

PRIDE OF NILE PVT LIMITED

**Proposed Project for Rehabilitation and
Expansion and Fish Processing Facilities
At Muleba, Tanzania.**

A BUSINESS PLAN: 2023 - 2028

Prepared by:

Pride of Nile Pvt Limited

P.O. Box 1966,

Muleba

Tanzania

EXECUTIVE SUMMARY

1.1 Introduction

M/s Pride of Nile Pvt Limited of P.O Box 1966 Muleba, Kagera region is a locally registered company under certificate of incorporation number 166909051 dated 21st August 2023. The company is planning to start fish processing activities in Muleba region. The company plans to carry out major rehabilitations and modernization of the fish processing facilities located within Muleba Municipality, Kagera region, by purchasing existing facilities owned by a dormant company called Sanga Fresh Investment Ltd. Envisaged activities will include rehabilitation of the factory premises, plant and machinery as well as acquisition of few machineries and transportation facilities. In the process, the company plans to inject additional US\$ 650,000 in the project where US\$ 550,000- is for fixed assets while US\$ 100,000 is to be utilized to finance working capital requirements.

With the investment, the company targets to continue utilizing as raw material the abundant Nile perch fish available around the shores of Lake Victoria in Kagera region (most of which is currently being smuggled to feed Ugandan factories) to increase production by at least 20% from the current production level during the next three years.

1.2 Rationale behind the investment Project

The applicants advocate two major economic reasons for considering Bukoba as their strategic area for investment:

- (i) Bukoba has very few fish processing factories compared to peer places like Kisumu, Entebbe, Jinja and Mbarara. While Bukoba has only one (1) operating factory, Kisumu has three (3), Entebbe has five (5), and Masaka, Uganda, a few kilometres from Bukoba Municipality has three. Lack of active fish processing factories encourages local fish suppliers from Kagera region to smuggle their fish to neighbouring Uganda, occasioning loss of revenue to the government of Tanzania. Rehabilitation and expansion of the existing processing facilities will therefore strengthen market share to fish suppliers in Bukoba/Kagera, enabling them to sell the otherwise smuggled fish within the country thus preventing further losses in government revenue;
- (ii) Tanzania owns 51% of Lake Victoria but compared to its counterparts and her lake potentials, the country has only 8 operating factories compared to Uganda with 43% share of the lake (11 operating factories) and Kenya with only 6% share of the lake (5 operating factories). Given this share analysis, Tanzania's lake potential is either underutilized or utilized to the maximum with fish supplies channeled to neighbouring countries due to lack of sufficient fish processing factories. Given the country's

potential, and sufficient fish catch in Bukoba/Kagera, the project envisages expansion of Tanzania's market share in the industry and thus maximizing the government revenue;

1.3 The Project Concept

The project entails the buyout and rehabilitation of existing property and acquisition of new facilities for processing Nile Perch fish fillets and fish maws for export. Saleable by-products are skins and extracted bones, belly flaps, head, and fats. Installed processing capacity (raw fish) of the existing facilities is about 20 tons per day or approximately 20,000,000 kgs per day assuming 300 working days per annum.

1.4 The Business Plan Objectives

This document has been prepared for two main reasons. Firstly, to determine the viability of the proposed investment and serve as a business plan for rehabilitation and expansion of the fish processing project. Secondly, it is meant to facilitate the application for Tanzania Investment Centre (TIC) Certificate of Incentives so as to access exemptions on duties, VAT deferments and other benefits and protections as statutorily provided for under Tanzania Investment Act (1997) for the project.

1.5 The Project Promoters

Pride of Nile Pvt. Limited is a Private Limited company incorporated in Tanzania under Certificate of Incorporation No. 166909051 dated the 21st August 2023. It is jointly owned by Mr. Rajeesan Chellappan (60%), Mr Honest Ngaiza (10%), Mr Sidhardh Rajeesan Panickar (15%) and Mrs. Greeshma Raj (15%). The Company is registered with authorized share capital of TShs 1,000,000,000/= divided into 100 ordinary shares of TShs 10,000,000/= each. Its fiscal year is the calendar year. The shareholders are Indian nationals

Directors:

1. Mr. Rajeesan Chellappan - Indian
2. Mr Honest Ngaiza - Tanzanian
3. Mr Sidhardh Panickar - Indian

1.6 Location and Infrastructure

The company's head office and processing plant is located at the shores of Lake Victoria at Plot No 3 Block D Muleba District, Kagera Region. The factory premises, project plant and most of transportation facilities are operated on strategic asset buyout basis. The property provides offices, plant and machinery, office equipment, transportation facilities and other fish processing facilities.

