SMEs with the necessary skills and knowledge to enhance their competitiveness and contribute to the growth of the aquatic food sector. To achieve this objective, the workshop adopted a highly interactive and participatory approach, encouraging SME owners to share their experiences, challenges, and successes. This collaborative environment fostered a sense of community and motivated participants to work together to find solutions to improve their businesses.

- **Official Opening and Closing Ceremonies**

The training workshops in Zambia and Tanzania kicked off with a ceremonial opening, officiated by high-level senior officials. In both countries, a similar ceremonial opening was held, with senior government officials from the Ministry of Livestock and Fisheries,

WorldFish, and partners. The officiating team in both countries gave motivational speeches to participants, setting the tone for the workshops. The ceremonial opening was replicated at the closing ceremony, where the officiating person handed over certificates to participants, marking the successful completion of the training. The award of certificates was sentimental to SMEs in recognizing their commitment to improving their businesses and contributing to the growth of the aquatic food sector.

These official ceremonies had a profound impact on enterprise development in both Zambia and Tanzania. By involving high-level government officials, the ceremonies created a sense of importance and legitimacy around the training workshops. This, in turn, fostered buy-in from stakeholders and partners, ensuring their support for the project team and the implementation of the project. The ceremonies also demonstrated the governments' commitment to supporting the growth and development of SMEs in the aquatic food sector. Figure 6 below shows SMEs in both countries at graduation of training.

Tanzania **Zambia**

Figure 6: Graduation Ceremonies at end of Training in Tanzania & Zambia

3.8.1. Training Methodologies

The training approach was diverse and engaging, incorporating a range of activities to cater to different learning styles. These included:

- PowerPoint slide presentations and lectures delivered by industry experts and trainers: This traditional teaching method provided a solid foundation for SMEs to gain knowledge on specific topics. The use of visual aids like PowerPoint slides helped to simplify complex concepts, making it easier for SMEs to understand and retain the information. The industry experts and trainers added significant value to the lectures.
- Plenary discussions and group work, allowing participants to share their experiences and learn from one another: This collaborative approach fostered a sense of community among SMEs, encouraging them to share their experiences, challenges, and successes. Group work enabled SMEs to learn from one another's strengths and weaknesses, gaining new insights and perspectives. This method also helped build relationships and networks among SMEs.
- Peer-to-peer presentations, where SME owners shared their success stories and challenges: This approach allowed SMEs to learn from one another's experiences, successes, and failures. By sharing their own stories, SME owners inspired and motivated others, while also gaining valuable feedback and insights from their peers. This method helped build confidence and trust among SMEs.
- Presentations by industry actors and experts, providing valuable insights and advice: This approach provided SMEs with access to valuable insights and advice from industry experts and actors. SMEs gained a deeper understanding of the industry and its challenges by learning from those with experience and expertise in the field. This method also helped build relationships between SMEs and industry experts.

- Motivational talks, aimed at inspiring and empowering participants to take their businesses to the next level: This approach inspired and motivated SMEs, empowering them to take their businesses to the next level. SMEs gained a fresh perspective on their businesses and the challenges they faced by hearing from motivational speakers. This method helped build confidence and enthusiasm among SMEs.
- Field visits to successful SMEs, providing a unique opportunity for participants to learn from real-life examples and gain practical insights: This approach provided SMEs with a unique opportunity to learn from real-life examples and gain practical insights. By visiting successful SMEs, participants gained a deeper understanding of how businesses operate, and the challenges and opportunities faced by SMEs in the industry. This method helped build practical knowledge and skills among SMEs. Throughout the workshop, participants were encouraged to actively engage with the material, ask questions, and share their thoughts and ideas. This interactive approach helped to create a dynamic and supportive learning environment, where SME owners felt comfortable sharing their experiences and learning from others. Figure 7 below shows SMEs in both countries undergoing training.

Figure 7: Trainings ongoing in Tanzania & Zambia

Find here the first training workshop report conducted in Zambia in 2023 (merged: Product Development, Trade Facilitation, and Business Development), training workshop report for cohort 2 of Zambia training on Business Development, and Product Development & Trade Facilitation. The Tanzania training workshop report which has all training components merged can be accessed here. Kindly note that WorldFish is currently working on merging the reports.

3.9. Selection of SMEs for Business Coaching and Mentorship Program

Following completion of scheduled training, a coaching and mentorship program was initiated to evaluate the progress of SMEs in implementing the knowledge and skills gained during training. The primary objective of the coaching exercise was to assess whether SMEs were applying the acquired knowledge, identify areas that required additional support, and provide guidance to overcome challenges. To maximize effectiveness, a one-on-one mentorship approach was employed, utilizing a hybrid model that combined online sessions (via WhatsApp, Zoom, or direct phone calls) with face-to-face meetings, due to limited financial resources.

In Tanzania, 15 out of 31 trained SMEs progressed to the mentorship stage, selected based on their level of commitment and business growth, as evidenced by formalization efforts, improved packaging and labeling, and facility upgrades. Notably, 14 SMEs (11 women, three men, and two youth) received group mentorship through the Aqua Processors Association of Tanzania (APAT), while five SMEs (two men and three women) received one-on-one mentorship. These SMEs participated in at least four coaching sessions in October, focusing on tailored topics identified through engagement with the SMEs.

Similarly, in Zambia, eight SMEs (six women, two men, and one female youth) received mentorship in November 2024, while an additional 14 SMEs (eight women, six men, and five youths) received mentorship in May 2024. While mentorship key subject areas were pretty much the same, Tanzania's topical areas included but were not limited to: a)

improving business management practices, b) enhancing production and packaging standards, c) strengthening branding and marketing strategies, d) increasing access to finance and managing collateral requirements, e) addressing compliance issues with regulatory bodies (BRELA, TBS, and TRA), and f) value addition through innovative techniques. Mentorship topics in Zambia included product development and certification, markets and marketing, trade and investments, financing/grants opportunities, export procedures, and writing bankable proposals.

3.10. Linking SMEs to Business Development Services in Public and Private Sectors

The Project's strategic partnerships with various institutions have been instrumental in fostering the growth of Small and Medium Enterprises (SMEs) in the aquatic food sector. From its inception, the project deliberately recruited organizations and institutions from both the public and private sectors to support SME development.

In Tanzania, partnerships were forged with government ministries (Fisheries, Commerce, and Trade), academia, research institutions, BRELA, TTA, TBS, and others. Similarly, in Zambia, collaborations were established with government ministries (Fisheries, Small and Medium Enterprise Development, Commerce), academia, ZDA, ZABS, and other stakeholders. Private consulting firms, such as CNC360 Consulting Limited, were also on-boarded to provide specialized business development expertise.

These strategic partnerships enabled the project to tap into specialized expertise, providing SMEs with access to critical knowledge, skills, and insights. For instance, experts from BRELA played a vital role in raising awareness about the importance of business registration and guiding SMEs through the registration process. Through this

collaborative model, SMEs benefited from training, mentorship, and coaching programs. Experts from partner institutions served as trainers, mentors, and motivational speakers, imparting valuable knowledge on business growth and scalability. Academia and research institutions played a crucial role in providing informed perspectives on issues like food quality, consumer health, and safety. The media fraternity, including public and private media outlets, was also engaged to raise publicity about project interventions and SME success stories.

Through deliberate efforts to secure media coverage, SMEs have featured in various media outlets, including electronic and print media, as well as social media platforms like Facebook, Twitter, Instagram, LinkedIn, and YouTube. This increased visibility has enabled SMEs to connect with wider audiences, driving business growth. Evidently, the project's strategic partnerships with diverse stakeholders have been instrumental in fostering SME growth in the aquatic food sector. By leveraging expertise from various sectors, the project has created a supportive ecosystem that empowers SMEs to overcome challenges, access new markets, and drive business growth.

3.11. Trade/Marketing Facilitation

This component involved several activities including facilitating the SMEs to attend various trade expositions across the two countries.

i. Support to SMEs on Access to Markets

In improving the competitiveness of the SMEs, the project worked to build and connect the SMEs to beneficial linkages by providing market information and technical skills for them to be able to successfully market their products. Further, they provided training for them to better understand trade policies both locally and internationally and to link them to the rightful institutions to support their trade. These included among others, the Zambia Bureau of Standards, and the Tanzania Bureau of Standards. In Tanzania, 31

SMEs were trained, and Zambia too had 31 SMEs trained giving a total of 62 SMEs. 24 women and seven (7) men, 8% of whom were youths in Tanzania while Zambia had 22 women and nine (9) men; with 19% being youths.

The training for Zambia was done with contracted experts from the University of Zambia in collaboration with the Ministry of Fisheries and Livestock while in Tanzania, the Small Industry Development Organization (SIDO) facilitated the training. For areas that needed specialized attention, expertise was sought from institutions with such competencies as (but not limited to): Business Registrations and Licensing Agency (BRELA), Tanzania Trade Development Authority (TANTRADE), Tanzania Bureau of Standards (TBS), Tanzania Revenue Authority (TRA) in the case of Tanzania; and Zambia Bureau of Standards (ZABS), Zambia Development Agency (ZDA), Citizens Economic Empowerment Commission (CEEC) and others in the case of Zambia.

The trainees in Zambia were drawn from; Luapula, Lusaka, Southern and Copperbelt Provinces while in Tanzania they were drawn from Mwanza, Mara, Dar es Salaam, Pwani, Geita, Kigoma, and Katavi regions. It was important to help the SMEs understand that the trade environment in which they operate can affect the level to which they can have competitive market access. Therefore, the SMEs were equipped with knowledge of Hazard Analysis and Critical Control Points (HACCP) and food safety.

