# MEGA BUILDERS LIMITED
# (Livestock Farming Project)

# Proposed Project for Establishing and Operating
# an
# Integrated Fish and Ostrich Farming & Poultry Hatcheries
# at
# Bagamoyo and Kisarawe Districts, Coast Region

# A BUSINESS PLAN

Prepared by:

B.S Malik
P.O. Box 5767
Dar es Salaam
Tanzania

October 2021

TABLE OF CONTENTS

# 1.0 EXECUTIVE SUMMARY-

## 1.1 Introduction

M/s Mega Builders Limited of Msasani Ward, Kinondoni P.O. Box 5767 Dar es Salaam is a well established company and renown for undertaking various projects in the country. The company is a locally registered company incorporated under Companies Act (2002) under Certificate of Incorporation Number 11668 dated 2$^{6th}$ day of July 2002. M/s Mega Builders Limited has entered into a 20-year Lease Agreement with her two sister companies, M/s Leco Tourist Resorts Limited and M/s Mega Cashew nuts & Allied Plantations Limited for the purpose of establishing fish, ostrich farms and poultry hatcheries in parts of three pieces of land belonging to the Lessors situated at Kerege Village and Mihuga villages in Bagamoyo District, and Vikumburu Village in Kisarawe District, Coast Region respectively.

Having engaged in the construction works for the last 35 years, the directors of M/s Mega Builders Limited have recently decided to venture into new business areas where they have already established gold processing plant at Mlandizi Village, Mvomero District, Morogoro, while another project for development of affluent and affordable residential houses in various areas of Bagamoyo District are at implementation stages. They are now looking at further diversifying their investment portfolio to include integrated fish, ostrich farming and poultry hatcheries.

## 1.2 The Project Concept

The project is comprised of four (4) distinctive components: The first component entails establishing ultra-modern fish farm at Kerege and Mihuga villages in Bagamoyo. The fish farm project is designed to use ponds and tanks for production of mainly tilapia fish and fish fingerlings for sale to the local market. In addition, sea fish farming in onshore ponds will be added at Kerege village where the project site is located at the shores of the Indian Ocean.

The second component will involve development of ostrich farm at Vikumburu and Mihuga villages where they have ample land for the project, The project targets at production of fully grown ostrich birds and ostrich chicks for sale to both local and export markets. For this purpose, the project will install its own hatchery to ensure a continuous supply of ostrich and chicken chicks. The third part involves establishing ostrich and chicken egg hatchery units for production and sell of 3-month old ostrich birds for mainly export and day-old chicken chicks for the local market.

The last major component will involve establishing a very modern fish, ostrich and chicken feed mills for production of quality feed meals of international standards for own project and sell excess production to fish fingerlings and chicks

customers. However, for purposes of this project, this is treated as a separate project of its own and therefore it is not included here.

## 1.4 The Study Objectives

This document has been prepared for three (3) main reasons. Firstly, to determine the social, economic and financial dimensions which the envisaged project is set to generate in this country. and serve as a business plan for establishing and running the 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. Thirdly, it will be used to facilitate application for bank term loan of US$ 649,014-- to supplement acquisition of fixed assets, and application of bank short term loan of US$ 100,000- to finance working capital requirements.

## 1.5 The Project Promoters

The applicant is M/s Mega Builders Limited Masasani Ward, Kinondoni District P.O. Box 5767 Dar es Salaam. The company was incorporated under Companies Act (2002) and granted Certificate of Incorporation Number 11668 dated 2$^{6th}$ day of July 2002. The authorized share capital of the company is TShs 200,000,000/= divided into 1,000 equity shares of TShs 200,000/= each.

Mega Builders Limited, the project developers, is owned by:

(i) Mr. Balbir Malik Singh (6,500 shares)

(ii) M/S Aruna Malik (5,400 shares)

(iii) Mr. Nitin Malik (6500 shares)

(iv) M/s Asha Selemani Lindonde (500 shares)

All are currently based in Dar es Salaam while the company head office is at Plot No. 1724 Block MSN 17 Makagira Street, Mikoroshoni Area, Msasani Ward, Kinondoni District.

## 1.6 Location and Infrastructure

The proposed project is to be established in three distinct sites: Fish farming project is to be located at Kerege and Mihuga villages, Bagamoyo District, chicken hatchery and feed meals at Kerege village, while ostrich farming is located at Mihuga (Bagamoyo) and Vikumburu (Kisarawe District). All are in the Coast Region.

The sites are neither connected to water supply, nor electricity supply infrastructure at the moment. It will be easy to connect Kerege site to connect to main water supply and the national electricity grid line which are already connected to the nearby Export Processing Zone site. Likewise, a standby power generator 5kVA will be procured as an alternative source in case of power cuts. As for Mihuga village, water will be drawn from Wami River (through pumping) which is about six (6) kms away, but for electricity, it is planned that solar power system at 5kVA will be installed in addition to a standby power generator at capacity of 5kVA. Vikumburu village will solely depend on solar energy and boreholes for water supply and electricity power. Large water collection ponds will be constructed and boreholes sunk at all the three sites to guarantee uninterrupted water supply at all times.

## 1.7 Capital Investment Structure

The directors and shareholders of Mega Builders Limited plan to make substantial investments in the development of the project, including construction of water collection ponds, fish hatchery and breeding ponds, staff houses and processing buildings, chicken and ostrich hatcheries, solar electricity generation facilities, structures storage buildings, office buildings, construction of fish ponds, and acquisition-modern fish and ostrich meat processing facilities, ostrich grazing areas and resting sheds and related civil works, and also fencing all the project sites. The proposed project also involves acquisition of tools, equipment, and utility and administration vehicles.

Total project is estimated to cost US$ 1,175,700- for financing fixed capital items, and additional US$ 100,000- to finance working capital requirements as summarised hereto below:

CAPITAL INVESTMENT SUMMARY

| | CAPITAL ITEM | COST (US$) |
|---|---|---|
| 1. | Land and Buildings | 640,700 |
| 2. | Plant Machinery, Tools and Equipment | 337,000 |
| 3. | Utility and Admin Motor Vehicles | 45,000 |
| 4. | Furniture, Fixture and Office Equipment | 33000 |
| 5, | Miscellaneous Expenses | 60,000 |
| 6. | Pre-operational Expenditures | 60,000 |
| | TOTAL | 1,175,700 |
| 7. | Add: Working Capital Requirements | 100,000 |
| | GRAND TOTAL | 1,275,700 |

## 1.8 Proposed Financing Arrangement

**Fixed assets** cost of the project estimated to cost US$ 1,175,700- is planned to be financed through owners' equity and directors' contributions (38.5%) and bank term loan (61.5%) while working capital will be financed through local short-term loan if and when required, depending on the business tempo. An overdraft facility of US$ 100,000- to be sought from the investor's local bankers is considered adequate for the initial working capital requirements.

## 1.9 Fingerlings/Ostrich, Chicken Eggs and Raw Materials Sources

The directors envisage obtaining about 300 matured females Nile tilapia and 100 male brooders of an average weight of 1 to 1.5 kgs ready for producing eggs. On the other hand, 100 pairs of adult ostrich and ostrich eggs will be procured from ostrich farms in Arusha and Kenya and if the need arises from other SADC counties member including Zimbabwe, Botswana and South Africa. Chicken eggs for hatching will mainly be obtained from poultry breeding farms in Mwanza (from M/s Misenani Agri Services Limited) and Mkuza Chicks Company at Kibaha, while additional requirement will be from other poultry farms in the country particularly in Arusha and Morogoro. Should a need arise; the investors leave their door open for imports from Kenya, Uganda, Zambia and Malawi. Materials for making fish meal, ostrich and chicken feeds including sardines, maize, polished rice, cotton cake, soya beans etc., will be obtained mainly from local suppliers. However, premix (minerals, micro-element etc.) will be procured from Arusha, Kenya, Uganda, Zambia, and Malawi while some of them will be imported mainly from China.

## 1.10 Production Capacity

### 1.10.1 Fish Farm

#### (a) Fish Production

Inland fish ponds measuring 20m x 10m x 1.5m high will be constructed for fish growing. Each pond will have a holding capacity of 12,000 sex-controlled fish fingerlings which will grow therein to portion size fish. Initially, the project will develop 10 ponds with a combined holding capacity of 120,000 fish with 5 to 6 months cycle, translating to 240,000 fish per annum weighing between 400 to 600 grams during the first year of production.