1.7 Capital Investment Structure

The directors and shareholders of Pride of Nile Pvt. Limited plan to make substantial investments in the rehabilitation and acquisition of new assets, including rehabilitation of factory buildings and related civil works, and acquisition of additional processing and fish transportation facilities.

The rehabilitation and expansion project is estimated to cost US\$ 550,000- for financing fixed capital items, and additional US\$ 100,000- to finance working capital requirements.

Table 1.1: Capital Investment Summary: 2023

S/No.	Capital Item	Capital Investment (US)
1.	Rehabilitation of Civil Structures and Buildings	200,000
2.	Plant Machinery, Tools and Equipment	250,000
3.	Utility Motor Vehicles	100,000
	TOTAL	550,000
7.	Add: Working Capital Requirements	100,000
	GRAND TOTAL	650,000

It is assumed that all motor vehicles will be replaced in the sixth-year operation.

1.8 Financing Arrangement

The proposed **fixed assets** of the project estimated to cost US\$ 550,000-- is planned to be wholly financed through owners' equity (ploughed back profits) Working capital will be financed through a short-term loan if and when required, depending on the business tempo. Initially, an overdraft facility of US\$ 100,000- is considered adequate for the initial working capital requirements.

The rehabilitation and expansion project will apply to be registered with Tanzania Investment Centre so as to be eligible to enjoy the various tax incentives and other benefits as statutorily provided under Tanzania Investment Act of 1997 as well as for meeting conditions for obtaining processing and export licences per The Fisheries Regulations of 2009.

1.9 Raw Materials Sources and Supply Arrangement

Nile Perch (Sangara), the raw material for fish processing under this project is obtained entirely from the Lake Victoria. The company will continue employing collection agents who will obtain the fish from artisanal fishermen. As has been our company norm, care will be taken to ensure only size of fish allowed for processing is purchased from the suppliers to avoid conflict with fisheries authorities.

1.10 Production Capacity and Revenue Estimates

Installed processing capacity (raw fish) of the existing facilities is about 20 tons per day or approximately 20,000,000 kgs per day assuming 300 working days per annum.

At full implementation of the programme, raw material (raw fish) is estimated to cost about US\$ 17.0 million (equivalent to 69.4% of total sales revenue) annually, all of which will go into the pockets of our local fishermen and collection agents. Under these production assumptions, the proposed project is set to generate revenue in excess of US\$ 24,491,315 per annum. This translates to huge flows of government revenue in form of royalty, corporate tax and other taxes.

1.11 Resources for Fish Processing: Raw Materials and Manpower

The two main resources for producing Nile Perch fillet are raw material and labour which are abundantly available in the region. The company is producing raw material from Lake Victoria, the second largest fresh water lake in the world and the largest in Africa. Forty Nine percent (51%) of the lake is under the territorial jurisdiction of Tanzania. The company will make substantial investments in the infrastructure for procuring the raw material like fishing boats, engines, fishing nets etc. Furthermore, fishing gear will be supplied to local artisan fishing community to ensure regular and assured supply of raw material.

The project envisages creating total local employment to 60+. The company will maintain around 12 expatriate staff, mainly fish technologists. Total employment is therefore expected to be 72.

Materials Procurement and Selection

The fish is procured from the artisan fishermen and weighed quantities are delivered to the factory. At the point of receipt of the fish and then again at factory, the fish is visually inspected for quality and freshness. Quality inspectors are in a position to access the quality of the raw material by the sense of touch smell and visual inspection.

Fish Processing

The acceptable fish is only taken into the factory premises where it is first washed with fresh clean water, and then dipped in a chlorine solution of 20 PPM and graded. The treated and graded fish is taken to the production line for filleting. The process of filleting involves

- Filleting, de-boning and removal of offal
- Removal of belly flaps

- De-skinning
- Trimming
- Grading
- Graded fillets are then individually poly-wrapped and weighed and packed in 6 kilo boxes
- Freezing for 1 hour 45 minutes to about 2 hours in plate freezers at minus 40 degrees Celsius
- Strapping of boxes and storage in cold stores at minus 18 degree Celsius
- Export by Air from Mwanza Airport or Transportation to Mombasa for export by Sea
- From the offal we remove the fish maws, skins, chest portions, head, skeleton and the tail
- Fish maws are frozen and it is an expensive product for sale in the far East market
- The belly flap and the chest portion are sold locally. Efforts are being made to export these by products also.
- Skin skeletons and the tail is at present sold to fishmeal manufacturers

