MWANZA MINHUI AQUATIC PRODUCTS COMPANY LIMITED

A proposed business plan on cage fish farming in Bukumbi Area, Misungwi, Mwanza

August, 2023

1. CHAPTER ONE

1.1 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 than4, 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 up country communities and also contributes to GDP (2.4% in 2015). This makes the country one of the greatest fisheries nations in Africa, ranking in the top 10in terms of total capture and fisheries production. The fisheries resources in Tanzania are currently exploited using the open access principle, through a licensing system and community participation in fisheries management.

1.2The 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 of325,000 to 380,000 tons per annum. About 85% is from inland fisheries, 14%from marine fisheries and just 1% from aquaculture. In 2014, there were some183,800 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.

FISH PRODUCTION IN TANZANIA 2015

SOURCE	METRIC TONNES	AS A % OF TOTAL
Inland	314,062	85%
Marine	51,912	14%
Aquaculture	3,942	1%
TOTAL CATCH	**369,966**	**100%**

Source: Fisheries Statistics 2014 Ministry of Agriculture, Livestock and Fisheries (MALF)

1.2.1 Fisheries Sector Institutions

The Ministry of Livestock and Fisheries 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 with in 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) varies out research in Fisheries and has its headquarters in Dar es Salaam and offices in Mwanza, Kigoma and Kyela. The institute under takes research in freshwater and marine capture fisheries, aquaculture and Mari culture, fish processing and quality as well as socio-economic studies.

The Mbegani Fisheries Development Centre and 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.

1.2.2 Inland Fisheries

Inland fisheries accounted for about 85% of the national fish production in 2014.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 fresh water capture fisheries during 2013, 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 fresh water sardine or Dagaa *(Rastrineobolaargentea).*

1.3 Aquaculture in Tanzania

Aquaculture, in Tanzania started in the early 1950s with experiments with tilapia in pond culture. These days the sector includes tilapia, trout, and cat fish (in fresh water), and a small marine aquaculture (mariculture) sector producing milk fish and prawns. Tanzania has considerable potential for increasing the contribution of aquaculture, given the extensive lake and other water resources, ideal temperatures and availability of raw materials for feed.

1.3.1 Production

Aquaculture production is static at about 4,000 tons per year, three quarters of which is tilapia. The sector generates considerable employment, with estimated 14,100 engaged in fresh water fish farming and 3,000 in the marine sector. Apart from a few notable examples, aquaculture in Tanzania is primarily a small-scale activity, with small ponds, little formal management and low productivity, reflecting it's largely subsistence nature.

However, there are some larger vertically integrated production units with cage farming in Lake Victoria, and some larger ponds for shrimp production in coastal areas. Production of Tilapia in cages has been introduced in Bunda district and some parts of the lake in Mwanza and Bukoba. There is one major joint venture between Danish and a Tanzanian company, and several training institutions, such as FETA, also operate farms. These producers have developed their own feed supply and hatchery facilities.

1.3.1.1 Constraints

- ✓ Lack of Good Quality Supply of Finger lings

There are nine hatcheries for tilapia in operation (three of them being government owned and operated) with production reaching lightly over 5,000,000 fingerlings, against a demand estimated by the Department of Fisheries Development to be over 30,000,000 fingerlings country wide. There is an apparent lack of good quality fry and the excess demand over supply results in lower quality and higher levels of mortality, under mining productivity.

- ✓ Lack of Good Quality Supply of Feeds

Feed supply is another constraint. There is one main fish feed producer and supplier based in Dar es Salaam. Government supports the distribution of affordable fish feed by subsidizing 85% of the commercial selling price to fish farmers. The company also supplies juvenile tilapia for grow-out. There are a few commercial operators with vertically integrated facilities, which include small-scale fish feed mills, using locally available raw materials such as fish meal (from dagaa), soya beans, sun flower oil, cassava flour, wheat and maize bran. Some feeds are also imported directly by larger producers, to ensure better quality and productivity. Government has strongly supported investment in aquaculture training, with degree programs at Sokoine University of Agriculture and the University of Dar es Salaam, and skills training at Mbegani Fisheries Development Centre and FETA.