One other challenge that was identified during the Training Needs Assessment (TNA) conducted before they all began the training was access to international markets. This was so because most of the SMEs expressed facing challenges to meet the requirements of international quality standards. Furthermore, SMEs reported that they experienced challenges in accessing funding since most financial institutions preferred cooperatives due to challenges experienced by most individual SMEs to repay the loans.

The SMEs were mentored in creating business platforms and two groups, one in Zambia and one in Tanzania were formed; during the life of the project.

ii. Establishment of Business Platform: Aqua Processors Association of Tanzania (APAT)

Aquatic Biosolutions Tanzania (ABiST) through the support of business development experts from the SIDO helped project beneficiaries to form a business platform dubbed, '**Aqua Processors Association of Tanzania**' (APAT). Currently, the group membership stands at 14 (11 women and 3 men). The primary goal of creating the platform is to enhance networking, knowledge sharing and support.

Through the platform created, members have been able to share experiences and establish professional relationships to foster growth and discuss critical business matters. Such business matters include marketing strategies and financial

PREAMBLE

This 2024 Constitution of APAT originates from the agreement of **Small and Medium Entrepreneurs Processors** of water-based products, including Seaweed, who met on 14th October 2024 at the APAT office located on **Mkuranga**, Street **Mkuranga 'A'**, Ward **Mkuranga**, District **Mkuranga**, Region **Coast**. This Constitution will serve as a guiding framework for APAT in carrying out its responsibilities and enabling full participation in contributing to the development of APAT.

APAT is owned and operated by its members through its governing bodies. The main goal is to strengthen solidarity and unity among its members, as well as other members of social organizations in the country. Additionally, APAT will enhance good relations between fish processing experts and various donors supporting this organization.

The APAT Constitution is the primary tool that will guide the execution of its activities. The Constitution will be subject to amendments whenever its members deem it necessary. Therefore, all APAT members, leaders, and officials are required to respect this Constitution and ensure that the leadership and operations of APAT are not contrary to the directives provided by this Constitution.

Masumbuko Z. Nzingula
Executive Secretary General
+255 673 455 683

January D. Remi
Chairperson
+255 620 857 376

10.4 Various Rules of the Organization

APAT shall have rules that will guide the operation of its activities as outlined in (a) – (d) below. These rules shall be prepared by the Executive Committee and reviewed by the General Meeting.

(a) Code of Ethics and Laws of APAT

(b) Election Rules

(c) Leadership Rules

(d) Financial Rules.

10.5 Resolution of Disputes

In the event of disputes within the association, the Ethics and Legal Committee shall be responsible for resolving them and submitting their recommendations to the Executive Committee, which will present it at the General Meeting.

LIST OF FOUNDING MEMBERS

#	NAME	SEX	NATIONALITY	POSITION	PHONE	SIGN
1	January D. Remi	M	Tanzanian	Chairperson	0620 857 376	
2	Iwani Kibonde	M	Tanzanian	V/Chair	0687 348 830	
3	Masumbuko Z Nzingula	M	Tanzanian	Secretary	0673 455 683	
4	Jovitha K. Juston	F	Tanzanian	Treasurer	0758 618 591	
5	Fatuma Katulla	F	Tanzanian	Member	0784 379 731	
6	Esther Kunambi	F	Tanzanian	Member	0714 444 512	
7	Beatrice Mnbuga	F	Tanzanian	Member	0765 034 815	
8	Sylvia Dotto	F	Tanzanian	Member	0753 039 041	
9	Joyce Lusega	F	Tanzanian	Member	0758 096 765	
10	Paulina Placid	F	Tanzanian	Member	0713 909 561	
11	Stella Masalya	F	Tanzanian	Member	0767 823 937	
12	Elizabeth Erasto	F	Tanzanian	Member	0764 924 492	

Figure 8: Extract of the APAT constitution

management. The platform also acts as a support system where members can seek encouragement and advice from others facing similar challenges in their entrepreneurial journeys. The platform also serves as a means for exchanging market information. The platform is currently in the process of formalization. The key processes required for formalization include registration i.e., opening platform bank account, certificate of registration, and Tax Identification Number (TIN). To accomplish this task, APAT members have voluntarily agreed to contribute 20,000 TZS (7.34 USD) each, which will be used for registration. A constitution has been established and an executive is already in place for the platform. Refer to Figure 8 below for an extract from the APAT constitution.

iii. Establishment of Women in Business Platform – Zambia

On the partnerships side, one of the components of the training that SME went through was on business partnerships. This component was facilitated by the Zambia Development Agency (ZDA). After the training, a group of ten (10) women got together and agreed to form a partnership.

Group convener Pamela Kalamba Mukoma explained that she had struggled to break through alone in the business and so with the knowledge of creating partnerships and the benefits that come with it, she, with nine other women formed a partnership. The women have agreed to use Pamela's improved fish processing facility to conduct their business. They process mainly smoked fish and salted fish. Figure 9 below gives highlights of WIB members displaying some of their products at one of the expositions in Zambia.

Figure 9: Women in Business members with some of their products

iv. SMEs attend the 2024 Zambia Agriculture and Commercial Show

The Agriculture and Commercial Show of Zambia (ACSZ) is an annual trade show organized by the Agriculture and Commercial Society of Zambia, a premier not-for-profit organization whose mission is "*to promote and showcase local and international products and services*." The annual show attracts local and international exhibitors and visitors. It gives business organizations an opportunity to showcase products and services in different segments of agriculture, commerce, and industry. Additionally, the event is a good opportunity for the business community and the general public to interact thereby

catalyzing exchange of knowledge and business networking - Agricultural & Commercial Show. Figure 10 below shows some highlights of SMEs activities during the ACSZ.

Figure 10: SMEs at the ACSZ

Figure 10: SMEs at the ACSZ

The theme for the 2024 show was, "***Creating a Competitive Future".*** This theme aligned well with the PROFISHBLUE project's overall objective which seeks to promote sustainable management of fisheries resources within the blue economy context, create employment through value chain activities, facilitate intra-regional trade and build adaptive capacity.

A total of 10 SMEs, of which four (4) were women and six (6) men and of which four (4) youths, attended the show where they showcased and sold their products. The SMEs also interacted with various media houses that expressed interest to cover their innovation. Four SMEs won awards at the 96th ACSZ held in Lusaka from the 31st of July to the 5th of August 2024. Out of the ten (10) final entries received in the category of "***Best Fish Processor***", value addition from different organizations, the team scooped four (4) prizes. They were entered in the "best fish processor, value addition category. Out of the 10 (ten) final best entries, received in the category from different organizations, the team scooped the three top awards and one for best theme interpretation.

Mpeni Farms represented by Joyce Tembo Chinyama, Lyeni Investments represented by Ednah Chama Kalala, and Kenaan Meats represented by Gordon Tembo, scooped the top three awards in that order while Fisherman's Delicacy represented by Malita Kaweche scooped the 3rd prize for best theme interpretation (Figure 11).

This achievement was a boost to the SMEs who have undertaken training in business development skills. The exhibited products included; catfish stripes, fish sausage, salted fish, fish powder, smoked fish, and fish balls, among others. The event served as an avenue for the SMEs to test the skills learnt during the training and, create more partnerships.

"*The impact from the training for me was first felt when I could properly explain my business to the judges, the training helped me to gain confidence. I am so happy to have received the award for best theme interpretation. After this show, with my morale now boosted, I had the courage to visit one local supermarket and pitched my product, the business owner was impressed and agreed for me to be supplying his store. This makes me so happy; I never knew this could be possible for me*." Malita Kaweche explained.

Figure 41: SMEs showcase their Awards at the Zambia Agriculture Show

v. SME Capacity Building Symposium

The SMEs had the opportunity to learn of the different business development services (BDS) offered by Ministry of SMEs including its agency the Citizen Economic

Empowerment Commission (CEEC) and, also the Zambia Industrial Commercial Bank (ZICB) under the Ministry of Commerce, Trade and Industry (MCTI). WorldFish also facilitated business to business (B2B) meetings between the SMEs and the financial institutions, such as the Zambia National Commercial Bank and chain stores (Shoprite; PnP and Choppies) to explore funding and market opportunities respectively. Market linkages with these chain stores provides a good leverage for the SMEs to enter regional markets through the business networks under these international brands.

The Capacity Building Symposium took place from 19th to 21st March 2024 at the Moba Hotel and Convention Centre in Kitwe. The symposium was organized by the Ministry of Small and Medium Enterprise Development in partnership with CNC360 Consulting Limited. CNC360 is a private firm comprising business development experts. They have been one of the strategic partners working with WorldFish since the inception of the PROFISHBLUE Project.

During this event, WorldFish supported four (4) SMEs under the Nutrition Component of the project to participate in the Symposium. This move was in response to the mandate of the Project component; which is: to promote national and regional fisheries and aquaculture tradable/nutritious food products focusing on SMEs, linkages with eco-tourism, and market connectivity to the African Continental Free Trade Agreement (AfCFTA). The event therefore aligned with the component's objectives that focus on;

i. Strengthening the availability and accessibility of nutritious aquatic food products to communities in the SADC region and
ii. Improving supply chain, markets and policy instruments to build resilient stakeholders across the food system.

The SMEs attended capacity-building sessions, during which many of the business actors made presentations on their role in the business space and how the SMEs could access

their services. The event, which lasted three days, was graced by the Permanent Secretary (PS) of the MSME, Ms. Subeta Mutelo.

Overall, the Symposium was one of the Project's interventions to challenges SMEs face in penetrating bigger markets and accessing financing to boost their businesses. The PROFISHBLUE Project SMEs (One from Lusaka (Female), two from Kitwe (women) and one from Ndola (woman), took part in the exhibition and exhibited some smoked fish and fish oils. Apart from that, the SMEs had an opportunity to take part in 'Business Clinics' on various market and financing issues affecting them. Figure 12 below provides highlight of the SMEs interaction with staff of Choppies Supermarket –Zambia.