Packaging and Storage

Primary Product Forms

Frozen Deep skinned boneless fillets; skin-on boneless fillets, Head less and gutted

Fresh Deep skinned boneless fillets; head less and gutted

Packaging

Frozen Fillets are typically Individually Layer Packed (ILP) or individually poly-wrapped (IPW) in 6 kg boxes, and frozen to minus 40 degrees Celsius and stored at minus 18 degree Celsius

Fresh Packed in 6 kg insulated boxes and chilled to minus 4 degrees Celsius.

Brands

Frozen Branding mainly depend on the marketing strategy applicable in countries in question.

Fresh Fresh product is normally supplied in white Styrofoam cartons

Storage Period

Frozen: Properly packed and stored - up to 18 months

Fresh: Fresh fillets will keep for 8 10 days

1.12 Market and Marketing Aspects

The company will continue to export fresh chilled and frozen Nile Perch fillets to its traditional major markets of Europe, Far East and Middle East.

The demand for these Nile Perch fillets and allied products has been constantly growing as transportation and logistics issues are taken care of and accessibility to markets in Europe, America and East Asian countries become easier. The demand for this fish in these countries is likely to grow. The prices of the Nile perch fish are more competitive than those of similar fish species and the supply virtually constant. This makes the Nile Perch fish fillets more attractive.

1.13 Competition

The emergence of and increasing global domination by Bassa fish from Vietnam is real threat to the Nile Perch. Before, there was ample scope in the world market for this product.

With the earlier EU ban and resultant greater awareness of hygiene requirements: many smaller players, who have not been able to upgrade their facilities to the required standard, have been weeded out of the market. Present restrictive quota regime operative for other white fillet fish like cod will help the company in market penetration.

The next logical step will be to enter in the value-added production and ready to eat meal section of the market in which as at present there are no or fewer players.

1.15 Environmental Aspects

The project activities involve collection, cleaning and cutting the fish into fish fillets, before packaging and chilling/freezing the products ready for transportation in refrigerated trucks to the export points (airport/sea port). In the process, the company cooperates with various regulatory authorities, including Tanzania Fisheries Department, OSHA, MMC, TRA, CGL and NEMC. Pride of Nile Pvt Limited will adhere to all regulations as appearing in The Fisheries Act (2003) and Fisheries Regulations (2003) which guides fish processors on the necessary the processors have to observe regarding environmental aspects before the processors can be granted fish processing and export licence.

Generally, Tanzania has environmental regulations governing the industrial operations/manufacturing activities etc. Nevertheless, each operator takes basic precautions to ensure that during operations, damage to environment is limited to the minimum possible level.

1.16 Organization and Management

The project is managed through the Board of Directors consisting of two members. The Board formulates policy and offer strategic business guidance to management and regularly monitor and evaluate performance of the company.

The day to day management of the project is vested in the Management Team. The Management Team comprises of the General Manager who is the overall in-charge of the project. The General Manager is assisted by Production Manager. The General Manager and his deputy are assisted by Section Supervisors and Officers. These are in turn supported by qualified personnel in their areas of specializations.

1.17 Risk Analysis

The major risk factor considered under this project is the possible temporary suspension of fishing activities in the Lake Victoria as fish stock is said to have been reduced substantially due to illegal fishing activities. There is an on-going debate that to prevent the fish stock being depleted further, the three governments sharing the lake should introduce fishing quotas. Should this happen, it is obvious the project will be adversely affected as it will be forced to temporarily stop production during the time of fishing suspensions. The second major risk is the possibility of the increase of number of fish processing companies which may increase competition drastically and thus reduce supply of raw materials to the company.

1.18 Social, Economic and Developmental Benefits

The fish processing activities generates a lot of developmental benefits, including but not limited to the following:

- Rehabilitation and expansion of the fish processing facilities will further strengthen and expand a reliable market for the local fishermen and fish collection agents in Bukoba/Kagera thus reducing losses in government revenue;
- Given the country's potential, and the abundant fish catch in Bukoba/Kagera, the project has expanded Tanzania's market share in the industry and thus maximizing the government revenue;
- The project employment will create 70+ jobs.
- Estimated amount of US\$ 17.0 million will be collected by local fishermen and collecting agents, income and other suppliers, the project is set to change the economy of Bukoba irreversibly;
- Bukoba Municipal Council will collect substantial revenue (levies/taxes) from fish processing activities;
- Except for saleable by-products, the entire production is geared for export; therefore, the proposed project will generate foreign currency. It is

anticipated that the export earnings of the project at full implementation will be in the excess of US\$ 24.49 million per annum.