- ✓ **Complexity of Multiple Licensing Requirements in Cage Culture**

Unlike Uganda and Kenya, cage culture in Lake Victoria has not taken off at commercial levels, due to the reported complexity of multiple licensing requirements with several agencies, namely the National Environment Management Council, Ministry of Environment and the Ministry of Agriculture, Livestock and Fisheries. Tanzania's aquaculture production equates to about 0.2% of fish supplies for human consumption in the country. In Kenya aquaculture contributes 1.4% and in Uganda it contributes 6.5%. Egypt, with considerably poorer production conditions than any of these countries, generates 80% of its fish supplies from aquaculture.

1.4 About Tilapia in Tanzania

Whilst Nile perch and dagaa dominate the inland fisheries, tilapia also makes an important contribution and it accounts for 11% of the Lake Victoria catch. Fresh tilapia is the preferred and most widely consumed fresh fish product in Tanzania, and the government has banned the exports of tilapia from the capture fishery as a food security measure. Tilapia is mainly consumed in a fresh form, but smoking and salting is widely practiced, especially by island communities that lack quick means of transport to the main land markets. Due to its high popularity locally and regionally, the lakeside price of Tilapia per kg is higher than that of Nile perch. The high prices have started to bring in imports of tilapia fillets, with increasing quantities of tilapia entering Tanzania from China.

1.5 Fisheries and Aquaculture Policy and Implementation

The Government has prioritized development of the agricultural and fisheries sectors, and in October 2015 the MALF published the National Fisheries Policy2015, which sets out the vision of: “By 2025 to have a progressive fisheries sector contributing significantly to socio-economic development through sustainable utilization of fisheries resources while conserving the environment.“ The overall objective of the National Fisheries Policy is to develop a robust, competitive and efficient fisheries sector that contributes to food security and nutrition, growth of the national economy, and improvement of the wellbeing of fisheries stakeholders while conserving the environment. Key documents, which guide the implementation of policy, are the Fisheries Sector Development Program, the National Aquaculture Development Strategy and Fisheries Management Plans for the prawn, octopus, tuna and small-scale artisanal pelagic fisheries. The existing legal and regulatory frame work applicable to the fisheries sector is expressed in several legal measures enacted in the Fisheries Act CAP279 of 2003, the Marine Parks and Reserves Act CAP146, the Deep-Sea Fishing Authority Act CAP388; and the Tanzania Fisheries Research Institute (TAFIRI) Act CAP 280, and other related laws and regulations. The Fisheries Act is presently under revision, to better reflect international best practices in fisheries governance and management. The Fisheries Regulations 2009 set out the detailed technical provisions applicable to the sector.

CHAPTER TWO: TECHNICAL ASPECTS

2.1The Project Concept

The project entails establishing modern fully tilapia cage fish farm in Lake Victoria waters in Ilemela District. The cage fish farm will comprise of three (3) major components:

- ✓ Development of breeding ponds for the production of the highest quality sex-controlled (all males) 1.0-gram fingerlings for own requirements and sell the excess production;
- ✓ Import and install 100 fish farm cages in Lake Victoria to produce portion size (400-500grams at an average grow out period of 4 -5 months , conduct processing and packaging the fish so produced for sale in the local market, surrounding E.AC community member states and beyond;
- ✓ Establish a fish feed mill for production of fish meal(including floating pellets)

2.1.1 Location and Infrastructure

The proposed project will be located in Plot No 133 Block No.42 Bukumbi Area, Misungwi District. The project has acquired a total 10, 000square meters planned for establishment of the factory, storage, offices, fish breeding ponds and hatcheries and residential for key staff. The site is accessible by Tamack road from Mwanza town to Bukumbi Centre and 2 km of rough road to the site. It is connected to the national grid electricity. Water will be drawn from the lake.