During the second year, 10 more ponds of same dimensions will be constructed for fish growing and likewise 10 additional concrete ponds will be developed and utilized for fish growing during the second year. The plan is to develop 10 ponds yearly from 1st year to the 10th year. Mortality rate is estimated to be about 20% given the fresh waters from the nearby river (Wami) and boreholes/rain water collection ponds, water sources with very little pollution, hence a harvest of 1,920,000 fish at full project

implementation at year ten (10). (Refer to Financial Analysis Appendix Four of the Financial Analysis Worksheet)

### (b) Fish Fingerlings

Just one female will typically produce about 200-1000 eggs per spawn. Some species can produce up to 1,600 eggs every spawn. Tilapia usually spawns once a month. The mall fingerlings are stocked in earth nurseries to reach the desired size of size 22 at 15-30 days and size 17 at 45 days. Nile tilapia can live for more than 10 years.

Under this project it has been assumed that initially the project will procure 300 matured female Nile tilapia and 100 males of an average weight of 1 to 1.5 kgs ready for producing eggs. It is further assumed that each female tilapia will produce an average of 1,000 eggs per spawn, and that they will spawn once a month, thereby producing 12,000 eggs per annum each, translating to 3.6 million eggs per year in total. Under the coast temperatures degree of about $28^0$ C, it will take 4 days for the eggs to hatch. (Refer to Financial Analysis Appendix Four of the Financial Analysis Worksheet)

## 1.10.2 Chicken Egg Hatcheries

Two chicken incubators will be procured for chicken hatchery with a combined capacity 200,000 eggs per month, at success hatching rate of 80% or successful production of 1,920 chicks per annum. (Refer to Financial Analysis Worksheet Appendix Three).

## 1.10.3 Ostrich Farming

100 pairs (100 males and 100 females)of ostrich brooders estimated to cost US$ 1250- each (total cost US$ 250,000-) will be procured for production of eggs that will be incubated. One ostrich is capable of producing a minimum of 40 eggs per year; therefore production of 4,000 eggs is estimated per annum which will all be incubated. Incubation success rate is estimated at only 60%, hence production of 2,400 chicks. The standard survival rate up to 12 months is estimated at 70% therefore only 1,680 ostrich chicks will make it to fully matured birds that will be sold at US$ 1,250- each, On the other hand, 200,000 ostrich eggs will be procured annually for hatchery to successfully produce 96,000 chicks which will all be sold 3 months old. (Refer to Financial Analysis Worksheet Appendix One)

## 1.10.4 Ostrich/Poultry Feeds and Fish Meals

Production of fish meal is estimated at 561,600 kgs, Ostrich and poultry feeds 1,458,844.75 kgs per annum at full project implementation. On the other hand, ostrich feeds, vaccines and medication is estimated to cost US$ 100- per bird per

month for a fully grown bird, US$ 75- for up to 24 months old birds and US$ 50- for chicks up to 3 months old.

## 1.11 Production Costs

### 1.11.1 Fish Farm

(a) Whole Fish Production

It requires 1.3kgs of feeds to produce 1.0kgs of fish. Production cost under market price is estimated at TShs 1,1600/= (US$ 0.5) per kilo. Given the assumptions in Section 1.10.1( a) above, feeds requirement cost works out at 43.3% of gross sales, ranging from US$ 62,400- in year one to 624,000- in year ten. (Refer to Appendix Four)

(b) Fish Fingerlings Production

Cost of feeds for fish fingerlings (of age between 30 to 45 days) is estimated at only 20% of gross sales revenue. From production assumptions under Section 1.10.1(b) above, the cost will range from US$ 40,320- in year one to US$ 14,400- in year ten. The trend is downward because while production remains stable at 3.6 million per annum, more fingerlings are transferred to growing ponds, therefore as fish production increases, excess fingerlings available for sale decreases at the same proportions. (Refer to Appendix Four)

### 1.11.2 Chicken Egg Hatcheries

This project is solely meant for chicken egg hatchery. It will rely on purchase of eggs from other specialized hatcheries. This is to prevent possibility of spread of poultry related diseases to the chicks. The major cost in this project therefore is eggs procurement and electricity.

Statistics obtained from M/s Misenani Agri Services Limited, the largest renowned hatchery in the Lake Zone indicate the price of a fertilized egg is Tshs 800/= (US$ 0.34) a piece. This has been considered the average price for this project. This translates to TShs 160,000,000/= (US$ 68,000-) for a batch of 200,000 egg, Annual requirement of 2,400,000 fertilized eggs will therefore cost Tshs 1,920,000,000/= (US$ 816,000- per annum.

Other major operating costs will include vaccines and medication heating and packaging for distribution. Should the investors fail to sell all the stock on hatching day, then the management will have to arrange for chicken feeds, water and watering, flitter, heating, electricity, cleaning and disinfecting the the bans where the chicks will be kept while awaiting distribution.

Cost for vaccines, medication, packaging and all other handling costs (including transport where necessary) is estimated at Tshs 200/= per chick (US$ 0.08)

translating to Tshs 40,000,000/= per a batch of 200,000 chicks or TShs 480,000,000/= (US$ 192,000-) per annum. (Refer to Appendix Three).

### 1.11.3 Ostrich Farming

Ostrich farms to will be located at at Mihuga and Vikimburu villages. A pair of 100 parent stock (100 males and 100 females) will be procured at a cost of US$ 1,250- (total US$ 250,000-) and reared to produce eggs for hatching. Each female will produce a minimum of 40 eggs per annum therefore 4,000 eggs will be incubated every year, and the chicks that will be reared up to 24-month juveniles for sale. The project will further procure 200,000 eggs per year at a cost of US$ 1.5 each (total US$ 300,000-) for hatchery to produce 3-month old chicks for sale. Incubation success rate is estimated at only 60%, hence production of 2,400 chicks annually from the 4,000 eggs produced in-house. The standard survival rate of ostrich chicks up to 12 months is estimated at 70% therefore only 1,680 ostrich chicks will make it to fully matured birds that will be sold at US$ 1,250- each,

Operation costs under this mini project are mainly provision of feeds, vaccines and medication as well as periodic planting of grasses in the birds grazing areas. Feeds, vaccines and medication will cost US$ 50- for chicks less than 3 months, US$ 75- for juvenile birds under 12 months and US$ 75- for fully grown birds. *(Refer to Financial Analysis Worksheet Appendix One and Summarized Capital Investment cost in Annex I for more production details)*

As in the case of fish farm and chicken hatchery projects, this project component will likewise establish a modern ostrich feed mill for production of good quality ostrich feeds of international standards.

## 1.12 Revenue Estimates

### 1.12.1 Fish Farm Project

(a) Whole Fish Sales

The price of a kilogram of fish is very conservatively estimated at TShs 3,480/= (US$ 1.5) per kilo. Annual production is estimated range from 96,000 kgs in year one to 960,000 kgs in year ten. From the assumptions under Section 1.11.1 (a), it translates to gross revenue ranging from US$ 144,000- in year one to US$ 1,440,000- in year ten. (Refer to Appendix Four).