1.19 Project Implementation Schedule

The company directors have the financial muscle, technology, market access and all other necessary resources required to implement the expansion project. Given that all the permits and authorization are in place, implementation of the project should take place immediately.

It should be noted that by nature of this industry, rehabilitation and replacement of the project facilities are an on-going exercise so as to meet product quality requirements of international standards. This exercise is therefore expected to be continuous for the next three years (2023 – 2025) as indicated in the investment plan.

1.20 Conclusion and Recommendations

The foregoing discussion highlights on the social, economic and financial dimensions which the envisaged rehabilitation and expansion project is set to generate in this country. The brief analysis indicates that the proposed project is economically feasible, financially viable, socially desirable and environmentally manageable. Therefore, it is strongly recommended that the sponsors, Pride of Nile Pvt Limited be availed the required institutional assistance so as to enable them implement the proposed expansion project. It is further recommended that an application for TIC Certificate of Investment Incentives be submitted to Tanzania Investment Centre with a view to benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act, 1997.

2.0 FINANCIAL PROJECTIONS

2.1 Introduction

Pride of Nile Pvt Ltd was initiated with the objective of procuring, processing, marketing and exporting fresh and frozen Nile perch fishery products.

2.2 Project Review: 2023– 2025

2.2.1 Capital Investment

Capital invested during the period fall in two major categories: fixed capital assets amounting to USD 550,000/= (financed through ploughed back profits), and working capital ranging from USD 100,000 financed through directors' loans and bank overdraft facilities.

Fixed Investment

Table 2.1: Capital Invested - 2023/2025

S/No.	Capital Item	Capital Investment (US)
1.	Rehabilitation of Civil Structures and Buildings	200,000
2.	Plant Machinery, Tools and Equipment	250,000
3.	Utility Motor Vehicles	100,000
	TOTAL	550,000
7.	Add: Working Capital Requirements	100,000
	GRAND TOTAL	650,000

Working Capital

Working capital was mainly required to finance purchasing of raw fish and other direct costs. It ranged from TShs 3,607,275,623/= to TShs 5,653,201,888/= and was financed through directors' loans, advance payments and bank overdraft facilities.

3.2.2 Raw Fish Cost and Quantity Processed

Table 2.2: Raw Fish Cost and Quantity Processed - 2023-2025

ITEM/PERIOD	2023	2024	2025
Quantity Processed (Kgs)	5,017,816	6,351,567	5,324,620
Price per Kg (TShs)	7,214	6,377	4,835
Cost of Raw Fish (TShs)	36,198,535,450	40,505,632,950	25,742,332,800

The Strategies to be employed

In order to realize the investment, the company will use the following strategies:

Modernization and Expansion of fish fillets processing and storage facilities. This will include procurement and installation of the following the following:

- Plate Freezer units comprising of compressor, evaporators and other accessories;
- Blast Freezer unit comprising of compressor, evaporators, and other accessories;
- Flake Ice Machines;
- Compressors and freezing accessories;
- Insulated tubs and miscellaneous tools and equipment.

Expansion of transportation facilities. This will include procurement of the following the following:

- Light Trucks with insulated body (refrigerated)
- Heavy Duty Truck with Semi Trailer

Rehabilitate the factory premises to conform to laid down fish processing international standards;

Continue to adhere to the EU Food Standards in collaboration with the country's fisheries authorities to ensure we are eligible to enter any global market at all times;

Ensure continuous specialized staff training and motivation throughout so as to maintain a local trained and dedicated work force.

2.2.3 The Products

The company produces three main products: fish fillets (fresh and frozen), fish maws and by products. While fish fillets and fish maws are mainly for the export markets, by products are sold locally for production of poultry feeds.