Figure 12: SMEs interact with Choppies personnel at the Symposium

vi. SMEs participate in the World Food Day Commemorations

'*The right to food for a better life and future*' was the global theme for the 2024 World Food Day commemoration. SMEs under the project through the auspices of the Ministry of Fisheries and Livestock took part in the commemorations in promoting healthy eating.

The platform also served as an avenue for Women in Business to participate and showcase their products to delegates and the public. During the exhibitions, the Vice President of the Republic of Zambia Her Honour the Vice President of the Republic of Zambia Mutale W.K Nalumango, MP, visited the booth where the SMEs showcased the various products (Figure 13). This was a big step in showcasing aquatic foods. The event exposed the SMEs to like-minded processors and was an avenue for learning and exposure. The government was pleased to learn of the different fish-based products and expressed interest in raising awareness on the importance of fish in human nutrition and public health.

Similarly, in Tanzania, ABiST facilitated for five (5) project beneficiaries to participate in the World Food Day commemorations, organized by the United Nations Food and Agriculture Organization (FAO). The event was held at the Chama Cha Mapinduzi (CCM) grounds,).

Figure 13: on the left, Vice President of the Republic of Zambia (in maroon attire) dates the Zambia SME Booth during the WFD & on the right SMEs in Tanzania demonstrate dagga processing during WFD in Tanzania

vii. Onboarding SMEs into multi-national Supermarkets

One of the most notable achievements of the PROFISHBLUE project is the game-changing breakthrough of SMEs securing shelf space in prominent supermarkets like Choppies. At the project's inception, SMEs uniformly cited market access as a major

hurdle, with none having successfully placed their products in these retail giants. In fact, aquatic food SMEs were not producing products that met the supermarkets' standards. SMEs had expressed apprehension about the complexity of the entry process, deterring them from even attempting to access these lucrative markets.

The project's partnerships model also facilitated access to new markets, with local supermarkets and restaurants, including multinational chain stores, being on-boarded as potential off-takers of SME products. This empowerment has yielded tangible results, with some SMEs successfully penetrating the supermarket market. Some SMEs have successfully gained shelf space for their products in prominent supermarkets, such as Choppies, Shoprite, and Cheers in Zambia. On particular example is that of EUNIMOS Investments who now has fish-based instant porridge (Riverland) now in all Choppies stores in Zambia (Figure 14).

This milestone marks a significant shift in the market dynamics, enabling SMEs to increase their market share and reach a wider customer base. The project's facilitation of this breakthrough has unlocked new opportunities for SME growth, contributing to the overall development of the aquatic food sector."

Figure 14: Riverland instant porridge advertisement (product now in all Choppies stores in Zambia)

3.11.1. Tanzania

i. SMEs attend the Small-Scale Fisheries and Blue Economy Summit

The Small-scale Fisheries (SSF) and Blue Economy Summit which took place in Dar es Salaam, Tanzania was used as an avenue for conducting awareness campaigns on international trade in fish and fish-based products. During this event, the exhibition

opportunity gave SMEs a platform room for creating awareness campaigns on promoting the consumption and production of aquatic food products and trade.

The ABiST booth attracted the attention of many international visitors during the SSF summit. By the end of the two-day event, ABiST had registered about 33 delegates having visited the booth. They included both local and international delegates. These delegates stopped by for various missions, such as to purchase some products, admire the products and learn about them, others for business interests of possible investment opportunities. Of the many visitors, the ABiST booth received the Deputy Executive Secretary for SADC, Ms. Angéle Makombo N`Tumba (Figure 15) with her team and the Director of Sustainable Aquatic Food Systems, WorldFish, Dr. Jörn Schmidt visited the booth. The booth was also visited by the Deputy Prime Minister and Minister of Energy of the United Republic of Tanzania, Hon. Dr. Dotto Mashaka Biteko (MP), who was also the guest of honor for the summit. Dr. Biteko (MP) represented the President of the United Republic of Tanzania, Her Excellency Dr. Samia Suluhu Hassan.

Figure 55: SADC Deputy Executive Secretary for Trade and Regional Integration (Center in blue/orange attire) dates the Project Booth during the Summit

The event brought to the fore why collaborating organizations should play mutual roles in promoting international trade and business. The delegates were inspired by the activities conducted by ABiST under the PROFISHBLUE Project; as was echoed by one of them "*This is the actual thing that this summit should be doing, i.e. linking SMEs to the market, ABiST could be given a side event to explain this*".

ii. **Participation in the 15th Dar es Salaam International Trade Fair (Sabasaba)**

The 48th DITF, which is an annual event organized by the Tanzania Trade Development Authority (TANTRADE), occurs from June 28th to July 13th further enhancing awareness campaigns on the international trade of aquatic food products. This event is positioned as a leading international trade promotion platform in Eastern and Central Africa.

At the DITF, the ABiST booth also received different visitors from various countries and regions. The 48th DITF provided enormous potential for possible collaboration between SMEs and international traders on aquatic food and related products (refer to Figure 16). One such trader was FREMU, a UK Company, which is collaborating with TANTRADE to find investment opportunities in aquatic food products especially buying and exporting frozen fish such as Nile tilapia from Lake Victoria.

Further on during the DITF, a team of about 30 young learners from a local school visited the booth and were enlightened on the importance of fish consumption to human health, especially cognitive development (Figure 17). This presented an opportunity for imparting knowledge to the children on the importance of aquatic foods.

During the event, SMEs also had an opportunity to showcase their products through media interactions. The Tanzania Broadcasting Network being among the major media houses covering the Trade Fair also took time to cover and broadcast some of the project initiatives on national Television.

Figure 16: SMEs showcase their products during the DITF

Figure 67: Project staff engage young learners during the DITF

ii. SMEs attending the Organization of African, Caribbean and Pacific States Meeting

After establishing the platform, ABiST in collaboration with SIDO linked six SMEs to participate in the 8th Meeting of the Organization of African, Caribbean and Pacific States (OACPS) for Ministers Responsible for Oceans, Inland Waters, and Fisheries. This was part of strengthening marketing strategies and business upscaling. The meeting took place from 9th to 11th September 2024 at the Julius Nyerere Conference Center (JNICC) in Dar es Salaam, Tanzania. The event brought together policy leaders, experts, stakeholders, and key organizations, including the African Union-Inter-African Bureau for Animal Resources (AU-IBAR), to address the urgent challenges facing marine ecosystems and fisheries across OACPS member states.

3.12. Supporting SMEs to attain Business Financing

The PROFISHBLUE project prioritized supporting Small and Medium Enterprises (SMEs) in aquatic food processing in Zambia and Tanzania to access financing opportunities. Recognizing the significant challenge of capital financing in this sector, the

project addressed the knowledge gap and lack of financing options. Unlike other sectors like livestock or crops, which have existing financing packages from micro-lending providers, aquatic foods remain underfunded. Financiers' skepticism stems from limited information on benchmarks, break-even points, and risk management strategies. To bridge this gap, the PROFISHBLUE project engaged financiers (both public and private) to encourage financing for aquatic food processors. SMEs needed information on accessing financing, and many lacked awareness or financial literacy. Elaborated below are some of the interventions that the project devised to help SMEs address this challenge of financing:

i. **Training and Capacity Building**: SMEs attended workshops, trainings, conferences, and exhibitions. Training workshops, sponsored by PROFISHBLUE, covered financial management, record keeping, capital sourcing, and insurance. Experts from ZDA (Zambia) and TANTRADE (Tanzania) shared insights on attracting investor confidence.

ii. **Business Clinics and Trade Fairs**: SMEs attended exhibition shows and trade fairs, networking with experts and business investors. Business clinics, set up during trade fairs, connected SMEs with financiers (National Microfinance Bank of Tanzania – NMB, Zambia National Commercial Bank – ZANACO, Zambia Industrial Commercial Bank – ZICB, CEEC, and Credit Guarantee Scheme – Zambia). Potential investors interacted with SMEs, exploring partnership opportunities.

iii. **Coaching and Mentorship**: One-on-one mentorship sessions provided SMEs with clarity on financing issues. Experts from specialized institutions guided SMEs through writing bankable proposals. In Tanzania, three SMEs have written proposals, while eight SMEs in Zambia are currently developing theirs. These proposals will be pitched to funding agencies.

The project's capacity-building initiatives have positioned SMEs for better financing opportunities. By formalizing businesses, complying with tax authorities, public health, product certification, and more, SMEs have become more attractive to capital providers. These interventions demonstrate the PROFISHBLUE project's commitment to supporting SMEs in aquatic food processing. By addressing financing challenges, the project has empowered SMEs to grow their businesses, contributing to the sector's development and economic growth.

Part 3

4. Knowledge Sharing

The objective of this sub-component was to develop communication and knowledge products to position the nutritional benefits of aquatic foods for the region, and to disseminate information and data to enable better participation of these SMEs in the food systems. The four knowledge products that WorldFish was tasked to develop were as follows: Recipe Book on 'nutritious aquatic foods', Short Videos raising awareness on the 'health benefits of consuming aquatic foods', open-source web-based repository platform; and Policy Brief on "***Promotion of Nutritious Aquatic Food Products in the region and market connectivity to AfCFTA***".