(b) Fish Fingerlings Sales

Fish fingerling is estimated to sell at TShs 150/- (US$ 0.06) per piece. Under the production assumptions given under Section 1.11.1(b) above, sales is estimated to take a downward trend, ranging from US$ 201,600- in the first year to US$ 72,000- in year ten. *(Refer to Appendix Four for more details).*

### 1.12.2 Chicken Egg Hatcheries

According to M/s Misenani Agri Services Limited, the company sells a day old broiler chick at TShs 1,500/= while a layer chick sells at TShs 2,500/=. For purposes of this project, the price of day old chick is estimated at an average of TShs 2,000/= (US$ 0.86-). Under this assumption therefore, sale of a batch of 200,000 chicks will generate gross revenue of TShs 400,000,000/= (US$ 172,414) or TShs 4,800,000,000/= (US$ 2,068,966-) or annual production of 2,400,000 chicks. *(Refer to Appendix Three for more revenue generation details).*

### 1.2.3 Ostrich Farming

The main products in this mini project are 3-mont old ostrich chicks and 24-months old of fully grown ostriches for sale. Incubation success rate is estimated at only 60%, hence production of 2,400 chicks. The standard survival rate up to 12 months is estimated at 70% therefore only 1,680 ostrich chicks from eggs produced in-house will make it to fully matured birds that will be sold at US$ 430- only- each, thereby generating US$ 744,400- per annum. On the other hand, 200,000 ostrich eggs procured from other fish farms for hatchery is successfully expected to produce 96,000 chicks which will all be sold to other fish farms abroad at 3 months old, at the price of US$10- only thereby generating US$ 960,000-. *Refer to Financial Analysis Worksheet Appendix One and Summarized Capital Investment cost in Annex I for more revenue generation details)*

### 1.14 Job Creation

The three mini projects envisage creating estimated number of 88 permanent jobs among which three (3) will be foreign expatriate staff. The remaining 85 will be local employees. The company also envisages creating 30 casual/seasonal unskilled temporary jobs whenever the need arises. Furthermore, among the local permanent employees, 45 are expected to be males while 40 are expected to be females.

### 1.13 Market and Marketing Aspects

Fish, fish fingerlings and chicken chicks targets the local market whereas both matured ostrich and chicks are mainly intended for export markets, particularly India and the Middle Eastern countries. The company is particularly considering taking advantage of the directors connections with their business acquaints in these countries linked to ostrich farming.

### 1.14 Competition

So far, there are only a few large commercial tilapia fish farming projects in the region and within the country in general. 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. Of recent, there has

erupted cage tilapia fish farming within Lake Victoria. This project uses ponds. It is therefore evident that there is no serious competition in fish farming, considering the fact that tilapia fish demand in the country is very high compared to available supply. The same is true for chicken hatcheries. The most established chicken hatcheries are Mkuza Chicks Limited (Kibaha, Coast Region), Silversands Tanzania (Njombe, Iringa) and a few others in Morogoro, Songea and Arusha whose combined supply does not satisfy demand by far. As for ostrich farming, the country has no real big commercial farms except small ones scattered in Arusha and elsewhere despite having lots of wild ostriches in Serengeti and some of the other national parks.

## 1.15 Financial Considerations

The attached Financial Projections Annexure analyses the Capital Investment Structure, (Annex) Annex II Summarises Capital Investment Cost, Annex III loan interest and Repayment plan, Annex V Working Capital requirements, Annex V Trading Account, Annex VI Profit and Loss Account while Annex VII analyses Sources and Uses of Funds

- Internal Rate of Return on investment 37.6%
- The Normal Payback Period is 4 years
- NPV Ratio is positive and computes at 6.5

## 1.16 Environmental Aspects

The project activities involve construction of concrete fish ponds for production of tilapia fish and fingerlings, and on-shore ponds for production of sea fish, construction of buildings for ostrich and chicken chicks hatchery, production of fish meal and chicken/ostrich feeds. Also building staff and office houses, ostrich resting areas and planting of grasses in ostrich grazing areas, cleaning and disinfection of ostrich/poultry house. Other activities include packaging of whole fish before packaging and chilling/freezing the products ready for transportation in refrigerated trucks to the markets, as well as packaging chicks for transportation to selling points. In the processes, the company will cooperate with various regulatory authorities, including Tanzania Foods and Drugs Authority, Fisheries Department, OSHA, MMC, TRA, CGL and NEMC. Mega Builders Limited will adhere to all the relevant regulations which guide ostrich, poultry and fish farmers and processors on the necessary regulations the ostrich, fish and poultry farmers and processors have to observe regarding environmental aspects before the farmers/processors can be granted permits and 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.

To ensure environmental aspects are fully accommodated in the planned project activities, the company will establish Work Health and Safety Policy which will show commitment of Mega Builders Limited Management and Workers to health and safety, with aims to remove or reduce risks to health, safety and welfare of all workers, contractors and visitors, and everyone else who may be affected by the Company's business operations.

## 1.17 Organization and Management Team

The project will be managed through the Board of Directors consisting of four members. The Board will formulate policy and offer strategic business guidance to management and regularly monitor and evaluate performance of the project.

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 three heads of departments: Ostrich Farm, Fish Farm and Chicken Hatchery Managers. The General Manager and his heads of departments will be further assisted by veterinary doctor with other qualified personnel in their various areas of specializations.

## 1.18 Risk Analysis

The major risk factor considered under this project is the possible breakdown of ostrich and fish diseases. However, this is highly unlikely as borehole and Wami River waters are very clean, almost pollution-free compared to similar water bodies. Likewise, the project sites are in excluded area where there is no contact with locally grown chicken. Besides, the ostrich resting areas, poultry houses and fish ponds and their respective environments will be periodically cleaned and disinfected to prevent the breakdown of diseases.

## 1.19 Social, Economic and Developmental Benefits

Ostrich, Fish farming and chicken hatcheries activities generate a lot of developmental benefits, including but not limited to the following:

- The project envisages employing estimated number of 88 people among who three (3) will be foreign expatriate staff. Of the remaining 85 local permanent employees, 45 will be males and 40 female workers. In additional 30 casual/unskilled workers will be temporarily employed whenever the need arises. Salaries and wages earned by local workers are expected to change the economy of their respective areas irreversibly;
- The entire fish and chicken hatchery production is geared for local consumption .Therefore, the increased supply of 960 tons of tilapia fish

and 1.92 chicks per year will not only influence to regulate fish and chicks 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 and more chicks will be available to chicken farmers at affordable price which is only 75% of the current market price.

- Production of mature and ostrich chicks targets the export market which the company directors have already established in India and Middle East countries. The ostrich farm expects to generating around US$ 1,682,400- in foreign exchange which is a benefit to the country's economy.

## 1.20 Project Implementation Schedule

The company directors have the financial muscle, technology and market access and all other necessary resources required to implement the project at any time. However, implementation of the project will only start after obtaining all the necessary permits and authorizations from the relevant authorities. Of particular interest is the grant of a Letter of No Objection from the Fisheries Department, and from the authority granting permits for ostrich farming, as well as grant of Tanzania Investment Centre (TIC) Certificate of Incentives with a view to benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act, 1997.

The project Implementation will be commencing immediately after being granted with the abovementioned authorization/permits. By nature of this project, procurement of the major capital items will be completed in the first three years except for the fish farming which will be a continuous exercise until the last year of the economic lifetime of the project.

## 1.21 Conclusion and Recommendations

The foregoing discussion highlights on the social, economic and financial dimensions which the envisaged 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, Mega Builders Limited be availed the required institutional assistance so as to enable them implement the proposed project with immediate effect. 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.

Meantime, TIC should be asked to obtain a Letter of No Objection and ostrich farming on behalf of the company for the establishment of the projects in Bagamoyo and Kisarawe Districts, Coast Region as part of TIC facilitation services to investors as provided for under Section 6(d) of Tanzania Investment Act, 1997.

# 2.0 TECHNICAL ASPECTS

## 2.1 The Project Concept

The project involves establishment of three mini projects. The first component will involve development of fish ponds for production of tilapia fish, and breeding ponds for the production of the highest quality sex-controlled (all males) 1.0-gram fingerlings in for own requirements and sale of excess production. The mini project will be established at Kerege and Vikumburu villages. In addition, In addition, it also involves establishing onshore ponds at Kerege Village beach to capture and rear various types of salt water therein. The salt water fish farm mini project is designed to use on-shore ponds. The tilapia ponds The fish project will also involve construction fish ponds measuring 20m x 20m x 1,5m high with a holding capacity of 12,000 fish fingerlings each to produce portion size (400 to 600 grams) at an average grow out period of 5 to 6 months – mainly for the local market. Development of the fish ponds will be spread in ten (10) years: 10 ponds will be constructed during year one, 10 more in year two onwards before completing the last ten during the 10th year. Associated to the fish project, a fish feed meal mill will be established for in-house production of top quality fish meal of international standards for the fish farm project.

The second component involves establishing a modern poultry hatchery for production of day-old chicks for sale in the local market. The project envisages procurement of a heavy duty incubator with a holding capacity of 200,000 eggs in one sitting to produce 1.92 million chicks per annum on assumption that hatching success will be at the rate of 80%. No parent stock will be kept to avoid spread chicken related diseases to the hatched chicks.