2.2.4 Production and Sales Revenue

The tables below summarize sales revenue of the above three (3) products during the period under review:

Table 2.3: Fish Fillet Production/H&G - Production: 2023/2025

PRODUCTION/VALUE	2023	2024	2025
Fish Fillets Production (Kgs)	2,156,973	3,249,807	2,360,183
Price per Kg (US\$)	5.89	4.64	3.77
Production Value (US\$)	12,694,503	15,086,398	8,908,189

Table 2.4: Fish Fillet /H&G - Export - 2023/2025

EXPORT SALES/VALUE	2023	2024	2025
Fish Fillets Export (Kgs)	2,119,673	3,023,512	2,319,421
Price per Kg (US\$)	5.89	4.64	3.77
Exports (US\$)	12,474,981	14,035,881	8,754,338

Table 2.5: Fish Maws - Production - 2023/2025

PRODUCTION/VALUE	2023	2024	2025
Fish Maws Production (Kgs)	102,666	138,546	123,812
Price per Kg (US\$)	39.07	45.19	36.67
Production Value (US\$)	4,011,097	6,261,357	4,539,800

Table 2.6: Fish Maws - Export 2023/2025

EXPORT SALES/VALUE	2023	2024	2025
Fish Maws Export (Kgs)	98,322	118,266	76,214
Price per Kg (US\$)	39.07	45.19	36.67
Export Value (US\$)	3,841,380	5,344,836	2,794,530

Table 2.7: Saleable By-products - Production and Sales - 2023/2025

PRODUCTION/SALES	2023	2024	2025
Fish Maws Production/Sales (Kgs)	2,848,748	3,373,182	2,998,856
Price per Kg (TShs)	784	724	722
Production/Sales Value (TShs)	2,233,063,517	2,442,818,491	2,166,472,911

2.2.5 Processing/Direct Costs (in TShs)

Table 2.8: Processing/Direct Costs - 2023/2025

Year	2023	2024	2025
Wages	184,899,414.00	381,860,387.00	337,748,690.00
Packing materials	713,423,314.60	809,994,394.22	579,182,873.17
Factory Expenses	20,065,360.00	10,760,500.00	24,655,480.00
Import Expenses	46,460,881.40	105,190,270.00	100,054,184.50
Electricity & Water	545,193,706.20	774,983,421.34	503,511,195.98
Lease Rentals	2,232,764,000.00	2,659,046,000.00	1,823,280,000.00
Processing Expenses	83,321,824.15	103,277,270.88	68,539,250.00
Ecolabelling Expense	125,013,600.00	50,356,250.00	67,413,600.00
Transportation Charges ¹	939,438,283.23	1,287,167,245.08	824,574,689.23
Grand Total	4,890,582,400.58	6,182,637,756.52	4,328,961,981.88

**Costs Estimates and Sales Revenue Forecast
(in US\$)**

Year	2023	2024	2025
Sales Revenue	20,240,766	22,264,877	24,491,315
DIRECT OPERATING COSTS			
Cost of R/M	14,056,997	15,462,695	17,008,963
Salaries & Wages	178,907	196,797	216,477
Packing Materials	337,367	371,104	408,215
Factory Expenses	12,779	14,056	15,463
Import Expenses	44,727	49,199	54,119
Electricity & Water	261,371	288,168	316,985
Lease Rentals	958,431	1,054,274	1,159,702
Processing Expenses	46,004	50,605	55,666
Ecolaballing Expense	35,142	38,656	42,522
Transportation Charges	447,268	491,994	541,194
Total Operating Costs	16,378,993	18,017,548	19,819,306
Operating Costs as % of Sales	80.92%	80.92%	80.92%
Operating Profit	3,861,773	4,247,329	4,672,009
Operating Profit as % of Sales	19.08%	19.08%	19.08%
ADMINISTRATIVE COSTS			
Canteen Expenses	19,431.00	21,374.00	23,511.00
Depreciation & Amortization	85,666.00	85,666.00	85,666.00
Employment Costs			
(i) Directors' Remuneration	7,894.00	8,683.00	9,551.00
(ii) Medical Expenses	3,440.00	3,785.00	4,164.00
(iii) Social Security Contributions	24,289.00	26,718.00	29,390.00
(iv) Salaries & Wages - Administration	91,083.00	100,192.00	110,210.00
(v) Skills & Development Levy	11,942.00	13,136.00	14,450.00
(vi) Staff Welfare	8,096.00	8,905.00	9,796.00
(vii) Training Expenses	9,108.00	10,019.00	11,021.00
(viii) Visas & Permits	30,200.00	30,200.00	30,200.00
(ix) Workers Compensation Fund		11,132.00	12,245.00