4.1 Recipe Book

The Project embarked on an exciting initiative to develop a Southern African Development Community (SADC) recipe book, showcasing a diverse array of aquatic food recipes from across the region. This innovative project aimed to promote inclusivity by featuring recipes from all 16 SADC member states. To achieve this goal, WorldFish collaborated with various partners, including the Aquatic Biosolutions Tanzania (ABiST). ABiST worked closely with local partners, such as TAFIRI, the Tanzania National Food Commission, and SIDO, to compile a collection of Tanzanian recipes. A first draft of the recipe book has been completed and is currently undergoing review before validation. Once validated, this volume will be integrated into the regional recipe book being developed by WorldFish.

To support the development of the regional recipe book, WorldFish engaged a consultant team comprising nutrition and health experts from the Ministry of Health and Levy Mwanawasa University Teaching Hospital in Zambia. This team collected a wide range of recipes from various sources, including online websites, and compiled them into a

comprehensive collection. To ensure the recipe book's regional relevance, WorldFish sort the support of PROFISHBLUE Project National Focal Point Persons from each country to assist data-mine and share recipes from their respective countries.

The resulting recipe book boasts of an impressive collection of aquatic food recipes from seven (7) SADC member states; namely: Angola, Botswana, Madagascar, Mozambique, Tanzania, South Africa, and Zambia. Despite efforts to include recipes from all SADC member states, some countries did not submit their contributions. The recipe book is currently undergoing review before validation and launch. Once completed, this valuable resource will promote the culinary diversity of aquatic foods across the SADC Region, contributing to the project's overall goal of enhancing the livelihoods of SMEs and communities involved in aquatic food production. Kindly refer to the draft Recipe Book here.

4.2 Production of Videos

The assignment involved developing promotional videos to raise awareness on the value of consuming aquatic foods. A total of five videos are currently under production, two from Tanzania and Three from Zambia. The videos are aimed at raising awareness about the benefits of consuming aquatic foods, targeting both a SADC region audience and a local audience. The videos will highlight nutritional, environmental, and economic benefits to encourage increased consumption of aquatic foods. The videos will also showcase outcome stories from SMEs.

The key messages are:

- Aquatic foods as an important constituent of a healthy diet;
- Inclusion of aquatic foods in one's diet is one of the primary ways to get healthy omega-3 fatty acids; and other micronutrients only unique to aquatic foods (Iron, Zinc, Vitamin A, Vitamin B12, Vitamin D among others);

- Consumption of fish and fish-based foods in the first 1000 days for infants and women of reproductive age;
- Aquatic foods are essential in providing food security and economic well-being.
- Aquatic foods for healthy people; a healthy planet and shared prosperity

Consultants were hired in both Tanzania and Zambia for the production of the videos. The videos are currently under finalization for publication. Once finalized, the videos will be disseminated through; television, YouTube, Facebook and other social media platforms. Refer to the links below for the promotion videos.

https://drive.google.com/file/d/1FQavga8H2u6wxc3bK8RtR0efcWTqU6me/view?usp=drive_link,

https://drive.google.com/file/d/1DHzWBcTpWdWSqVrpoFvdKtXluGg0b6l_/view?usp=drive_link

4.3 Open-source Web-based Repository Platform

The key milestone delivered under this activity is the creation of an open-source web-based repository platform where the knowledge generated by the project, such as case studies, policy documents, training manuals, project reports etc., will be stored for sharing with key stakeholders. The platform encompasses information from the three components WorldFish is implementing under the PROFISHBLUE project. The link to the repository is given below.

https://worldfishcenter.org/project/program-improving-fisheries-governance-and-blue-economy-trade-corridors-sadc-region

4.4 Policy Brief

A policy brief has been developed on "Promoting Consumption of Nutritious Fish-based Foods in SADC." The paper provides context-specific solutions and approaches that can be adopted and scaled up to increase the consumption of fish-based foods and the role of SMEs in making aquatic foods available and accessible to people in the region. Currently, the zero draft of the policy brief has been concluded and it is currently undergoing reviews before it can be finalized. The zero draft of the Policy Brief can be accessed here.

Part 4

5. Impacts Generated by the Project

The impacts created by the project are described below. The training had generated multiple impacts on the SMEs. Firstly, it has enhanced their entrepreneurial capacity, especially in terms of business thinking and planning and the importance of taking strategic actions in business growth. As discussed below, improvements witnessed around technical operations and business management are expected to result in increased income for the SMEs as they climb the value ladder through product safety, differentiation and branding. Gender Disaggregated Data of Project Milestones are contained in Table 3 below.

Table 2: Gender Disaggregated Data of Project Milestones

Output	Target	Achieved (number/%)	Comments
Conduct Training Workshops and Create Business Platform for Product Development	60	62	31 SMEs trained in Tanzania (23 women, 8 men; 3 youths) • 31 SMEs in Zambia (22 women, 9 men; 6 youths) • One SME partnership of 14 SMEs in Tanzania –APAT (11 women & 3 men) • One SME partnership of 14 SMEs in Zambia –WIB (10 women; one youth)
Support to SMEs for Scaling-out Production using Business Development Tools	60	62	31 SMEs trained in Tanzania (23 women, 8 men; 3 youths) 31 SMEs in Zambia (22 women, 9 men; 6 youths)
Develop Partnerships, Financing and	2	9	• In Tanzania, partnerships have been created with

Promoting Exportable Fish based Products			ABiST, SIDO, TAFIRI, BRELA, TDS) • In Zambia, partnerships have been created with ZABS, CEEC, CNC360, ZDA)
Generate Knowledge Products and Communication Tools	• Recipe Book –1 • Promotion videos –4 • Web based repository –1 • Policy Brief –1	• 1 • 4 • 1 • 1	• Recipe book at 95% finalization- undergoing review • 2 promotion videos concluded in Tanzania & Zambia (100%) • Web repository (100%) • Policy brief at 95% finalization-undergoing review

5.1.1 Knowledge and Skills Transfer

The training helped to build the capacity of the SMEs in three core areas of enterprise development:

Technical – Training the SMEs in several key areas in the processing of foods will help them to embrace food safety as one of the key operational objectives in the enterprises. Adopting good manufacturing practices will help the SMEs to deliver safe and healthier diets.

Elaborated below are some of the impacts resulting from the trainings:

i. **Increased Access to New Markets** - Through the trade shows the SMEs were able to market their products to wider audiences (new markets) compared to previous informal arrangements that were dependent mostly on word of mouth generally limited to a network of close friends, and also digital platforms such as personal Facebook pages. Inclusion of three of the SMEs on a trade mission to DRC by the

Zambian government provided the SMEs with an opportunity to scope for new domestic and export markets, mostly high premium ones;

ii. **Enhanced Product Quality** - the knowledge acquired during the training has helped the SMEs to improve product packaging and labelling. The entrepreneurs now include essential features on product labels that are key to building customer confidence in the product such as product composition (constituent product ingredients); product manufacturing and expiry dates and contact details of the SME. Improved labelling enhances product trust and customer loyalty as consumers have confidence that the product meets their expectations;

A particular testimony is that of Gildah Sovi of Gigiblis eneterprises who is into production of smoked fish and fish oil. She was in the first cohort of the training and post-graduation she has built a mini shelter to improve her food safety standards. She has built a small facility and ensured it is closed enough to keep flies and other insects away yet well ventilated. Further, she has ensured that she has a scale and all the needed proper utensils for her production so that the quantities are consistent. Before the training, she processed her fish from an open space. Further to improving her facility, Gildah is now in the process of patenting her fish oil with PACRA.

"When I attended the training, I realized that an open space was not safe going by the standards. I learnt that I was supposed to put up a structure where I am processing my products. It's not only the clients that will benefit, but even me, because most of the time you find that you have to produce in the night or in the rainy season, so I needed a shelter. This indeed was eye opening, and I feel good that I am actualizing it despite it not being very big, it's a step in the right direction for me." Echoed Gildah when contacted for a comment of the impact of the project onto her business.

iii. **Product Safety** - the SMEs appreciated the knowledge and experience on good manufacturing practices, SPSS measures and HACCP in improving their products. Some of the SMEs have started incorporating the knowledge in the manufacturing of their products with one of the SMEs working on having his product certified by a government regulatory agency responsible for product certification. Product certification is expected to customer loyalty and improved access to markets;

iv. **Facility Certification** - Some SMEs have reconstructed their processing facilities to meet regulatory requirements for facility certification. A good example is Ms. Pamela Mukoma who had a newly refurbished processing facility launched by SADC along with various government agencies. The interventions taken by these SMEs improves their capacity to meet requirements of premium domestic and export markets. The interesting output of Pamela's efforts is that her facility has since been certified by the Zambia Bureau of Standards. Two other beneficiaries in Zambia (Collins Chongo of EUNIMOS Investments and Moses Fwanyanga of Beltesmol Fisheries; specifically trading in fishbased instant porridge and tilapia fillets respectively have both been cleared by the ZABS for certification and are only awaiting issuance of certificates;

v. **Increased Competitiveness** - the interventions adopted by SMEs following the training will improve their product value and subsequently product competitiveness as they added product features (value) will distinguish them from ordinary and traditional fish products on the market

Vi. Enhanced Food Safety - SMEs are now using processing technologies that enhance food hygiene and energy efficiency such as the improved smoking kilns. This intervention will enhance product safety and quality and is expected to improve market access

Pamela Kalamba Mukoma

She used to conduct her fish processing business in a kitchen. The kitchen had wooden shelves and only one washing point and she used a drum smoker for the processing. Before the training, that was good enough for her. ZABS through the training elaborated what criteria a food processing (fish) facility should meet before it can qualify for certification.

"*We were taught that tiles are better than wooden surfaces because wood harbors a lot of bacteria and is difficult to clean. We were also advised to have our work area in white so that we can spot dirt easily*." Pamela explained.

Upon her return from the training, the first thing Pamela did was redesign her kitchen and to call in experts to help her design a modern fish smoker.