The third component will involve development of ostrich farms at Mihuga and Vikimburu villages. A pair of 100 parent stock (100 males and 100 females) will be procured and reared to produce eggs for hatching. Each female will produce a minimum of 40 eggs per annum therefore 4,000 eggs will be incubated every year, and the chicks reared to 24-month juveniles for sale. The project will further procure 200,000 eggs for hatchery to produce 3-month old chicks for sale. As in the case of fish farm project, the project component will likewise establish a modern ostrich feed mill for production of good quality ostrich feeds of international standards.

## 2.2 Location and Infrastructure

The proposed project is to be established in three distinct sites: Fish farming project is to be located at Kerege and Mihuga villages, Bagamoyo District, chicken hatchery and feed meals at Kerege village, while ostrich farming is located at Mihuga (Bagamoyo) and Vikumburu (Kisarawe District). All are in the Coast Region.

The sites are neither connected to water supply, nor electricity supply infrastructure at the moment. It will be easy to connect Kerege site to connect to main water supply and the national electricity grid line which are already connected to the nearby Export Processing Zone site. Likewise, a standby power generator 5kVA will be procured as an alternative source in case of power cuts. As for Mihuga village, water will be drawn from Wami River (through pumping) which is about six (6) kms away, but for electricity, it is planned that solar power system at 5kVA will be installed in addition to a standby power generator at capacity of 5kVA. Vikumburu village will solely depend on solar energy and boreholes for water supply and electricity power. Large water collection ponds will be constructed and boreholes sunk at all the three sites to guarantee uninterrupted water supply at all times.

## 2.3 Ownership

The proposed project is being promoted by M/s Mega Builders Limited, a private company incorporated in the United Republic of Tanzania under Companies Act (2002) and granted Certificate of Incorporation Number 11668 dated 2$^{6th}$ day of July 2002. The company offices are located at Masasani Ward, Kinondoni District P.O. Box 5767 Dar es Salaam. The authorized share capital of the company is TShs 200,000,000/= divided into 1,000 equity shares of TShs 200,000/= each.

The current shareholders and shareholding structure of thecompany are as shown hereto below:

| S/NO | Name and Address of Shareholders | Nationality | Number of Shares | % Shareholding |
|---|---|---|---|---|
| 1. | Balbir Singh<br>P.O. Box 5767<br>Dar es Salaam | Indian | 6500 | 3.25 |
| 2. | M/s Aruna Malik<br>P.O. Box 5767<br>Dar es Salaam | Indian | 5400 | 2.70 |
| 3. | Asha Selemani Lindonde<br>P.O. Box 5767<br>Dar es Salaam | Tanzanian | 500 | 0.25 |
| 4. | Nitin Malik<br>P.O. Box 5767<br>Dar es Salaam | Indian | 6500 | 3.25 |
| 5. | Unalloted Shares | Indian | 181100 | 90.55 |
| | TOTAL | | 200000 | 100 |

Company Directors:

(i) Mr. Balbir Malik Singh
(ii) M/s Aruna Malik
(iii) M/s Asha Selemani Lindonde
(iv) Nitin Malik

All the four directors are high net-worth businessmen with wide experience in various disciplines ranging from

Both directors are high-net worth businessmen engaged in various activities. Their main activities at present include civil construction, gold processing, to real estate development.

## 2.4 Planned Activities

### 2.4.1 Fish Farm

The Fish Farm project has six principal activities: construction of concrete ponds measuring 20m x 20m x 1,5m high; procure tilapia parent stock of 200 brooders and rear the tilapia fish to produce 1.0-gram sex-controlled fingerlings for both own use and sell the excess production to other tilapia fish farmers; utilize the fingerlings to grow up all-male fingerlings in breeding ponds to portion size fish (400 to 600 grams), process and package the fish so produced for sale in the local market; construct onshore ponds for trapping and rearing of salt water fish; and produce top quality fish meal for own project use and sell of excess production to the market.

### 2.4.2 Chicken Hatchery

The Poultry project has three principle activities: construct hatchery, staff and office buildings; procure eggs with holding capacity od 200,000 eggs for hatching to produce day-old chicks for sale in the local market; and produce top quality chicken feeds for sell mainly to the company day-old chick customers, and sell excess production in the open market.

### 2.4,3 Ostrich Farming

The project has six principal activities:

(1) Fence the whole area to avoid the possibility of ostrich running away from the farm;
(2) Plant grasses in the whole area earmarked for ostrich grazing;
(3) Prepare ostrich resting areas
(4) Construct office, staff and ostrich egg hatchery buildings;
(5) Procure a pair of 100 ostrich parent stock for in-house production of eggs for hatching and sale as matured ostriches at 24 months;

(6) Procure ostrich egg hatching incubator with a holding capacity of 200,000 eggs to produce 3-month old chicks for sale at 3-months.

## 2.5 Strategies to be employed

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

2.5.1 Complete registration of the project and obtain TIC Certificate of Incentives for the project as well as obtaining licences, permits and authorizations from relevant authorities for establish the three components of the project, project;

2.5.2 Develop most modern Tilapia Fish Breeding Ponds to produce top quality all-males sex controlled fingerlings;

2.5.3 Procure tilapia fish parent stock at the ratio of one (1) male to three (3) females;.

2.5.4 Construct 100 concrete fish ponds per year, each to accommodate 12,000 fingerlings. Mortality rate is estimated at 20%;

2.5.5 Procure a chicken hatchery with a holding capacity of 200,000 eggs at a time to produce top quality day-old chicks for sale. Initially be procured from M/s Misenani Agri services, the most modern hatchery situated in Mwanza. Chicks hatching success rate is estimated at 80%;

2.5.6 Procure matured ostrich parent stock ready for production of eggs at the ration of 1:1 females and males, meaning 100 males and 100 females, and prepare grazing areas as well as resting shed while fencing the whole area to avoid the possibility of the ostriches running away;

2.5.5 Develop an ultra-modern ostrich, fish and poultry feed mill to produce top quality feeds for own use in ostrich and fish farms. The entire poultry feeds production is meant for the project's chick customers. The excess production will be sold in the open market;

2.5.6 Construct at the project site processing and storage buildings, feed mill factory buildings, staff houses and office buildings and develop necessary civil works structures to accommodate all the proposed project facilities.

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

- Procurement and installation of refrigeration equipment/system and compressors, cold rooms, IQF (Individually Quick Freezing) Plants; Processing Line Equipment (Blast and Flake Ice Plants);
- Development of laboratory for quality analysis;

- Establish a workshop for service and maintenance of plant equipment and transportation facilities and procurement of engineering equipment;
- Procurement of processing equipment;
- Undertake Staff recruitment and training;
- Procurement and installation of solar systems for each of the three sites;
- Procurement and installation of new heavy duty 5 kVA Standby Electric Power Generators for each site;
- Procurement of 2 units of refrigerated light trucks, 2 units light trucks for transportation of products to the various selling points and collection of feed materials from neighboring villages and regions.

2.5.8 Enter into supply contracts with the major target markets;

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

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

## 2.6 Investment Costs

Capital investment in fixed assets is estimated at US$ 1,175,700-. In addition, there will be a need for about US$ 100,000- to finance working capital requirements as indicated under the Financial Projections Annex I (Capital Investment Summary) of this document. The main investment items are indicated in the same annexure which also show the implementation plan. The specific activities to be financed are indicated in Annex I and summarized in Annex I and summarized in Annex II and in the table below.