	10,120.00		
General Office Expenses	16,597.00	18,257.00	20,082.00
Insurance	56,269.00	61,896.00	68,085.00
Licences, Fees and Levies	34,409.00	37,850.00	41,635.00
Fines & Penalties	10,525.00	11,578.00	12,735.00
Postages & Telephones	5,870.00	6,457.00	7,102.00
Printing & Stationery	5,667.00	6,234.00	6,858.00
Professional, Legal and Secretarial Fees	5,263.00	5,789.00	6,368.00
Security Expenses	41,898.00	46,088.00	50,697.00
Subscription & Fees	4,250.00	4,675.00	5,143.00
<i>Selling & Distribution Overheads</i>			
(i) Freight, C&F and Export Charges	71,275.00	783,724.00	862,094.00
(ii) Fuel Expenses	133,994.00	147,393.00	162,133.00
(iii) Motor Vehicle Running Expenses	377,243.00	40,967.00	45,064.00
(iv) Royalty on Exports	588,197.00	647,017.00	710,933.00
(v) Travelling & Hotel Expenses	20,038.00	22,042.00	24,022.00
Repairs & Maintenance	82,582.00	90,841.00	99,924.00
Service Levy	66,390.00	73,029.00	80,331.00
Bank Charges & Commissions	42,505.00	46,756.00	51,432.00
	1,864,241.00	2,370,403.00	2,594,842.00
Administrative Costs as % of Sales	9.20%	10.65%	10.59%
COST SUMMARY			
Direct Operating Costs	16,378,993.00	18,017,548.00	19,819,306.00
Administrative Costs	1,864,241.00	2,370,403.00	2,594,842.00
Total Costs	18,243,234.00	20,387,951.00	22,414,148.00
Profit Before Tax	1,997,532	1,876,926	2,077,167
Profit Before Tax as % of Sales	9.87%	8.43%	8.48%

Corporate Tax (30% of Profit Before Tax)	599,259.00	563,077.00	623,150.00
Net Profit After Tax	1,398,273.00	1,313,849.00	1,454,017.00
Net Profit as % of Sales	6.91%	5.90%	5.94%

2.2.6 Markets and Marketing Aspects

During the period under review, the company exported its products to the following countries: Netherlands, Germany, Belgium, Italy, Spain, Romania, Greece, Poland, Japan, Dubai (UAE), Saudi Arabia, and Vietnam.

As stated from the outset, our marketing strategies involved production of high quality fish products, implementing quality controls as per international standards, aggressive marketing to expand our sales share in international markets, minimizing production cost without compromising the product, and benchmarking our competitors.

2.2.7 Organization and Employment Aspects

The company is headed by a Managing Director who is also a company director and shareholder, Mr. Rajeesan Chellappan. He is assisted by a General Manager who is currently an expatriate staff. The General Manager is further assisted by Production Manager and competent supervisors.

The company has four core departments as indicated below with number of employees in brackets:

- (i) Administration Department (including the Managing Director, General Manager, logistics and security) (13)
- (ii) Production Department (37)
- (iii) Engineering (2)
- (iv) Eco Laboratory (11)

Total employment (including the Managing Director) adds to 63 in the breakdown below:

- o Local Employees: 51
- o Expatriate Staff: 11 comprised of:
 - the Managing Director (1)
 - the General Manager (1)
 - the Production Manager (1)
 - Fish Technologists (9)

3.0 BUSINESS ENVIRONMENT AND SECTOR ANALYSIS

3.1 Introduction

Tanzania is blessed with fisheries resources from marine, freshwater, riverine and wetland species, according to a Study Report *“The Tanzania Fisheries Sector: Challenges and Opportunities”* by the Ministry of Agriculture, Livestock and Fisheries (2016). By making use of these resources, the sector provides direct employment of about 183,800 fishers. More than 4,000,000 people such as boat builders, fish processors, net and engine repairers are indirectly employed. It provides income for local people from foreign earnings, food for coastal and upcountry communities and also contributes to GDP. This makes the country one of the greatest fisheries nations in Africa, ranking in the top 10 in terms of total capture and fisheries production. Current information on the assessment of the fisheries management performance is scanty. The fisheries resources in Tanzania are currently exploited using the open access principle, through a licensing system and community participation in fisheries management.