"*I removed the wooden surfaces and replaced them with porcelain white tiles. I was using a drum smoker for my fish, but now, I have put up a modern smoker which also takes in about fifty fish pieces compared to the ten I could smoke with the drum smoker*."

Through the process, with the one-on-one mentorship from the ZABS, Pamela improved her facility to certification standards.

On October 2nd, 2024, the government, private and public actors gathered to witness this milestone of the launch of the facility by the SADC Secretariat in Lusaka. The launch was covered by the national media and can be accessed here:

- https://www.facebook.com/share/v/CcHT5eVYxwrYm/?mibextid=oFDknk
- https://www.mfl.gov.zm/?p=1243

On the business management side, Pamela explained how she would run her business: "*Before the training, what I used to do was to just smoke fish without considering how much profit I had made or whether there was a loss or not. It was mostly just hand-to-mouth for my business then. Having gone through the training, I knew where I had to start from and where I needed to improve, and here I am*."

vi. Product Branding and Improvement

Before the training, most of the SMEs used conventional methods of packaging and very few had their products labelled. This was mostly because their market was mainly peer-to-peer. There were no indications of important details like; the expiry date, how to prepare the product and nutritional benefits on the packaging of the products.
Additionally, the products had no innovation and those producing were just producing using the same methods. With the help of CNC360 consultancy, who are marketing and branding experts, SMEs were able to navigate the challenges together to think outside the box and learn new techniques of selling their products. During the training, the SMEs realized the importance of having a unique value proposition and having a specific niche for their products.

"*I have dealt in fish for more than five years and what I am learning now on the many products I can explore with fish is amazing. We have added fish crackers on our product line to target the school going children. This also makes me happy because I know that this is a healthy snack I am putting on the mark*et." Stated Ednah Chama Kalala, CEO of Lyeni Investments.

Sunduzwayo Zulu, a youth in the group chose to explore fun ways that young adults can consume fish. He decided to improve his fried kapenta by adding various flavors to it. *"I now have kapenta snacks in; sour and cream, vinegar and salt, cheese and chili flavors. The snacks are for sure attracting a lot of young people. This is like a snack on the go*!" Added Sunduzwayo.

Further to the additions of product lines, the packaging has immensely improved, from just ordinary polythene bags to zip-lock polythene bags now, and Kraft paper packaging that the SMEs are using thereby adding value to their products.

vii. **Exposure to International Markets**

Linking Zambian businesses to international markets is one of the essential tools in the growth of the SMEs. The ZDA has played a pivotal role in this aspect. They have walked with the SMEs from the training and were present to witness one SME launch a fish processing facility. Through its Zambia Outward Trade Mission, the ZDA selected three of the SMEs under the project to be part of the mission. The mission whose objectives were to facilitate the growth of Zambia's non-tradable exports and to secure market access for Zambian products took place in the Democratic Republic of Congo from 16th to 18th October 2024.

The mission further provided an opportunity of funding for the SMEs once deals are secured through the Zambia Export Development Fund (ZEDF) who stand ready to swiftly support the SMEs for them to fulfil clinched orders and ensure timely delivery of the products. Three (3) project beneficiaries (Pamela Mukoma, Theressa Khonje, and Edna Chama Kalala) who are all female adults were privileged to have taken part in the

2024 Trade Mission. The SMEs all went with not less than 50kg of their products to sell and to advertise.

Below is an extract of the message from the ZEDF to SMEs at mission commencement:

October 13-18, 2024 extract from the ZDA page during the 2024 Trade Mission

"To our esteemed SMEs participants embarking on the Congo Dr Lubumbashi mission:

We wish you success and fruitful engagements during your trip! As you explore new trade opportunities and forge strategic partnerships, rest assured that ZDA through the Zambia Export Development Fund (ZEDF) stands ready to support your growth.

Upon securing deals, ZEDF financing will be available to facilitate order fulfilment, ensuring timely delivery and empowering your businesses to thrive in the export market.

Leverage this mission to expand your networks, tap into new markets, and contribute to Zambia's economic development".

Best wishes for a productive and successful mission! ZDA/ZEDF

5.1.2 Increased Awareness on Nutrition-value of aquatic foods and aqua-based Products

Business Partnerships - through the project the SMEs have been able to create strategic business partnerships to grow their enterprises.

i. **Women in Business** - On partnerships, one of the components of the training was on business partnerships, the component was facilitated by the ZDA. After the training, a group of ten (10) women sat together and agreed to form a partnership. Also wanting to leverage partnerships for easy funding access as advised by the CEEC. WIB was created during cohort 2 training program in Zambia. The team has since registered the association with PACRA/Registrar of Societies, making it a formal entity. Members have agreed to use Ms. Pamela Mukoma's facility to process their products, reducing the burden on other association members to

construct their own processing facility at a time when they may have no funds for such capital expenditure. The association members agreed to market their products under one brand name of Women in Business. Aggregating their products will enable them to meet market demand.

"The training was an eye-opener for me as a woman, I realized that it is difficult to break through in this business when working alone because you need volumes, so, during the training, we formed a partnership with other women, the 10 of us, we have so far opened a bank account and putting in money with an agreed amount, we also got a Taxpayer Identification Number (TPIN) from ZRA for our business. We agreed that for the start, we would use my improved facility to process our products until we have grown enough to secure a bigger commercial facility. I am proud to say that this group is operational, we are the 'Women in Business'." Pamela Kalamba explained.

"With the knowledge acquired on partnerships, how to brand ourselves and sell ourselves on international markets and the introduction to major actors who can help us to get our products on the regional and international markets, I believe that we will be able to reach those markets because I am ensuring that we comply with all the standards for local, regional, and international trade as taught." Pamela added.

ii. **Collaboration with AWFISHNET** - the collaboration by WIB with AWFISHNET gives WIB members access to the AWFISHNET refrigerated truck (donated by the SADC Secretariat) to transport their products to markets. Otherwise, WIB would have continued to face the challenge of lack of appropriate transport to deliver goods to markets, especially high premium markets that demand assurance from their suppliers on improved food safety of the products from point of

manufacturing to their premises. SADC Secretariat procured the refrigerated truck for AWFISHNET through the PROFISHBLUE Project.

iii. **Financing Facilitation** – Opportunities were created to bring financial institutions (both in the public and private sectors) and the SMEs together thereby removing the disconnect that existed before between the fish-based enterprises and financial houses. During these sessions the SMEs were able to articulate their diverse financing needs (such as capital and operating capital) and challenges they face to access traditional funds such as high interest rates. The financial institutions also explained to the SMEs the financial products on offer. The financial institutions that interacted with the SMEs are shown in Table 4 below.

Table 4: List of Financial Institutions that Interacted with the SMEs

Tanzania	Zambia
Public-sector-based Financial Institutions	**Public-sector-based Financial Institutions**
• National Microfinance Bank -Tanzania	• Citizens Economic Empowerment Commission (CEEC) • National Savings Bank (NATSAVE)
Private-sector-based Financial Institutions	**Private-sector-based Financial Institutions**
	• Zambia National Commercial Bank (ZANACO) • Zambia Industrial Commercial Bank (ZICB)

iv. Production Innovations

Soon after attending the SME training in Tanzania, the 'Hifadhi Hai' group comprising Fatuma Rajabu Juma, Pauline Placid Mdendemi, and Azzah Zaquan visited the seaweed farm in Puna, aimed at addressing the challenges associated with shallow water on long-line seaweed farming. The farm supplies them with the seaweed for their product line. The visit was aimed at addressing the challenges associated with shallow water or long-line seaweed farming which the farmers had reportedly been facing. The farmers had been complaining about their seaweed getting carried away by ocean currents and unsuitable salinity levels. This meant that Hifadhi Hai was also getting low-quality materials and low quantities to meet their product demand.

The group took on these challenges head-on to find a solution by setting up a pilot technology in seaweed farming. The tool is locally known as a "Dema" and is typically used as a fish trap. The team named it "3 Sisters Dema." It was improved by the group to facilitate seaweed cultivation in deeper waters and is currently being tested. The technology means farmers can shift to deep-water farming.

The team worked together with local craftsmen to custom-make the Dema to suit deep-water seaweed farming. The Dema was designed using bamboo sticks. After the Dema was done, they collaborated with local expert sea divers to deploy it. The successful deployment and initial positive results potentially paves the way for a more sustainable and efficient method of seaweed farming.

"We desire to solve the challenges of seaweed farmers to get seaweed for food and other usage. Solving the problem will help us to improve our Sea moss product line's quality too because our business starts from the farm.

The training helped us to think outside the box, it helped us to realize that we have all the necessary actors that can help us to propel our business to greater heights. We will not just think of our product line for local consumption, we are now thinking international and that is why we want to ensure that we have a steady supply of the raw materials we need." Paulina confidently explained.

On other lessons that changed their business outlook, Paulina explained that the emphasis on quality throughout the production chain, factory layout for Hazard Analysis and Critical Control Point (HACCP) compliance, packaging, labeling, and branding was key in the steps they had taken. She explained that once the raw material is of good quality, all factors will be easy to address because they will be selling a reliable brand.

v. **Access to Markets** – through the trade events the 62 SMEs had opportunities to enhance visibility of their businesses and products they offer. Access to more and markets has also been enhanced through partnerships created with selected chains stores. Adoption of digital platforms to market their products will further enhance access to different domestic and international markets. Inclusion of the SMEs in trade missions by the ZDA enabled the three SMEs from Zambia to have access to the market in DRC.