2.1.2 Ownership

The project is promoted by **M/s Mwanza Minhui Aquatic Products Company Limited**, a locally registered company under Companies Act, 2002 with Certificate of Incorporation No: 167830897 dated 17th day of August, 2023 formed with the main objective of undertaking fish farming activities in Tanzania. The Company is registered with authorized share capital of Tshs 500,000,000/= divided into 5,000 ordinary shares of Tshs 100,000/=each. The shareholders are two (2) Chinese nationals with respective shareholding as shown below:

COMPANY SHAREHOLDERS AND SHAREHOLDING STRUCTURE

NAMEANDADDRESS OFSHARE HOLDER	NUMBEROFSHARES TAKENBYEACH	NATIONALITY
LIN XINYAN Plot No 108,Xinhai Street, Fuzhou City, Fujian Province, China.	2750 (55%)	Chinese
WANG YUANXIAN Plot No 108,Xinhai Street, Fuzhou City, Fujian Province, China.	2250 (45%)	Chinese
TOTAL	**100**	

2.1.3 Planned Activities

As mentioned elsewhere, the project has three principal activities: breeding tilapia fish to produce 1.0-gram sex-controlled fingerlings; grow up all-male fingerlings in cages to portion size fish (400to500grams), fish processing and packaging for both domestic and local market.to the market. Specifically, the company plans to do the following in the next 4years:

- ✓ Complete land acquisition and registration processes;

Obtain the necessary licenses, permits and authorizations necessary to establish the cage fish farming, processing and selling locally and export to the E.A .C Community member states and elsewhere abroad;

- ✓ Develop a cage fish farm with a maximum of 100 cages to produce all-male sex-controlled tilapia
- ✓ Construct project buildings, storage facilities and related civil works;
- ✓ Procure and install new ultra-modern plant machineries and equipment for fish processing and production of own top quality fish feeds;
- ✓ Procure new specialized fish transportation and raw materials trucks and administration vehicles.

2.1.4 Strategies to be employed

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

i. Complete land acquisition negotiations focusing in obtaining about Plot No 133 Block No.42 Bukumbi Area, Misungwi District, as well as obtaining licenses, permits and

authorities to establish the project from relevant authorities;

ii. Develop fifteen (10) Tilapia Fish Breeding Ponds to produce top quality fingerlings at the ratio of one (1) male to three (3) females. Total females in one pond are estimated at 600. The breeding stock will be obtained from Lake Victoria.

iii. Develop fish feed mill to produce top quality feed mill to satisfy the demand.

iv. Construct at the project site processing and storage buildings feed mill factory building and develop necessary civil works structures to accommodate all the proposed project facilities.

v. Procure facilities necessary for production and distribution activities. This will include the following:

vi. Procurement and installation of refrigeration equipment/system and compressors, cold rooms, IQF (Individually Quick Freezing) Plants; Processing Line Equipment (Blast and Flake Ice Plants);

vii. Development of water treatment plant/effluent water plants,

viii. Development of laboratory for quality analysis;

ix. Establish a workshop for service and maintenance of plant equipment and transportation facilities and procurement of engineering equipment;

x. Procurement of processing equipment;

xi. Undertake Staff recruitment and training;

xii. Procurement and installation of a new heavy duty Standby Electric Power Generator.

xiii. Identify and establish fish distribution points and external markets;

xiv. 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

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

2.2 Investment Costs

Capital investment in fixed assets is estimated to be US$741,586. In addition, there will be a need for about US$71489.4) to finance working capital requirements as indicated under Annex I oftheFinancialProjectionssectionofthisdocument.Themaininvestmentitemsareindicated in the same annexure. The below is a proposed investment plan summary:

PROPOSEDCAPITALINVESTMENTSTRUCTURE

ITEAM	AMOUNT IN USD
Land, Buildings & Structures	88,976
Cages, Machinery, Tools & Equipment	519,931.80
Vehicles	121,076
Furniture & Office Equipment	6,383
Pre-operational Expenses	5,106
Contingencies	4,255
Total Investment Cost	745,729

2.3 Investment Financing Plan

Project promoters plans to finance their project through both equity from Directors in China and Loan from a local bank in Tanzania. The project financing plan is summarized on the below table as show in Annex II.