3.2 The Fishery Sector

Tanzania is endowed with rich marine and inland waters that yield a wide range of living aquatic resources, providing livelihoods, food security, export revenues, and potential further economic development. The fisheries can be divided into the following subsectors: marine and inland capture fisheries, aquaculture, and fish processing. The scale of operations ranges from small-scale subsistence fishing to industrial fish processing. There is a vibrant export market, exploited by small-scale fish processors and traders serving the regional market, and by large fish processors selling into international markets.

Over the last decade, Tanzania fisheries production has been in the range of 325,000 to 380,000 tonnes per annum. About 85% is from inland fisheries, 14% from marine fisheries and just 1% from aquaculture. In 2014, there were some 183,800 people engaged in fishing, accounting for about 0.7% of the work force, with a large, but unknown number, also engaged in fish trading and processing.

3.3 Fisheries Sector Institutions

The Ministry of Livestock and Fisheries (MLF) is responsible for the preparation, implementation, monitoring, and reviewing of national fisheries policies and regulatory frameworks in Tanzania. The Department of Fisheries Development within the MLF is responsible for the management of inland fisheries, and for marine fisheries within the territorial waters of the mainland.

In addition, several institutions work in the fisheries sector in research, training and development roles. The Tanzania Fisheries Research Institute (TAFIRI) carries out research in Fisheries and has its headquarters in Dar es Salaam and offices in Mwanza, Kigoma and Kyela. The institute undertakes research in fresh

water and marine capture fisheries, aquaculture and mariculture, fish processing and quality as well as socio-economic studies.

The Mbegani Fisheries Development Centre and the Nyegezi Fisheries Institute (Mwanza) operate under Fisheries Education Training Agency (FETA). They offer technical training courses in fishing technology, aquaculture, fish processing and quality control, coastal resources management, and other subjects relevant to the development needs of the fishery sector.

3.4 Inland Fisheries

Inland fisheries accounted for about 85% of the national fish production. Lake Victoria and Lake Tanganyika are the most important lakes from a fishery point of view, accounting for about 94% of the total inland fish production. Lake Victoria, according to the Lake Victoria Fisheries Organization, is the most productive freshwater fishery in Africa.

The inland fisheries are currently exploited by an estimated 132,982 fishers, operating 42,288 (mostly very small) vessels, and over the last 15 years have produced an average overall catch of 296,370 tons. Of the three lakes, Lake Victoria accounted for about 63% of all fish production from freshwater capture fisheries, Lake Tanganyika contributed about 18% and Lake Nyasa about 3%. The main freshwater species of commercial interest are the Nile Perch (*Lates niloticus*), Nile Tilapia (*Oreochromis niloticus*), and freshwater sardine or Dagaa (*Rastrineobola argentea*).

3.5 Nile Perch

3.5.1 Description

Nile Perch Is a fatty white fish found apparently exclusively in freshwater lakes in central and eastern Africa, overwhelmingly in Lake Victoria. Lake Victoria is the second largest lake in the world and also the largest lake in Africa, covering a surface area of 68,000km² and a catchment area of 184,000km². The lake fishery is a shared resource with Uganda (45%), Tanzania (49%) and Kenya (6%).

Over the past two decades, the Nile Perch fishery has attained great importance from both food security and economic points of views. Nile Perch, which is a top predator, is caught mostly from small traditional designed wooden canoes (paddle, sail or outboard powered), and is fished with gillnets and longlines. Tanzania's annual catch of Lates species in Lake Victoria and Tanganyika was about 112,000 tonnes in the previous years (36% of freshwater fish production).

An extensive system of collector vessels, mostly powered by outboard motors, delivers the catch to the landing sites, where it is sold to traders and processors, who bring vehicles and ice to the location. Nile Perch, of a suitable size and quality, is processed into chilled and frozen export products in ten factories operating to international standards. The importance of this species is reflected

in the substantial private investment in processing infrastructure for the export of Nile Perch.

3.5.2 The Main Fishing Grounds

The Nile Perch fishing grounds are located around the entire shoreline of Lake Victoria although they are concentrated in certain areas more than others. The Fisheries Export Data, the busiest areas on the Tanzania shoreline were in the Ukerewe - a very large Island in the south east corner of the lake which contributed 13,704.2 metric tons (29.1% of total Nile Perch catch on the Tanzanian side), Musoma District (7,186.1 tons or 15.5%), south west corner of the lake on the islands in Muleba District (6,931.5 tons or 14.7%), and Sengerema District (5,866.2 tons or 12% of total Nile Perch catch during the year). In summary, the catch in the three Tanzanian regions surrounding the lake were as follows:

Table 3.2: Nile Perch Catch by Regions Surrounding the Lake

REGION	CATCH IN METRIC TONS	AS A % OF TOTAL
Kagera	10,097.2	21.46%
Mara	11,019.8	23.42%
Mwanza	25,934.0	55.12%
TOTAL	47,051.0	100.00%

Source: Fisheries Annual Statistics Report 2013 – Ministry of Agriculture, Livestock, and Fisheries Development – Fisheries Development Division

3.5.4 Industrial Fish Processing

Nile Perch provides a substantial white flesh which is readily filleted, and is in good demand on international markets. Statistics obtained from a Study Report on the Tanzania Fisheries Resources - “The Tanzania Fisheries Sector: Challenges and Opportunities” by Ministry of Agriculture, Livestock and Fisheries (MALF) (2016) reveal that up to 2016, there were ten processing plants in Tanzania authorized for international export of Nile Perch (compared to fourteen in Uganda and four in Kenya). All are situated in the region of Lake Victoria.

All these establishments are operated to international standards, including HACCP, and are compliant with EU hygiene rules. As well as complying with EU hygiene requirements, many of the establishments are certified to ISO 22000 BRC and other global standards certified on issues of food safety, hygiene standards.

Fresh fish on ice is delivered to the processing plant directly from the landing site, and sorted into export and non-export grades. Nile Perch is gutted and scaled and processed by hand into a range of products according to market

requirements. Premium quality fish is used for chilled fillets and steaks etc., which are freighted in fresh form to global destinations. The EU is the major market, but product is also sent to the Middle East, USA, Australia, Israel and South Africa. More recently, markets for skins and maws (swim bladders) have been developed.

3.5.5 Hygiene Conditions

Tanzania was one of the first countries in Africa to achieve hygiene approval from the European Union, and be permitted to export fish and fishery products to the EU. At present there are 14 establishments and two freezer vessels approved for export to the EU. The Fisheries Development Division of the MALF is the nominated Competent Authority for official control of fishery product exported to the EU.

The system is periodically audited by European Commission. The inspectorate is well equipped with a microbiological laboratory and a chemical analysis laboratory. There are 34 inspectors of whom 22 are based in Mwanza Office and the rest in field offices on Lake Victoria. Fish inspectors take regular samples from all fish processing factories to assess the sanitary conditions of the fish before export. The national sanitary regulations require that establishments apply the Hazard Analysis and Critical Control Point (HACCP), and that they employ qualified Quality Control Staff.

3.5.6 Fish Processing Capacity

The MALF report reveals that today, the Tanzanian factories have the capacity to process an average of 500 tonnes of raw fish per day. The decline in catches of fish of a suitable size has led to most plants operating at a much-reduced capacity; only 25% in some of the larger plants.

The international market for Nile Perch has also been hit by the rise of the much cheaper Pangasius fillets from Asian aquaculture suppliers, such as Vietnam. However, most of the plants are over 20 years old, and are able to continue operations with relatively low overheads.

4.6 Financial Aspects – Investment Costs

The company plans to invest additional capital amounting to US\$ 650,000- in rehabilitation of existing assets, and procurement of new tangible assets.

Planned Investment Structure: 2023 to 2025 Period

S/NO.	CAPITAL ITEM	QTY (UNITS)	UNIT PRICE (US\$)	INVEST MENT 2023	INVEST MENT 2024	INVEST MENT 2025	TOTAL COST (US\$)
1.0	Rehabilitation of Civil Structures and Buildings			150,000	30,000	20,000	200,000
2.0	Plant Machinery and Equipment						
2.1	Plate Freezer units with accessories	2	60,000	0	0	0	120,000
2.2	Blast Freezer & accessories	1	75,000	0	0	75,000	75,000
2.3	Flake Ice Machines	1	75,000	75,000	0	0	75,000
2.4	Compressors and freezing accessories	10	7,500	0	0	0	75,000
2.5	Miscellaneous tools and equipment			30,000	40,000	30,000	90,000
	Sub total			105,000	40,000	105,000	250,000
3.0	Transport Facilities						
3.1	Light Refrigerated Trucks	1	45,000	45,000	0	0	45,000
3.2	Heavy Duty Truck with Semi Trailer	1	105,000	105,000	0	0	105,000
	Sub total			150,000	0	0	150,000
	TOTAL						550,000
	Add: Working Capital						100,000
	GRAND TOTAL						650,000