CAPITAL INVESTMENT SUMMARY

| S/No. | CAPITAL ITEM | COST (US$) |
|---|---|---|
| 1. | Land and Buildings/Structures | 640,700 |
| 2. | Plant Machinery, Tools and Equipment | 337,000 |
| 3. | Utility and Admin Motor Vehicles | 45,000 |
| 4. | Furniture, Fixture and Office Equipment | 33,000 |
| 5, | Miscellaneous Expenses | 60,000 |
| 6. | Pre-operational Expenditures | 60,000 |
| | TOTAL | 1,175,700 |
| 7. | Add: Working Capital Requirements | 100,000 |
| | GRAND TOTAL | 1,275,700 |

### Proposed Financing Arrangement

Fixed assets cost of the project estimated to cost US$ 1,175,700- is planned to be financed through owners' equity and directors contributions at 38.5% and bank term loan (61.5%) while working capital will be financed through local 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, thus:

### SOURCE OF FINANCE

| | Source of Finance | Amount (US$) | Percent Contribution |
|---|---|---|---|
| | Owners' Equity | 452,586 | 35.5 |
| | Bank Term Loan | 722,414 | 56.6 |
| | *Sub total* | *1,175,000* | *92.2%* |
| | Add: Working Capital | 100,000 | 7.8% |
| | **Total Financing** | **1,275,700** | **100.0%** |

M/s Mega Builders 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 for under Tanzania Investment Act of 1997.

## 2.7 Production Process

### 2.7.1 Tilapia Fish Production

#### (a) Tilapia Fish Production

Fish fingerlings are produced in breeding ponds where the parent stock will be obtained from local hatcheries. The fingerlings are treated with hormones through feeds to ensure only males are produced. Fingerlings are transferred to the growing ponds at the age of 26 days when they are 1.0grams on average. The fingerlings are fed with top quality fish meal for five to six months when they will have grown to between 400 to 600 grams which is the standard market portion size. Thereafter, tilapia fish will be harvested and taken to the processing building. Here they will be cleaned, ready for packaging.

#### (b) Tilapia Eggs Production

Fish fingerlings are produced in breeding ponds by the parent stock obtained from local hatcheries. One tilapia is expected to produce 1000 eggs per month's 0r 12,000 eggs per year. 100 males and 300 parent stock will be used to produce a total of 3,600,000 eggs per year, where initially 240,000 will be utilized in-house and the remaining sold to local fish farmers.
(Refer to Appendix *Four of the attached Financial Analysis Worksheet).*

Note should be taken that the company will sell whole fish which apart from cleaning and freezing before transportation to selling points, no further processing will take place.

### 2.7.2 Chicken Hatchery

This project is solely meant for chicken egg hatchery. It will rely on purchase of eggs from other specialized hatcheries. This is to prevent possibility of spread of poultry related diseases to the chicks. The major cost in this project therefore is eggs procurement and electricity.

About 200,000 fertilized eggs will be procured monthly or 2,400,000 per annum and hatched in an incubator with a capacity to hatch 200,000 eggs at once. Eggs hatchery success rate is estimated at 80% thus it is assumed that 1,920,000 day-old chicks will be available for sale. *(Refer to Appendix Three of the attached Financial Analysis Worksheet).*

### 2.7.3 Ostrich Farming and Hatchery

100 pairs (100 males and 100 females) of mature ostrich brooders will be procured for production of eggs that will be incubated to produce ostrich chicks. One ostrich is capable of producing a minimum of 40 eggs per year; therefore production of 4,000 eggs is estimated per annum which will all then be incubated. Incubation success rate is estimated at only 60%, hence production of 2,400 chicks will be available for rearing. Various researches carried out in Kenya, South Africa an the USA have concluded that the standard survival rate of ostrich chicks up to 12 months is estimated at 70% therefore only 1,680 ostrich chicks will make it to fully matured birds that will be sold at US$ 1,250- each, On the other hand, 200,000 ostrich eggs will be procured annually for hatchery to successfully produce 96,000 chicks which will all be at the age of 3 months to ostrich farmers abroad. *(Refer to Financial Analysis Worksheet Appendix One),*

## 2.8 Packaging and Storage

### 2.8.1 Fish Packaging and Storage

Whole fish will be packaged in Styrofoam cartons, each carton 10kgs. One refrigerated light truck will carry 450 cartons.

The products will then be chilled at minus 30 degrees centigrade before being transferred and stored in cold room below minus 18 degrees centigrade.

### 2.8.2 Day-old Chicken Packaging and Storage

Once the chicks are hatched they will be packaged into boxes where a label is placed on the exterior of the box. This label displays the date hatched, company logo, address, contact phone numbers and location of the hatchery before being stored in a specially treated room while awaiting delivery to selling points.

## 2.9 Production Capacity

### 2.9.1 Fish Farming

(a) Fish Production

Concrete fish ponds measuring 20m x 20m x 1.5m high will be constructed for fish growing. Each pond will have a holding capacity of 12,000 sex-controlled fish fingerlings which will grow therein to portion size fish of 400 to 600 grams. Initially, the project will develop 10 ponds with a combined holding capacity of 120,000 fish with 5 to 6 months cycle, translating to 240,000 fish per annum weighing between 400 to 600 grams during the first year of production. Step by step the management will increase construction of pounds at the rate of 10 ponds per year until year 10 when the combined fish production capacity eggs reaches 3.6 million fish per annum of which 2.4 million will be utilized internally and the remaining amount sold to other fish farmers. It should however be noted that survival rate of fish fingerlings in rearing ponds is 80% in strictly managed fish farms.

(b) Fingerlings Available for Sale

As for tilapia fish fingerlings, a number of 3,360,000 fingerlings will be collected and sold at 26 days or so. However, supply will take a downward trend as more and more fingerlings are continuously channeled to internal the farms at the rate of 240,000 per annum while production remains the same, until eventually only 1,200,000 fingerlings will be available for sale. (*Refer to Financial Analysis Work Sheet Appendix Three for more production capacity details*)

### 2.9.2 Poultry Hatchery

Chicken building measuring 18m x 12m will be built to accommodate poultry the hatchery unit. 200,000 fertilized eggs will be procured monthly (2,400,000 eggs per annum) from local chicken growers and be incubated to produce 1,920,000 chicks annually as hatching success is estimated at 80%. This trend will go on until the end of the estimated economic life of the project in year ten (10) of operations. The entire production of chicks will all be sold to chicken farmers within the country.

### 2.9.3 Ostrich Farming and Hatchery

As it has been mentioned elsewhere, A pair of 100 parent stock (100 males and 100 females) will be procured and reared to produce eggs for hatching. Each female will produce a minimum of 40 eggs per annum therefore 4,000 eggs will be incubated every year, and the chicks reared to 24-month juveniles for sale. Because hatching success rate is estimated at only 60%, out of 4,000 eggs incubated will produce about 2,400 chicks per annum. Furthermore, of the hatched 2,400 chicks, researches conducted in various African countries reveal that only 70% will reach the age of 24 months, translating that from this project component, 1,680 chicks only will survive to reach maturity before being sold at the age of 24 months.

On the other hand, 200,000 eggs will be procured every year from established fish farms in Kenya while some may be obtained from Arusha from wild ostriches roaming freely in the Serengeti National Park. If need arises, the investors may import eggs from other SADC member countries renowned for commercial ostrich farming including South Africa, Botswana and Zimbabwe. The eggs so obtained will all incubated to produce ostrich chicks which will be grazed in the specially prepared grazing areas while being fed supplementary factory produced feeds and allowed to reach full maturity ostriches before being sold at the age of 24 months.

### 2.9.4 Fish meal, Ostrich and Chicken Feeds

On the other hand, production of fish feeds is estimated at 561,600 kgs and poultry feeds 1,458,844.75 kgs per annum at full project implementation.

## 2.10 Production Costs

### 2.10.1 Fish Farm

It requires 1.3kgs of feeds to produce 1.0kgs of fish. Production cost is estimated at TShs 1,160/=/= (US$ 0.5) per kilo of in-house produced fish meal. At full project production therefore (by year ten) when 1,246,000/= kgs are produced, it will cost TShs 1,113,600,000/= (US$ 623,000) to feed the entire population per annum. This computes to about 43.26% of total sales revenue.