Some of the challenges to SMEs to growth and moving up the value chain and access formal markets is their inability to meet the large product volumes demanded these markets and deliver safe products certified by national bureaus of standards.

vi. Entry into the Industrial Yards

At the SME Symposium organized by the Ministry of Small and Medium Enterprises in Kitwe at the Moba Hotel, three SMEs were exposed to interactive sessions with industry players one of whom was the CEEC. Here, the SMEs were introduced to industrial yards where they could bundle with other like-minded producers to meet their supply demand but also, be able to access funds under the commission for their business growth.

Industrial yards are a government initiative aimed at providing support to SMEs by facilitating the development of suitable infrastructure to enable them to conduct their business in a conducive environment. They provide all the machinery and equipment needed which are industry specific. Two SMEs; Collins Chongo of EUNIMOS Investments and Ednah Chama of Lyeni Investments have since been on-boarded onto the Mansa and Ndola Industrial Yards successfully.

"*For Lyeni Investment, this is a huge step, we strategically applied for the Ndola yards because we are targeting the DRC Kasumbalesa market. This is a big leap in our business and it's all thanks to the project for linking us to such strategic industry players*." Ednah stated.

5.1.4. Contribution to National and Regional Development

In addition, the Project has contributed to the attainment of several national and regional development initiatives.

i. National Development

Zambia – In Zambia implementation of EDP has contributed to the attainment of the country's:

National Aquaculture Trade Development Strategy and Action Plan 2020 – 2024: especially with regards to:

a) training and capacity building,
b) infrastructure development,
c) product testing and certification,
d) business formalization and trade facilitation
e) effective extension service delivery and,
f) improved market access.

Revised National Micro Small and Medium Enterprise Development Policy 2023 - especially on:

a) Enhancing MSME access to domestic, regional and international markets.
b) Enhancement of entrepreneurial capacity of MSMEs;
c) Promoting MSME access to business development services
d) Promoting formalization of MSMEs
e) Promoting MSMEs product and service standards for competitiveness and;
f) Enhance development of a culture of technological adoption among MSMEs

Tanzania – the project has contributed to the achievement of the objectives of selected policy and strategic frameworks of Tanzania.

The Fisheries Sector Master Plan 2021/2022 – 2036/2037 especially on

i) Strengthening market information systems and;
ii) use of technology in accessing market information.

National Fisheries Policy of 2015 as it relates to:

i) Promote utilization, processing and marketing of fisheries products

ii) Enhance youth involvement in fisheries and aquaculture development activities with skills and assured resource accessibility;

iii) Build capacity of fishers and aqua-farmers to access finance and credit facilities;

The National Trade Policy which seeks to promote:

i) domestic trade development;

ii) Strengthen trade integration and utilization of foreign market opportunities;

iii) Improve access to trade finance;

Part 5

6. Scaling of the Capacity Building Program to Other SADC Member States

Enterprise development is essential in delivering inclusive and nutrition-sensitive business models. The EDP was implemented in two pilot countries. We recommend that same approach used in the designing the training program be used and customized to each country based on TNA to enable the trainers to contextualize the training. The training manuals are expected to cover similar modules on technical and business aspects of the training. The TNA for each country will help to determine areas of emphasis and matching the identified training needs with key resource persons – trainers. The goal behind the scaling of the training program is to reach multiple SMEs in other member states.

Part 6

7. Lessons Learnt and Proposed Way Forward

The project has generated multiple lessons on the role of SMEs in nourishing the regional population.

i. **Stage of business growth** - First the stage of growth of the SME has influence on its ability to respond to emerging business opportunities. Majority of the SMEs in the processing and trade of aquatic foods are in the start-up phase of the seven stages. In this phase, the SME has its product launched but sales growth is slow. People are unaware of the product; enterprise hardly earns any profit. The main problem faced by the enterprise is sourcing customers and delivering its products contracted for. This is what we observed with most SMEs after the training program. The SMEs in this category lacked self-motivation and were not solution-oriented and, could not see and seize opportunities even created by the project. A few SMEs were at the stage of near transition into growth phase where enterprises experience growth of sales and begins to record profits, and its product faces competition. These enterprises had growth preparedness and embraced the growth challenge catalyzed by the project. These SMEs had a strong customer base and generated adequate revenue to cover its operating expenses. The business has a simple structure, as few employees and does not generate enough cash to finance growth to earn significant return on investment. Our observation is that most of these growth-oriented SMEs are stuck in this survival phase. It is critical to select SMEs with a mix of growth preparedness and innovation for BDS to catalyze attainment of project milestones.

ii. **Need to improve information sharing** - In one of the meetings between SMEs and financial institutions it became clear that there was a lack of information flow to the SMEs in the AqFS on supporting financing mechanisms on the market. In implementing the assignment, we made several observations. SMEs in both Tanzania and Zambia complained of experiencing resource constraints. On the other hand, we observed that governments in the two countries provided several "user-friendly" financing mechanisms to support SMEs. For instance, the Zambia government provides loans at about 15% interest rate under the CEEC and has also provided a credit guarantee scheme under the Ministry of Finance and National Planning to support SMEs seeking credit financing from banks and other financial institutions but do not have collateral as way of helping SMEs to help contribute to economic development.

The Zambia Development Agency (ZDA) has a program designed to promote growth of SMEs in its quest to reduce poverty, enhance SMEs contribution to job creation and economic growth. Though access to credit and capital remains a concern among SMEs, the governments have implemented supportive and inclusive financing mechanisms designed to grow small enterprises. It is unfortunate that the flow of information to SMEs in AqFS is slow. The other complaint from the SMEs was long and complicated border processing procedures despite the simplification of such trade procedures provided by SADC and other Regional Economic Communities (RECs).

iii. **Importance of Sustainable Energy Supply** - In 2024 Zambia experienced the worst drought in the last 40 years which resulted in among others the worst ever energy crisis. At its worst period power supply was limited in most cases to 3 hours per day. Reports of certain areas going without power for 24 – 72 hours were

not uncommon. This significantly affected the operations of the SMEs as almost all of them rely on hydropower.

iv. **The impact of climate change on AFPT** – studies on impact of climate change in AqFS have focused mainly on the production side neglecting the AFPT component. The observations in (2) above calls for (i) more research in understanding the full impacts of climate change in AFPT-based SMEs and, (ii) a shift from traditional business planning and business model-based planning to enhance SMEs ability to embrace Climate-smart business models to help SMEs to build resilience to climate change. In the example described in (iii) above, adoption of alternative energy sources such as solar energy would help the SMEs to build resilience to climate change impacts on hydropower.

Part 7

8. Discussion and Conclusion

Project interventions have generated multiple benefits related to "promoting tradable national and regional fish and fish products and linkages with market connectivity." This is critical in nourishing the regional population, creating jobs and contributing to national and regional economic growth. The key achievements of the project include *inter alia*:

Enhanced Entrepreneurial Capacity

i) Enhanced the SMEs capacity to enter formal markets in the domestic and regional markets

ii) Created confidence of the SMEs to seize business opportunities

iii) Enhanced SMEs knowledge on growth-oriented support mechanisms offered by governments and RECs to enhance growth of SMEs and support cross border trade facilitation. Otherwise, SMEs would have continued being unaware of available market information and financing opportunities

iv) Product diversification and, marketing, an indication of their innovation

v) Helped the SMEs to market their products and create new markets through trade shows

vi) Enabled SMEs create linkages with financing institution

Highlight trade support mechanisms available to support the growth of SMEs in the two countries

vii) Linking SMEs to trade scoping missions

viii) Provided export-related training

- Coaching in business planning and, resource mobilization;

Improved access financing

- Systematize their businesses and thereby enhance their ability to source for funding
- SMEs showed interest and commitment in entering formal CBT by undertakeing business formalization, product and processing facility certification and improved product labelling

Food Safety

- SMEs rapidly embraced product safety
- helped the SMEs with "export preparedness"
- Meet sanitary and phytosanitary (SPS) measures and thereby improving their capacity to enter regional markets and formal domestic markets to deliver nutrition and economic outcomes at scale;
- Meet the requirements for product certification and thereby improve their product competitiveness and;

Nutrition Awareness

- Increased awareness of the value of aquatic foods in nutrition stimulated demand for the aquatic foods through trade shows, generation of nutrition awareness videos and sharing of knowledge products on the open portal system;

The Enterprise Development Program

It is hoped that the SMEs will continue with these initiatives to consolidate their gains to enter formal markets on the domestic market and trade their products across borders through formal trade. To achieve this the SMEs will still require support to consolidate the initial steps to formal CBT vis-a-vis:

- Sustained awareness on trade support mechanisms offered by governments and RECs;
- Increased access to finance and credit guarantee schemes to enable them (SMEs) to initiate and sustain export activities;
- Improved access to market research;
- Leveraging ICT to enhance e-marketing and trade;
- Enhance transport and logistics support that meet international food safety standards
- Creation of management systems especially record keeping to enhance their ability to access financing from financial institutions;
- Support on technical issues such as food safety and SPS measures for CBT;
- Business management skills related to export trade and;
- Creation of cross border networking by SMEs in the region.

Otherwise, the observed export preparedness may result in "perceived preparedness."

Public sector based BDS are expected to continue playing a critical role to nurture the SMEs for the formal CBT. Caution is, however, given to avoid a situation where such support from BDS should lead to dependency on outside support for business growth and export preparedness.

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10. Annexes

Annex1: SME scoping Questionnaire

PROFISHBLUE Project: Improving Fisheries Governance and Blue Economy Trade Corridors in SADC Region

Sub Activity: Training SME in Food Safety and Business Related aspects

Questionnaire: SME profiling

WorldFish is conducting a short survey to understand the opportunities and challenges for food safety among SMEs conducting business in aquatic food systems related enterprises in Zambia. The survey is meant to gather information on the comprehension of SMEs in matters of **Food safety** as well as **Entrepreneurship.** At an earlier time, you indicated that you were involved in aquatic foods enterprises, and it is for this reason that we are reaching out to you. The survey should take about 15 minutes to complete. Thank you for taking the time to complete the survey and for the valuable information you have shared.