Financing Mode	**Country Source**	**Amount**
Foreign Equity	China	222,442
Local Bank Loan	Tanzania	519,144
Total Sources		741,586

M/s **Mwanza Minhui Aquatic Products Company Limited** will apply to be registered with Tanzania Investment Centre under this project 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 licenses per The Fisheries Regulations of 2009.

2.4 Production Process

Fish fingerlings are produced in breeding ponds where the parent stock will be obtained from Lake Victoria. The fingerlings are treated with hormones through feeds to ensure only males are produced. Fingerlings are transferred to thecagesattheageof26dayswhentheyare1.0 grams on average. The fingerlings are fed with top quality fish meal for four months when they will have grown to between 400 to 500 grams which is the standard market size. Thereafter, tilapia fish will be harvested and taken to the processing building. Here they will be cleaned, ready for packaging. Processing capacity is estimated at 40 tons per day.

2.5 Packaging and Storage

Whole fish will be packaged in Styrofoam cartons, each carton 10kgs. One refrigerated container will thus carry 2,500 cartons. The products will then be chilled at minus 30 degrees centigrade before being transferred and stored in cold room below minus 18 degree centigrade.

2.6 Production Capacity

Initially, the project will procure and install 100 square cages measuring 4m width, 4m height with 4m length, total 640 cube meters. Each cage will have capacity to accommodate between 8,000 sex-controlled fish fingerlings which will grow there into portion size fish (400to500grams) each. Mortality rate is estimated to be less than 20% given the fresh waters of Lake Victoria which has very little pollution compared to other similar water bodies. The director's estimates that each cage will produce 3.2 tons within every 4 to 5 months, thus producing twice during a year and hence 640 tons per annum. This translates to total production of 6400 metric tons per annum at full project implementation.

2.7 Revenue Estimates

The price of fish portion size (400 to 500 grams) is estimated at TShs 4,500/=per kilo. Under the production assumptions, therefore the project is projected to generate revenue of TShs 6,451,200,000/=equivalent to US$2,745,192-per annum from fish sales only.

The price of fish fingerlings is conservatively projected at only TShs 80/= (US$0.04) per piece and the price of fish meal for sale is estimated at TShs 2,500/=(US$1.07) per kilo. Given the installed capacity of food processing mill and ponds for fingerlings being small. The products will mostly be for internal use and only the small amount will remain for sell to cover up small operational cost.

2.8 Production Costs

It requires 1.3kgs of feeds to produce1.0 kgs of fish. Production cost is estimated at TShs 2,000/= (US$ 0.86) per kilo – in-house price assigned the fish production part of the project. At full project production therefore, it will cost TShs3,088,589/= (US$ 1,314293) to feed the entire population per annum.

2.8 Employment

The project envisages employing estimated number of 100 people among whom 6 will be foreign expatriate staff. Of the remaining 94 local employees,44 will be skilled while 50 will be casual /unskilled workers.

2.9 Project Organization, Management and Labor Requirement

The project will be managed through the Board of Directors consisting of 4 members. The Board will formulate 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 will be vested in the Management Team. The Management Team will comprise of the General Manager who will be the overall in-charge of the project. The General Manager will be assisted by Deputy General Manager. The General Manager and his deputy will be assisted by three (3) Heads of Department: Production Manager, Marketing Manager and Finance & Administration Manager. These will in turn be supported by qualified personnel in their areas of specializations.

CHAPTER THREE

3.1 MARKET EVALUATION

3.1.1 Market and Marketing Aspects

The project targets both the local market and the E.A Community member states and beyond. The export market is not considered for the time being.