### 2.10.2 Cost of Fingerlings

As for fish fingerlings, the production costs involved are procurement and administration of hormones to ensure the fish eggs are turned into all male fingerlings production, and feeding the produced fish fingerlings therein up to the age of 26 days when they will be old enough for sale. The other major operations cost involved is feeding the parent stock of 400 grown fish and ensuring they are all vaccinated and medicated from time to time. Like in the fish rearing ponds,

1.3kgs will be required to feed the parent stock at the cost of US$ 0.5 per kilo feed the parent stock estimated at 3.0 kgs each or a combined weight of 1,200 kgs of fish. This will require 1.5 feeds and vaccination/medication annually each every month. Total feeds/vaccination/medication will cost amount into 1,800 kgs annually which at a price of US$ 0.5 total cost will work out at US$ 900- only. This has been considered insignificant and therefore can be assumed to be included in the other costs of the fish rearing ponds. Likewise, the cost of vaccines/medication and feeds for fish fingerlings up to the age of 26 days is also considered too little an amount and therefore has been treated on the same assumptions. *(Refer to Appendix Four of the Financial Analysis Worksheet for further production cost and assumptions details).*

### 2.10.2.1 Poultry Hatchery

This project is solely meant for chicken egg hatchery. It will rely on purchase of eggs from other specialized hatcheries. This is to prevent possibility of spread of poultry related diseases to the chicks. The major cost in this project therefore is eggs procurement and electricity.

About 200,000 fertilized eggs will be procured monthly or 2,400,000 per annum at a price of TShs 800/ (US$ 0.34) per piece translating to a cost of TShs 1,920,000,000/= US$ 816,000-) per annum, The eggs hatched in incubator an incubator of a holding capacity of 200,000 eggs at a time. Incubation will happen once every month. Eggs hatchery success rate is estimated at 80% thus it is assumed that 1,920,000 day-old chicks will be available for sale. *(Refer to Appendix Three of the attached Financial Analysis Worksheet).*

### 2.10.2.2 Chicken Feeds Requirement and Cost

Production of fish meal is estimated at 561,600 kgs per annum. Ostrich On the other hand, ostrich feeds, vaccines and medication is estimated to cost US$ 100- per fully grown bird per month, US$ 75- for juveniles up to 24 months and US$ 50- for chicks up to 3 months old. *(Refer to Appendices One, to Two, Three and Four of the attached Financial Analysis Worksheets for more details on the feeds requirement and costs involved).*

### 2.10.2.2 Chicks Production Costs

Selling price for chicks produce will be TShs 2,000/= (US$ 0.86 per chick for the whole production period of ten (10) years. The only production cost under this mini project involve procurement of fertilized eggs from other well established local hatcheries at a cost of TShs 800/= (US$ 0.34) per piece. Other major operating costs will include vaccines and medication, heating, electricity, water and watering, cleaning and disinfecting of hatchery house and packaging and

distribution to the selling points. These are included in the general miscellaneous expenses.

### 2.10.3 Ostrich Farming and Hatchery

From a 100 pairs of matured parent stock (100 males and 100 females), production of 4,000 eggs will be realized annually of which all the eggs so produced will be made available for incubation every year, and the chicks reared up to maturity age of 24-month birds for sale. The project will further procure 200,000 eggs for hatchery to produce 3-month old chicks for sale. In addition to specially prepared grazing areas with planted grasses suitable for the birds, this project will likewise establish a modern ostrich feed mill for production of good quality ostrich feeds of international standards to supplement grasses and other feeds available in the grazing area.

On the average, factory prepared feeds, and vaccines and medication for the ostriches will cost US$ 50- for chicks below the age of 6 months, US$ 75- for juvenile chicks up to 18 months and US$ 100- per month for fully matured birds from 18 months onwards. Details on total feeds requirements for the chicks at various ages are shown in *Appendix One of the attached Financial Analysis Worksheet.*

### 2.10.2.3 Consolidated Direct Production and Operating Costs

These are many considering magnitude project.

#### Direct Production costs

The direct production costs have been summarized under Appendix Five of the Financial Analysis Worksheet. The most notable direct costs involve procurement of materials including ostrich parent and fish parent stocks for production of eggs for fathering purposes, direct procurement of ostrich and chicken eggs and procurement of feeds (from in-house production unit) and vaccines and medication for ostriches, chicken chicks and fish/fish fingerlings are summarized under *Appendix Five (Consolidated Direct Production Revenue and Production costs of the Financial Analysis Worksheet attached.* At full project implementation (year 10) the costs are summarized to read as follows:

| PERIOD | DIRECT PRODUCTION COST (US$) | TIMING |
|---|---|---|
| Year I: | US$ 1,850,400 | per annum |
| Year 2: | US$ 1,912,800 | per annum |
| Year 3: | US$ 1975,200 | per annum |
| Year 4: | US$ 2,037,600 | per annum |
| Year 5: | US$ 2,100,000 | per annum |
| Year 6: | US$ 2,162,400 | per annum |

| | | |
|---|---|---|
| Year 7: | US$ 2,237,800 | per annum |
| Yeat 8: | US$ 2,287,200 | per annum |
| Year 9: | US$ 2,349,600 | per annum |
| Year10: | US$ 2,412,000 | per annum |

### Indirect Costs

Indirect Costs mainly consist of salaries, wages and labour overhead costs, production overheads, marketing related expenses, insurances on motor vehicles and other major capital items, fuel, oils and lubricants for machinery equipment, vehicles maintenance expenses, rental fees on leased properties and selling points house buildings, interest charges on long term loan and overdraft facility, depreciation costs on the major capital items as analyzed in the attached Financial Annexure.

Salaries, Wages and Labour Overhead are dealt with under Annex V (Trading Account), Depreciation, Loan Interest and Corporate Tax under Annex VI (Profit and Loss Account), Depreciation and Miscellaneous Expenses under Annex II (Summarized Capital Investment Costs), Loan Repayment and Interest Payment under Annex III (Loan Interest and Repayment Schedules). The remaining costs have been included under Material Costs in Annex V (Trading Account)

### 2.10.2.4 Depreciation and Amortization Costs

These include depreciation cost of buildings and structures, machinery equipment, motor vehicles and furniture as well as pre-operational expenses. As mentioned above, these costs are covered under Annex II (Capital Investment Summary). They keep on changing year after year as more capital items are procured as the project expands and also due to frequent replacement of obsolete capital items due to the length of implementation and operating period as shown below:

| PERIOD | DEPRECIATION COST (US$) |
|---|---|
| Year i: | 101,006 |
| Year 2: | 115,757 |
| Year 3: | 127,643 |
| Year 4: | 128,902 |
| Year 5: | 138,525 |
| Year 6: | 96,429 |
| Year 7: | 101,651 |
| Year 8: | 105,156 |
| Year 9: | 104,661 |
| Year 10: | 104,661 |

## 2.11 Revenue Estimates

### 2.11.1 (a) Fish Farming

The price of a kilogram of fish is conservatively estimated at TShs 3,480 (US$ 1.5) per kilo. Total is estimated production and sales revenue are shown in the table appearing below:

**PRODUCTION AND SALES REVENUE ESTIMATES – FISH FARMING**

| YEARS | PRODUCTION (KGS) | SELLING PRICE (US$) | PROJECTED REVENUE (US$) |
|---|---|---|---|
| 1 | 96,000 | 1.5 | 144,000 |
| 2 | 192,000 | 1.5 | 288,000 |
| 3 | 288,000 | 1.5 | 432,000 |
| 4 | 384,000 | 1.5 | 576,000 |
| 5 | 480,000 | 1.5 | 720,000 |
| 6 | 576,000 | 1.5 | 864,000 |
| 7 | 672,000 | 1.5 | 1,008,000 |
| 8 | 768,000 | 1.5 | 1,152,000 |
| 9 | 864,000 | 1.5 | 1,296,000 |
| 10 | 960,000 | 1.5 | 1,440,000 |
| | | | |

*(Refer to Appendix Four of Financial Analysis Worksheet attached)*

### 2.11.1 (b) Fish Fingerlings Project

Production of fingerlings is designed to take a downward trend because while fish farming expands at the rate of 10 ponds (with holding capacity of 12,000 fingerlings each), production of fish fingerlings remain the same while more and more fingerlings are transferred into fish growing ponds. The table below shows availability of fingerlings for sale, sales price and revenue estimates in each year:

**FINGERLINGS AVAILABILITY AND REVENUE ESTIMATES**

| YEARS | PRODUCTION (KGS) | SELLING PRICE (US$) | PROJECTED REVENUE (US$) |
|---|---|---|---|
| 1 | 3,360,000 | 0.06 | 201,600 |
| 2 | 3,120,000 | 0.06 | 187,200 |
| 3 | 2,880,000 | 0.06 | 172,800 |
| 4 | 2,640,000 | 0.06 | 158,400 |
| 5 | 2,400,000 | 0.06 | 144,000 |
| 6 | 2,160,000 | 0.06 | 129,600 |
| 7 | 1,920,000 | 0.06 | 115,200 |
| 8 | 1,680,000 | 0.06 | 100,800 |
| 9 | 1,440,000 | 0.06 | 86,400 |
| 10 | 1,200,000 | 0.06 | 72,000 |

*(Refer to Appendix Four of Financial Analysis Worksheet attached*

## 2.11.2 Chicken Hatchery.

Hatching capacity, selling price and revenue estimates remains constant from year one to the end of the assumed economic life of the project at year ten. The table below serves to show production of chicks and estimated sales revenue:

### PRODUCTION AND SALES REVENUE ESTIMATES – CHICKEN HATCHERY PROJECT

| YEARS | NO. OF CHICKS AVAILABLE FOR SALE | SELLING PRICE (US$) | REVENUE ESTIMATES (US$) |
|---|---|---|---|
| 1 | 1,920,000 | 0.86 | 1,651,200 |
| 2 | 1,920,000 | 0.86 | 1,651,200 |
| 3 | 1,920,000 | 0.86 | 1,651,200 |
| 4 | 1,920,000 | 0.86 | 1,651,200 |
| 5 | 1,920,000 | 0.86 | 1,651,200 |
| 6 | 1,920,000 | 0.86 | 1,651,200 |
| 7 | 1,920,000 | 0.86 | 1,651,200 |
| 8 | 1,920,000 | 0.86 | 1,651,200 |
| 9 | 1,920,000 | 0.86 | 1,651,200 |
| 10 | 1,920,000 | 0.86 | 1,651,200 |

*(Refer to Appendix Three of Financial Analysis Worksheet attached*

## 2,11.3 Ostrich Farming and Hatchery Project

4,000 eggs will be produced in-house and incubated every year to produce chicks to be reared up to full maturity before sold wholly at the age of 24 months at US$ 1,250- per bird. Further 200,000 eggs will be procured at US$ 2- apiece and incubated to produce chicks that will be sold at the age of 3 months at US$ 10- apiece. The table below indicates total production, sales price and revenue estimates during the 10-year project' assumed economic life:

### 3-MONTH OLD OSTRICH CHICKS PRODUCTION AND REVENUE ESTIMATES

| YEARS | NO. OF CHICKS AVAILABLE FOR SALE | SELLING PRICE (US$) | REVENUE ESTIMATES (US$) |
|---|---|---|---|
| 1 | 96,000 | 10 | 960,000 |
| 2 | 96,000 | 10 | 960,000 |
| 3 | 96,000 | 10 | 960,000 |
| 4 | 96,000 | 10 | 960,000 |
| 5 | 96,000 | 10 | 960,000 |
| 6 | 96,000 | 10 | 960,000 |
| 7 | 96,000 | 10 | 960,000 |
| 8 | 96,000 | 10 | 960,000 |
| 9 | 96,000 | 10 | 960,000 |
| 10 | 96,000 | 10 | 960,000 |

### 24-MONTH OLD MATURED OSTRICHES PRODUCTION AND REVENUE ESTIMATES

| YEARS | NO. OF MATURE BIRDS AVAILABLE FOR SALE | SELLING PRICE (US$) | REVENUE ESTIMATES (US$) |
|---|---|---|---|
| 1 | 0 | 0 | 0 |
| 2 | 1,680 | 430 | 722,400 |
| 3 | 1,680 | 430 | 722,400 |
| 4 | 1,680 | 430 | 722,400 |
| 5 | 1,680 | 430 | 722,400 |
| 6 | 1,680 | 430 | 722,400 |
| 7 | 1,680 | 430 | 722,400 |
| 8 | 1,680 | 430 | 722,400 |
| 9 | 1,680 | 430 | 722,400 |
| 10 | 1,680 | 430 | 722,400 |

In the first year of operation only 3-month old chicks will be available for sales, generating revenue of US$ 960,000- whereas combined sales estimates for production of matured birds starts in the second year. Combined Sales Estimates for the 3-month old chicks and matured birds amount to US$ 1,682,400- which remains constant for the next 9 years.

*(Refer to Appendix Two of the Financial Analysis Worksheet attached for detailed analysis of production and sales estimates for the ostrich farming project)*

## 2.12 Project Organization, Management and Labour Requirement

The project will be managed through the Board of Directors consisting of four members. The Board will formulate policy and offer strategic business guidance to management and regularly monitor and evaluate performance of the project.

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 five heads of departments: Fish Farm Manager, Poultry Hatchery Manager, Feeds Production Manager, Marketing Manager and Finance Manager. The General Manager and his heads of departments will be further assisted by qualified personnel in their various areas of specializations. The four mini projects envisage employing estimated number of 88 permanent staff among whom three (3) will be foreign expatriates. Of the remaining 85 local employees, 45 will be skilled while 40 will be casual/unskilled workers. Furthermore, among the local employees, 45 are expected to be males while 40 are expected to be females.

# 3.0 MARKET EVALUATION AND MARKETING STRAEGIES

## 3.1 Market and Marketing Aspects

The fish farming and hatchery as well as chicken hatchery projects target mainly the local market and while ostrich farming targets foreign markets, particularly india and Middle East countries where the company is particularly considering taking advantage of the developed links between the company directors have with over years with ostrich related business.

## 3.2 Competition

So far, there are only a few large commercial tilapia fish farming projects in the region and within the country in general. 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. Of recent, there has erupted cage tilapia fish farming within Lake Victoria. This project uses ponds. It is therefore evident that there is no serious competition in fish farming, considering the fact that tilapia fish demand in the country is very high compared to available supply. The same is true for chicken hatcheries. The most established chicken hatcheries are Mkuza Chicks Limited (Kibaha, Coast Region), Silversands Tanzania (Njombe, Iringa) and a few others in Morogoro, Songea and Arusha whose combined supply does not satisfy demand by far. As for ostrich farming, the country has no real big commercial farms except small ones scattered in Arusha and elsewhere despite having lots of wild ostriches in Serengeti and some of the other national parks.

## 3.2 MARKETING STRATEGIES

Mega Builders Limited envisages undertaking a comprehensive and concerted marketing program in order to obtain distributors and buyers of its products The company will reach out to all relevant stake holders, using services of renowned agents with the necessary market knowledge and skills prepared to lend their expertise and resources to Mega Builders Limited. A focused aggressive marketing strategy is envisaged in this plan. It will include outsourcing adequate working capital to back up the marketing effort.

It is envisaged to allocate 1.0% of the project gross income over a period of 5 years towards the marketing and advertising efforts which will be used largely in preparation of promotional and advertising materials, presentations to selected customers.

## 3.3 Target Markets

As stated elsewhere the objective for establishing the project is to tap into the opportunities for potential demand in the expanding market for white meat and ostrich meat. Demand for fish and chicken is very high in the country, making

these two safe sources of protein sell very high in the market before the means of low income bracket consumers for lack of adequate supply compared to the market demand. The chicken and fish projects aim at adding a substantial amount of these two products in the market which in the long run might influence reduction of their respective prices so that they can be affordable by ordinary citizens.

On the foreign market front, the demand for ostrich and its meat though considered a red meat has increased tremendously in the global market thus providing a sustainable income for farmers. Ostrich meat has lower fat, calories and cholesterol than beef, chicken, or turkey.

## 3.4 Pricing

Mega Builders Limited does not pretend to become a market leader. The company's pricing policy is set with the objectives of achieving profitability and growth and achieving a reasonable share of the market without necessarily pricing the company out of competition. The company will maintain a wide set of packages on offer with different terms and prices to suit different interests and pocket sizes.

## 3.5 Promotion and Advertising

Creative promotion and advertising strategies will be outlined in the comprehensive marketing plan. With the objective of capturing new market segments and to attract faster without stretching the company's human and financial resources too thin, Among these strategies will include securing services of renowned marketing agents.