We wish to assure you that the information we are collecting will be used purely to inform the design of a Food safety and Entrepreneurship training module under the PROFISHBLUE Project.

The data collected will be kept in strictest confidence. Each Party shall hold in confidence all documents disclosed to it by the other Party containing the other Party's trade secrets and proprietary, secret, confidential and/or other information not generally available to the public (Confidential Information). Confidential Information shall only be disclosed to persons assigned by the Parties who are directly involved in the collaboration.

For any inquiries or clarifications over this questionnaire, kindly contact Lizzy Muzungaire on either L.Muzungaire@cgiar.org or +260 973 466 282 (call or whatsapp)

Background

Through funding from the African Development Bank (AfDB), the Southern African Development Community (SADC) Secretariat is implementing the Programme for Improving Fisheries Governance and Blue Economy Trade Corridors (PROFISHBLUE) in SADC Region. The Project aims to promote sustainable management and use of fisheries resources within the blue economy context in order to improve food and nutritional security, create employment through value chain activities, facilitate intra-regional trade, and build adaptive capacity of fish value chains communities against climate change and other external shocks. In this project component, nutrition-sensitive

approaches will be adopted to strengthen aquatic foods SMEs in two selected countries, Tanzania and Zambia, through the following methods: a) Creating enabling environments, platforms and partnerships to promote diverse aquatic foods SMEs in the countries; b) Build capacity of aquatic foods SMEs through targeted training and programs; and c) Develop communication materials to disseminate knowledge and information to strengthen nutrition messaging in the aquatic food systems of the countries.

The project has identified SMEs as an important stakeholder in transforming aquatic food systems, with particular focus on women and youth SMEs in the region. These stakeholders are vulnerable to shocks and disruptions, evident by the climate, conflict and COVID-19 shocks in the past two years. Therefore, this project is designed to strengthen the institutional capacity and knowledge of SMEs in aquatic food systems towards adaptation and mitigation of impacts from these vulnerabilities and disruptions.

Selection/Screening criteria

SMEs were ranked based on the 5 areas below and top 5 were set aside to undergo the training

1. Registration with PACRA (Patents and Companies Registration Agency) and other relevant entities such as local authorities
2. Zambia Revenue Authority (ZRA) compliance
3. Production volumes/sales
4. Revenues per month/annum
5. Certification of products
6. Availability of processing/storage equipment or facilities

QUESTIONNAIRE (FOR STATEMENT WITH PROVIDED OPTIONS, KINDLY TICK YOUR PREFERRED RESPONSE/S)

Name of Proprietor: _____ **Gender (M/F)** **Business Name**: _____**PACRA registration no.: _____ Years in aquatic foods processing business _____**

1. **Geographical location**: **District**: **Province**:
2. **Type of Business:** Post harvest handling/Fish processing/value addition
3. **No. of employees**: Male:_____ Female:_____
4. **Type of Processing:** Whole fish
   Fillets/gutting
   Smoking
   Salting
   Smoking
   Sausages
   Fish powders
   Other (specify)_____

5. For each of the products above, state average monthly production (Kg)

Whole fish	_____
Fillets/gutting	_____
Smoking	_____
Salting	_____
Smoking	_____
Sausages	_____
Fish powders	_____
Fish-based Instant porridge	_____

Other (specify)_____

6. State source/s of your raw materials/products (main source)

Raw material/Product	**Source (aquaculture-A or capture fisheries-C), quantity (Kg), Country of origin: A/C-Kg-local origin-Country**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

7. State market for your products

Product	**Market (local community, supermarket, restaurant/hotel or abroad—state actual name of place)**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

8. Do you deal in any other business enterprises apart from aquatic foods? Yes/No

8 (a) If answer to Ques 8 above is yes, kindly list your other enterprises

_____
_____
_____
_____
_____

9. Do you have certification for any of your aquatic food products? Yes/No

9 (a) If answer to Ques (8) above is "Yes", kindly list the products that have certification, including certifying authority

Product	**Certification Authority**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

9 (b) If answer to Ques (9) above is "No" for any product/s, kindly state the key reasons hindering you from having your products certified

_____	_____
_____	_____
_____	_____
_____	_____

10. Do you export any of your products? Yes/No

10 (a) If yes, state export destination for any of your top five products

Product	**Export Market**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

11. Do you import any of your products? Yes/No

11 (a) If yes to Ques (11) above, state export destination for any of your five top products

Product	**Import Market**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

12. State average monthly revenue for your business (tick the appropriate response)

<K5,000 K5,000 to K10, 000 K10, 000 to K15,000 K15,000 to K20,000 Above K20,000

13. State your main source of financing your for business

Revolving/self-financing Grants from projects or Govt microfinance loans

Commercial Banks

14. Is your business insured? Yes/No

14 (a) If answer to Ques (14) above is 'Yes', state the insurance company/institution

14 (a) If answer to Ques (14) above is 'No', give reason why you have not insured your business

15. In reference to Table 1 below, kindly provide the following:

15 (a) State Y/N under the column "Trained" for all trainings you have undergone and Y/N under the column "Certificate" if you were awarded certificate after the training *(Y for Yes and N for No)*

15 (b) On Table 1 below, mark (by encircling the numbers a, b, c etc) for any topical areas you feel you would require training (even if it means a refresher course)

Table 1: Training Needs

S/N	Subject Area	Trained? Y/N	Certificate? Y/N
1	**Entrepreneurship**		
a	Business planning		
b	Business management		
c	Business risk management		
d	Digital marketing/e-commerce and e-payment		
e	Business Development Tools for Production scaling out		
f	Business Development Tools for business growth and production scaling out		
2	**Production of aquatic foods-Processing/handling/food safety/HACCP/Sanitary & Phytosanitary/Trade**		
a	Product standards for domestic markets		
b	Hazard Analysis Critical Control Points (HACCP) in production of fish-based products		
c	Product Standards across SADC region - product development and labeling		
d	Export procedures (Sanitary and phytosanitary measures) and documentation including Certificates of Origin		
e	Trade opportunities under other Regional Economic Communities (RECs) and the African Continental Free Trade Area (AfCFTA)		
f	Digital platforms to facilitate business growth		
g	Partnership Formation and Management – with a focus on Partnership Objectives and Models and Steps to Develop Partnerships		

3	**Export of fish-based products**		
a	International trade facilitation for fish-based products		
b	Product Standards for international trade in Aquatic Food Products (packaging and labeling, certification and food safety)		
c	Product Standards across SADC Region		
d	Export Procedures for fish-based products (including Sanitary and Phytosanitary Measures) and Documentation e.g. Certificate of Origin		
e	Identification of trade opportunities under other Regional Economic Communities (RECs) and the African Continental Free Trade Area (AfCFTA)		

End of Questionnaire—Thank you

Appendix 2: Training Modules used during Training in Tanzania

S/No.	Module	Highlight	Approach/Methodology	Expert
	Business development Tools			
1	Business Planning	To enable participants to appreciate the importance, preparation, and implementation of a business plan	Presentation, discussion, demonstration	Jonathan (JJ)
2	Business management/Risk Management	To give entrepreneurs an awareness on various issues to consider for attainment of higher efficiency and effectiveness	Presentation, discussion, demonstration and Business Game	Baraka Kandonga
3	Business Development Tools for Production scaling out and growth	To inform participants what needs to be done for of business growth and product life cycle	Presentation, discussion, demonstration	Jonathan
4	Digital platforms to facilitate business growth	To enable participants to do business globally	Presentation, discussion, demonstration	Kelvin Kavinje (External)
5	Partnership Formation and Management – with a focus on Partnership Objectives and Models and Steps to Develop Partnerships	Understand regulations governing partnership and modal of operation	Presentation, discussion, demonstration	BRELA/Adv. Laurencia

6	Intellectual Property Right, Business Name Registration	IPR provides certain exclusive rights to the inventors or creators of that property, to enable them to reap commercial benefits from their creative efforts or reputation	Lecture and Discussion	January Malkiado
	Food safety			
1	Introduction to Food Production and Preservation of Aquatic Food Products	Understand basic principles of food processing of aquatic foods/Explain various techniques for food preservation and processing of aquatic food	Lecture and Discussion	Malembeka
2	Food Quality Characteristics	To make the participant aware and be able to explain various food quality characteristics	Lecture and Discussion	Malembeka
3	Food spoilage	To enable participants to become aware of various ways of food spoilage and their control. Also mention important groups of harmful micro-organisms	Lecture and Discussion	Malembeka
4	Plant layout	To enable SMEs the hygiene and layout of the factory.	Lecture and Discussion	Joseph Kins
5	Food hygiene and safety	To enable them know the hygiene in General	Lecture and Discussion	Joseph Kins

6	Nutritional Contents of Aquatic Food Products and their importance	To understand the importance of nutrients obtained in aquatic food products	Lecture and Discussion	Joseph Kinsi
7	Dried and Packed Aquatic Food	To enable the participants, determine to preserve food	Presentation, practical, discussion, demonstration	Joseph Kinsi
8	Product Packaging and labelling	To enable the participants to know the main aim of packing foods and various methods in use.	Presentation, discussion, demonstration	Michael Malembeka
9	Hazard Analysis and Critical Control Points (HACCP) in production of Aquatic Food Products. • Step 1: Assemble the HACCP Team Step 2: Describe the Product	To enable the participants, determine main control steps of controlling the hazards (CCP).	Presentation, Exercise, discussion, demonstration	Halima Kazindogo
10	Hazard Analysis and Critical Control Points (HACCP) in production of Aquatic Food Products. • Step 3: Identify Intended Use • Step 4: Construct a Flow Diagram	To enable the participants, determine main control steps of controlling the hazards (CCP).	Presentation, discussion, demonstration	Halima Kazindogo