3.1.2 Competition

Cage fish farming has officially been allowed by the government in recent years. So far, there are only a few large commercial tilapia fish farming projects in

The country. The most notable project is Ruvu Fish Farm located in Bagamoyo, Coast region which is a joint venture between a Tanzanian and a Danish partner with support from DANIDA. The project is expected to produce 450 tons of quality tilapia fish per year. However, this project uses ponds. Cage fish farming is rapidly expanding in Lake Victoria waters. The biggest cage fish farm with in Tanzania borders is located at Bulamba Area, Bunda District under the ownership of JKT 822KJ- Bulamba Detach. The Bulamba JKT has to-date developed more than 50 cages A few more cage farms have started appearing in Ilemela District.

It is therefore evident that there is no serious competition in cage fish farming, considering the fact that tilapia fish demand in the country is very high compared to available supply.

3.2 Financial Analysis

3.2.1 Financial Assumptions

The estimated capital cost and basic operating assumptions are summarized in the financial projections as shown in Annexure I to XI. In the financial analysis the following major assumptions have been taken into considerations:

By taking into consideration gradual increase in production capacity, the financial projections are for 5 years.

For convenience and stability, all financial figures have been quoted in United States Dollar at US$1=2,350/=TShs.

Total capital investment cost is estimated at US$741,474 excluding working capital requirements.

It is proposed to finance the total fixed Investment costs of this project through foreign equity contributions (30%), and local bank term loan (70%). The Initial Working Capital Requirements estimated at TShs168,000,000/= (US$ 71,489.4) will be financed through bank

short-term loan in form of overdraft facility to be charged interest at theprevailingrateof8%.
Implementation period of seven (7) months has been taken into consideration to allow for development of the site infrastructure and other civil works structures etc); procurement of fish cages and development of rearing and breeding pond/tanks, recruitment and training of technical staff; procurement and installation plant machinery equipment and necessary tools, and motor vehicles; and securing local and export markets.
Discounting rate has been assumed to be 8%

Depreciation of fixed assets and amortization of the pre-operational expenses/contingencies rates used are as shown in Appendix 3(Annual Depreciation and Amortization of Assets) and Annex I (Investment, Replacement and Depreciation Schedules).
Project capacity utilization is estimated at 60% in the first year, rising to 65% in second year, reaching 70% in year three,75% in year four before stabilizing at 80% from year five onwards.
Investment Costs are shown in Annex I (Investment, Replacement and Depreciation/ Amortization Schedules).
Direct production costs shown in Appendix 2 (Operational Costs) andAnnex1V (Trading Account)are based on current rates.
Salaries, Wages and Allowances have been based on the prevailing scales in the aquaculture industry in Tanzania. There is provision of 20% to cover company contribution to Social Security Fund (10%) and other Social Welfare Benefits (10%).
Administrative/Overheads and farm/factory Overhead costs are based on the prevailing rates in the market and needs of the proposed project.

3.3 Major Operating Costs

Major production cost items are indicated in Appendix 2 (Operational Costs). Corporate Tax is fixed at 30% of taxable profits.
The project will be granted a Tanzania Investment Centre (TIC) Certificate of Incentives and therefore enjoy tax relief on both capital and deemed capital goods.

3.3.1 Analysis of Financial Results

Following are highlights of the financial projections and analysis: **Annex IV–Trading Account**

Operations of the project are profitable right from year 1when the company Posts a net profit after tax of US$ 411,441-. The profitability position remains stable during the subsequent years, rising to US$ 468,782- in year two, US$ 498,140- in year three before climaxing at US$582,888- by end of the 5th and last assumed economic life of the project.

Appendix V–Sources and Uses of Funds

The projected Cash flow for Financial Planning indicates that the project will generate enough cash to meet its financial obligations. The cumulative cash balance during the project period grows over five (5) fold, increasing from US$411,441- to US$ 2,502,741-. This is a positive indication that the project isliquidenoughtomeetitscashrequirementstosupportitstradingoperations.