	Step 5 and 6: Hazard Analysis			
11	Hazard Analysis and Critical Control Points (HACCP) in production of Aquatic Food Products. Step 6: Hazard Analysis	To enable the participants, determine main control steps of controlling the hazards (CCP).	Presentation, discussion, demonstration	Halima Kazindogo
	Trade Requirements			
1	Trade opportunities under other Regional Economic Communities (RECs) and the African Continental Free Trade Area (AfCFTA)	Understanding the trade opportunities	Presentation, discussion, demonstration	January/TANTRADE
2	Product standards and certification for domestic markets and international markets of Aquatic Food Products	To enable participants to understand the quality and standards requirements for export market	Presentation, discussion, demonstration	Halima Kazindogo
3	Export procedures and documentations	Understand different institutions and regulations governing formality on export	Presentation, discussion, demonstration	Jonathan/GCLA/ TCCIA and Invited exporting SMEs

Appendix 3: Training Modules used during Training in Zambia

S/No.	Module	Highlight	Approach/Methodology	Expert
	Business development Tools			
1	• Introduce Business Plan • Assess Your Readiness to Start Your Business • Business Plan and Idea	• Understand the purpose and importance of a business plan in guiding business success. • Identify key components of a business plan, including executive summary, market analysis, operations, and financial planning. • Recognize how a well-structured business plan can attract investors and secure funding. • Learn how to structure and present a business plan effectively.	Presentation, discussion, demonstration, Individual exercises	Taizya Chipungu – ILO Master Trainer
2	• Conduct Your Market Research • Making a Marketing Plan • Digital Marketing & E-payments • Business growth	• Identify target markets, customer needs, and competitor strategies. • Apply market research findings to inform business decisions. • Develop a structured marketing plan aligned with business goals. • Implement effective marketing strategies across various channels.	Presentation, discussion, demonstration and Business Game	Taizya & Thelma – ILO Master Trainer

		• Utilize digital marketing tools to enhance online visibility and engagement. • Implement secure and efficient e-payment solutions for business transactions. • Develop strategic approaches to scale and expand a business. • Leverage customer relationships and market opportunities for sustainable growth.		
3	• Staffing • Buying for your Business	• Identify and implement effective hiring and recruitment strategies. • Develop techniques for employee retention, motivation, and performance management. • Evaluate suppliers and purchasing options to optimize cost and quality. • Implement effective inventory and procurement strategies to maximize profitability.	Presentation, discussion, demonstration, Focus Group Discussions	Taizya & Thelma – ILO Master Trainer
4	• Costing & Financial Planning • Start-up Capital • Types and Sources of Capital • Linkages to Finance	• Develop accurate cost structures to ensure business profitability. • Create financial plans that support sustainable business growth. • Identify the financial requirements needed to launch a business. • Explore various strategies to secure and manage start-up funding.	Presentation, discussion, demonstration, Individual exercises	Taizya & Thelma – ILO Master Trainer

		• Differentiate between various types of capital and their uses in business. • Evaluate suitable funding sources based on business needs and growth plans. • Identify financial institutions and programs that support business funding. • Develop strategies to access and maintain financial support for business operations.		
5	• Business Risk management • Record Keeping & electronic platforms	• Identify potential risks that could impact business operations. • Develop risk mitigation strategies to enhance business resilience. • Implement effective record-keeping practices for financial and operational efficiency. • Utilize electronic platforms to streamline data management and business transactions.	Presentation, discussion, demonstration, Focus Group Discussions	Taizya & Thelma – ILO Master Trainer
6	• Finalizing the Business Plans • Consolidate the business model • Action Plans for implementing Business Plans	• Refine and complete a comprehensive business plan for implementation. • Ensure alignment of business goals, financials, and operational strategies. • Strengthen the core components of a business model for sustainability.	Presentation, discussion, demonstration, Focus Group Discussions	Taizya & Thelma – ILO Master Trainer

		• Validate the feasibility and scalability of the business approach. • Develop a step-by-step action plan to execute the business strategy. • Establish monitoring and evaluation methods to track progress and success.		
	Food safety			
1	• Introduction to Food Safety and Global Trade in Food Products • Food Safety Hazards	• Understand the importance of food safety in global trade and regulatory compliance. • Identify key international food safety standards and their impact on market access. • Recognize biological, chemical, and physical hazards that pose risks to food safety. • Apply hazard prevention and control measures to ensure food quality and consumer safety.	Lecture and Discussion	Maputa Kamulete – MFL
2	• Sanitary and Phytosanitary Agreement of the WTO • Product standards for domestic markets	• Understand the principles and objectives of the WTO SPS Agreement. • Apply SPS measures to ensure compliance with international trade regulations.	• Presentation, discussion, demonstration, Focus Group Discussions	• Maputa Kamulete – MFL

	• Product Standards across SADC region - product development and labelling • Product Standards for international trade in Aquatic Food Products (packaging and labelling, certification, and food safety)	• Identify key product quality and safety standards required for local market access. • Implement compliance strategies to meet national regulatory requirements. • Understand regional product standards and labeling requirements within the SADC region. • Apply best practices for product development to enhance regional market competitiveness. • Identify packaging, labeling, and certification requirements for exporting aquatic food products. • Implement international food safety standards to ensure compliance with global trade regulations.		• Chola Siulanda – Choppies • Charles Matongo – ZABS
3	• Good Manufacturing Practices • Factory (Plant) Requirements • Equipment Suitability • Control of Contamination • Personnel Hygiene and Training	• Understand the principles of GMP and their role in ensuring food safety and quality. • Implement GMP standards to maintain compliance with regulatory requirements. • Identify key infrastructure and facility design requirements for food processing plants.	Presentation, discussion, demonstration, Focus Group Discussions	• Doreen Sakala – MCTI

		• Ensure compliance with safety, hygiene, and operational efficiency standards.		
4	• Digital platforms to facilitate business growth • Partnership Formation and Management	• Identify and utilize digital platforms to enhance business visibility, sales, and operations. • Leverage e-commerce, social media, and digital payment systems to scale business growth. • Develop strategies for identifying and establishing successful business partnerships. • Implement effective partnership management practices to ensure long-term collaboration and mutual growth.	Presentation, discussion, demonstration, Focus Group Discussions re and Discussion	• Nathan Chiyezhi -ZDA
6	Nutritional Contents of Aquatic Food Products and their importance	• Identify key nutritional components of aquatic food products, including proteins, omega-3 fatty acids, vitamins, and minerals. • Explain the health benefits and importance of aquatic foods in a balanced diet and their role in food security and nutrition.	Lecture and Discussion	• Maputa Kamulete – MFL
8	Product Packaging and labelling	• Understand the key functions of packaging in product protection, preservation, and market appeal. • Apply labeling requirements and regulations to ensure compliance	Presentation, discussion, demonstration	• Nathan Chiyezhi - ZDA

		with industry standards and consumer expectations.		
9	Hazard Analysis and Critical Control Points (HACCP) in production of Aquatic Food Products. • Step 1: Assemble the HACCP Team • Step 2: Describe the Product • Step 3: Identify Intended Use • Step 4: Construct a Flow Diagram • Step 5 and 6: Hazard Analysis	• Understand the HACCP principles and their role in ensuring food safety in aquatic food production. • Apply steps 1–6 of HACCP, including team assembly, product description, intended use, flow diagram creation, and hazard analysis. • Identify critical control points (CCPs) and establish monitoring, corrective actions, and verification procedures. • Implement proper documentation and record-keeping to ensure compliance with food safety regulations.	Presentation, Exercise, discussion, demonstration	• John Muma (UNZA-Public Health) • Charles Matongo – ZABS
	Hazard Analysis and Critical Control Points (HACCP) • Step 7: Determine the Critical Control Points (CCPs) • Step 8: Establish Critical Limits			• John Muma (UNZA-Public Health) • Charles Matongo – ZABS

	• Step 9: Establish Monitoring System for CCPs • Step 10: Establish Corrective Actions • Step 11: Establish Verification Procedures • Step 12: Establish Documentation and Record Keeping			
	• Supplier Monitoring Techniques	• Identify key criteria for evaluating and selecting reliable suppliers. • Implement effective monitoring techniques to ensure supplier compliance with quality and safety standards.		• John Muma (UNZA-Public Health)
	Trade Requirements			
1	• Trade opportunities under other RECs and the AfCFTA	• Understand the trade benefits and market access opportunities under Regional Economic Communities (RECs) and the African Continental Free Trade Area (AfCFTA).	Presentation, discussion, demonstration	• Philip Soko – MCTI

		• Identify strategies to leverage preferential trade agreements for business expansion across African markets.		
2	• International trade facilitation for fish-based products • Export procedures (Sanitary and phytosanitary measures) and documentation including Certificates of Origin • Product Certification and Food Import/Export Requirements	• Understand international trade facilitation processes for fish-based products, including regulatory and logistical requirements. • Apply export procedures, including compliance with sanitary and phytosanitary measures, documentation, and certification requirements. • Identify product certification standards and food import/export regulations to ensure market access and compliance. • Implement best practices to streamline export processes and enhance competitiveness in global markets.	Presentation, discussion, demonstration	• Philip Soko –MCTI • Doreen Sakala – MCTI

3	• Export procedures and documentations	• Understand the key steps involved in export procedures, including regulatory and compliance requirements. • Identify and prepare essential export documents such as Certificates of Origin, invoices, customs declarations, and shipping documents.	Presentation, discussion, demonstration	• Doreen Sakala – MCTI