Appendix VI-Projected Balance Sheets

The balance sheets indicate a favorable state of affairs of the project throughout the projected period. Similarly, current liabilities are well covered by the current assets, the ratio ranging from 6.64 to 36.52 fold. The company net-worth (Initial Shareholders Equity plus Retained Earnings) grows 5.82 fold during the economic life of the project, increasing from US$ 519,144- at the end of construction period to US $3,021,885-by end of the 5th year, a significant growth in the value and profitability of the company.

PaybackPeriod

The Normal Payback Period is1.3 years at zero discount rate **Key Financial Ratios**

The ratio between Net Profit + Interest to Investment ranges from 58% to 79%.

Return on Equity (RoE) tells us how much profit the firm generates for each dollar of equity it owns. RoE on this project by the end of its assumed economic life at year five (5) is82.82, translating to a return of 82.82 for every 100 equity dollars invested in the project. This indicates that the project is very profitable, over and above the industrial standard return of 15-20%

Return on Investment (RoI) is a performance measure used to evaluate the efficiency or profitability of an investment. RoI on this project is 238%, a return of 238 % for every US $100-invested.

Debt to Equity Ratio (D/E Ratio) is used to evaluate a company's financial leverage. It is a measure of the degree to which a company is financing its operations with debt rather than its

own resources. D/E Ratio for this particular project is only 0.01 by far lower than the standard range of 2 to 2.5. This result tells us that resource allocation in this project is not optimal.

Equity to Total Liabilities ratio range from 4.24 in year one, decreasing as the loan amount is reduced before reaching 21.51at year three when the loan is fully paid and 128.17 by the end of the assumed project life at year five.

Break even Analysis

Break-even ratio for this project is36.72%. This tells us that the firm can break-even when it operates at 36.72% of the assumed security services provision capacity.

Sensitivity Analysis

From the analysis carried out on changes of some key factors to show their effect on profitability and IRR, the project shows to be more sensitive to changes in price than changes in decline in capacity utilization and increase in direct operating costs.

CHAPTER FOUR: ENVIRONMENTALASPECTS

4.1 Introduction

The project activities involve installation of fish cages with in lake waters, production of fish meal, cleaning and packaging of whole fish before packaging and chilling /freezing the products ready for transportation in refrigerated trucks to both local and 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. **Mwanza Minhui Aquatic Products Company 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 license.

Generally, Tanzania has environmental regulations governing the industrial operations/ manufacturing activities etc. Never the less, each operator takes basic precautions to ensure that during operations, damage to environment is limited to the minimum possible level.

Mwanza Minhui Aquatic Products Company Limited will seek to obtain European Union Certification for the proposed processing plant before starting operations, and this will ensure a working quality control system in place. The HACCP System (Hazard Analysis & Critical Control Points) of quality control will give this factory a global competence. A working laboratory, an efficient training programme, good team work and support from the government authorities will help this industry to grow day-by-day. The company will implement all directives from the EU and therefore grant approval for export to all the EU countries and the global market in general including the Middle East and to the other member states of East Africa.

4.2 Project Activities

The Project Activities: involve collection, cleaning and packaging and chilling/freezing the products ready for transportation in refrigerated trucks to the local and export points (airport/ seaport. Processing begins with fish receiving and selection of ideal fish for processing. The only chemical applied during the processing is Chlorine used for cleansing purposes.

Mode of Liquid Waste Disposal: Recycled and treated waste water and the affluent disposed in underground tanks.

4.3 WorkHealthandSafetyPolicy

To ensure environmental aspects are fully accommodated in the planned project activities, the Company will establish its Environmental Management Plan which shows commitment of Management andWorkers to health and safety, with aim store move or reduce risks to health, safety and welfare of all workers, contractors and visitors, and everyone else who maybe affected by the Company's business operations

4.4 Environmental Impact Screening

The nature of the project indicates that there are no major negative environmental effects of public concerns, except two minor ones:

4.4.1Air Pollution (Odour/Offensive Smell)

It has been noted that during processing fish, the processing maybe associated with release of offensive smell, and as a result, may disturb the surrounding community. However, the fish processing operations for **M/s Mwanza Minhui Aquatic Products Company Limited** will be conducted in an ultra-modern factory that will meet all the Fisheries Act (2009) and Fisheries Regulations (2009), and therefore processing will be carried out under very clean environment.This impact is therefore considered negative, cumulative, shorter man do flow significance.

4.4.2 Land Contamination from Chemicals/Effluent

It is urged that improper management of effluent and other cleansing chemicals like chlorine spills may occur prom processing. This is also considered of low significance as all effluent water will be channeled to water treatment plant. Mitigation measures should be in place and other necessary precaution should be taken in order to avoid land pollution.

TheCompany'sCommitmenttoEnvironmentalProtectionandFisheriesRegulations2009

As discussed above, the project does not involve any wastes as all processing wastes are either further processed for sale or sold raw as an important in put for production of animal feeds. Environmental degradation is therefore not an issue in this project. Notwithstanding the minimal environmental impact of the project, Company will ensure maximum cleanliness of the project is maintained, and that the project conforms to requirements in The Fisheries Act, 2003 and Fisheries Regulations, 2009.

4.5 RISKANALYSIS

The major risk factor considered under this project is the possible break down of fish diseases. However, this is highly unlikely as Lake Victoria waters are very clean, almost pollution-free compared to similar water bodies. These can be major risk if there is the possibility of the increase of number of cage fish farmers around Misungwi district who may compete for lake space. However, this is also un likely to happen in a foreseeable future as commercial cage fish farming is relatively a young industry in the country.

4.6 SOCIAL, ECONOMIC AND DEVELOPMENTAL BENEFITS

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

Establishing the proposed fish meal production facilities in Misungwi and production of 10,812 metric tons for sale will help ease the fish feed supply constraint which is hindering the growth of fish farming industry.

Supply of 10.88million good quality tilapia fish fingerlings will reduce the huge deficit currently experienced which stands at over 30 million compared to the available supply of 5 million fingerlings countrywide.

The good quality fingerlings sold to other farmers will further influence reduced mortality and improved productivity.

The project envisages employing estimated number of 100people.

Fish production is geared towards both local consumption and export to the neighboring countries and beyond. Therefore, the increased supply of tilapia fish per year will not only influence to regulate fish price but also, with the project fish price being half of the current market price means more local people will have access to nutrients available in tilapia fish.

Misungwi District Council will collect substantial revenue (levies/taxes) from fish farming and processing activities;

Revenue to the government Treasury and other organs in the form of taxes, fees and levies;

The project personnel will benefit from training on fish farming and processing skills.

CHAPTER FIVE: CONCLUSIONSANDRECOMMENDATION.

5.1Conclusion.

Financial and economic analyses above reveal the following:

The project is financially viable, economically feasible and environmentally friendly as indicated by the projects' cost of production and profitability tables, cashflows and balance sheet.

The project envisages expansion of Tanzania's market share in the fish export industry and thus maximizing government revenue in form of various taxes; The project has a very short payback period of 1.30 years relative to its fixed capital investment of US$ 741,474.

The project will create employment opportunities, transfer of technology. It is geared to employ about 94 local employees, a significant number of which will be men.

The project will generate a considerable amount of foreign exchange through the sale of tilapia fish.

The project will have a huge impact in the economy of Mwanza region considering the amount of money that will be paid to workers per annum in form of salaries and wages

5.2 Recommendations.

In view of the above it is strongly recommended that the project be approved by Tanzania Investment Centre and be granted the TIC Certificate of Incentives with its associated privileges and benefits as provided for under Tanzania Investment Act,1997 to facilitate smooth implementation.

It is further recommended that TIC assist the investors to obtain a Letter of No Objection from the Ministry of Livestock and Fisheries and subsequent grant of Fish Processing and Export License as provided for under Section 6(d) of Tanzania Investment Act ,1997 which reads" *assist all investors….to obtain all necessary permits, licenses, approvals ,consents, authorizations ,registrations and other matters required by law for a person to setup and operate an investment, and to enable certificates issued by the Centre to have full effect"*.

Financial Analysis And Projections