# 4.0 FINANCIAL ANALYSIS

## 4.1 Financial Viability

The analysis of the proposed project shows that the project can generate a fairly good profit and that it generates sufficient cash to meet its financial obligations. The review is given below under the following sub – sections:

- Fundamental Assumptions
- Capital Expenditure and Financing
- Operating Costs;
- Working Capital Requirements
- Projected Profitability
- Projected Balance Sheet;
- Projected Cash Flow;
- Projected Balance Sheets; and
- Project Pay Back Period

## 4.2 Fundamental Assumptions

The preparation of the financial projections considered the following main assumptions:

4.2.1 The operating period under which the viability of the project is being evaluated is ten (10) years;

4.2.2 The fixed capital cost of the proposed project is US$ 1,175,700-;

4.2.3 All the calculations throughout the economic lifetime of the project are constant with October 2021 being the base date;

4.2.4 The projected direct operational costs are shown under Annex V & VI;

4.2.5 The main revenue source is from sales of tilapia fish, tilapia fish fingerlings, day-old chicks and ostrich chicks and fully matured ostriches;

4.2.6 Capital expenditure has been assumed to be incurred for continuously during the assumed economic life of the project (10 years;

4.2.7 The financial plan is for the shareholders to finance fixed assets of the project through a bank term loan at US$ 822,614- (54.5%) at the prevailing bank interest of 8%, while the balance of US$ 452,586- (35.6%) is through equity contribution and directors' loans;

4.2.8 Economic depreciation rates based on useful lifetimes of the various capital items have been adopted. The following facts apply for the deprecation rates in this project:

- Building, Structures and Civil Works are depreciated at 5% Straight line;
- Equipment, Processing Plants, Machinery and Operating Equipment 12.5% and therefore replacement is after 8 years. Scrap value is put at 35%.
- Motor Vehicles are depreciated at 20% with scrap value estimated at 20%. All the motor vehicles will be replaced during the 5th year of operation
- Furniture, Fixture & Fittings at 12.5%.

### 4.2.9 Working Capital Requirements

Ideally, working capital requirements are directed by the volume and business tempo. Initial working capital is budgeted at US$ 100,000- which will be borrowed from investors' bankers in form of overdraft facility.

## 4.3 Financial Review

### Analysis and Evaluation of Financial Results

The liquidity performance of the project is shown under the Financial Flows of the Financial Projection Schedules. The projections consider the assumed sources and applications of funds over the planned period and show the ability of the project to meet financial obligations and capital expenditure requirements.

Following are highlights of the financial projections and analysis:

### 4.3.1 Annex VI - Projected Profit and Loss Accounts

Net Profits for the 10-year project after providing for interest, depreciation and corporate tax generated by the project in year one of operation is 1,552,729-= before reaching US$ 2,043,545- in year ten which is theend of the assumed economic life of the project.

Total sales revenue ranges from US$ 4,770,000- to US$ 6,068,010- during the ten-year period operations period.

### 4.3.6 Key Financial Ratios

The key ratios are acceptable with Internal Rate of Return (IRR) at 37.6%, positive NPV Ratio of 7.5

### 4.3.7 Pay-back Period

The project's normal payback period is 3 years.

## 5.0 ENVIRONMENTAL ASPECTS

The project activities involve construction of concrete fish ponds for production of tilapia fish and fingerlings, and on-shore ponds for production of sea fish, construction of buildings for ostrich and chicken chicks hatchery, production of fish meal and chicken/ostrich feeds. Also building staff and office houses, ostrich resting areas and planting of grasses in ostrich grazing areas, cleaning and disinfection of ostrich/poultry house. Other activities include packaging of whole fish before packaging and chilling/freezing the products ready for transportation in refrigerated trucks to the markets, as well as packaging chicks for transportation to selling points. In the processes, the company will cooperate with various regulatory authorities, including Tanzania Foods and Drugs Authority, Fisheries Department, OSHA, MMC, TRA, CGL and NEMC. Mega Builders Limited will adhere to all the relevant regulations which guide ostrich, poultry and fish farmers and processors on the necessary regulations the ostrich, fish and poultry farmers and processors have to observe regarding environmental aspects before the farmers/processors can be granted permits and 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.

To ensure environmental aspects are fully accommodated in the planned project activities, the company will establish Work Health and Safety Policy which will show commitment of Mega Builders Limited Management and Workers to health and safety, with aims to remove or reduce risks to health, safety and welfare of all workers, contractors and visitors, and everyone else who may be affected by the Company's business operations.

## 6.0 RISK ANALYSIS

The major risk factor considered under this project is the possible breakdown of ostrich and fish diseases. However, this is highly unlikely as borehole and Wami River waters are very clean, almost pollution-free compared to similar water bodies. Likewise, the project sites are in excluded area where there is no contact with locally grown chicken. Besides, the ostrich resting areas, poultry houses and fish ponds and their respective environments will be periodically cleaned and disinfected to prevent the breakdown of diseases.

## 7.0 SOCIAL, ECONOMIC AND DEVELOPMENTAL BENEFITS

Ostrich, Fish farming and chicken hatcheries activities generate a lot of developmental benefits, including but not limited to the following:

- The project envisages employing estimated number of 88 people among who three (3) will be foreign expatriate staff. Of the remaining 85 local permanent employees, 45 will be males and 40 female workers. In additional 30 casual/unskilled workers will be temporarily employed whenever the need arises. Salaries and wages earned by local workers are expected to change the economy of their respective areas irreversibly;

- The entire fish and chicken hatchery production is geared for local consumption .Therefore, the increased supply of 960 tons of tilapia fish and 1.92 chicks per year will not only influence to regulate fish and chicks 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 and more chicks will be available to chicken farmers at affordable price which is only 75% of the current market price.

- Production of mature and ostrich chicks targets the export market which the company directors have already established in India and Middle East countries. The ostrich farm expects to generating around US$ 1,682,400- in foreign exchange which is a benefit to the country's economy.

## 8.0 PROJECT IMPLEMENTATION SCHEDULE

The company directors have the financial muscle, technology and market access and all other necessary resources required to implement the project at any time. However, implementation of the project will only start after obtaining all the necessary permits and authorizations from the relevant authorities. Of particular interest is the grant of a Letter of No Objection from the Fisheries Department, and from the authority granting permits for ostrich farming, as well as grant of Tanzania Investment Centre (TIC) Certificate of Incentives with a view to benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act, 1997.

The project Implementation will be commencing immediately after being granted with the abovementioned authorization/permits. By nature of this project, procurement of the major capital items will be completed in the first three years except for the fish farming which will be a continuous exercise until the last year of the economic lifetime of the project.

## 9.0 CONCLUSION AND RECOMMENDATIONS

The foregoing discussion highlights on the social, economic and financial dimensions which the envisaged 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, Mega Builders Limited be availed the required

institutional assistance so as to enable them implement the proposed project with immediate effect. 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.

Meantime, TIC should be asked to obtain a Letter of No Objection and ostrich farming on behalf of the company for the establishment of the projects in Bagamoyo and Kisarawe Districts, Coast Region as part of TIC facilitation services to investors as provided for under Section 6(d) of Tanzania Investment Act, 1997.

# FINANCIAL PROJECTIONS

**ANNEX I: CAPITAL INVESTMENT STRUCTURE (US$)**

| ITEM/YEARS | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ASSETS | | 1,102,700 | 1,152,700 | 1,216,197 | 2,281,197 | 3,587,897 | 3,747,097 | 3,640,097 | 4,019,097 | 4,392,157 | 15,844,418 | 29,329,679 |
| **Current Assets** | | | | | | | | | | | | |
| Cash C/F | | | (-1,316,212) | (-2,395,773) | (-899,053) | 544,351 | 1,897,326 | 3,685,866 | 5,259,453 | 6,745,514 | 8,800,991 | 10,949,197 |
| Stock of materials | | | 1,850,400 | 1,912,800 | 1,975,200 | 2,037,600 | 2,100,000 | 2,162,400 | 2,237,800 | 2,287,200 | 2,349,600 | 2,412,000 |
| Stock of output | | | 129,335 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 |
| Total | | | 663,123 | (-196,703) | 953,517 | 2,840,621 | 728,213 | 6,106,936 | 7,755,923 | 1,872,857 | 11,409,261 | 13,619,867 |
| | | | | | | | | | | | | |
| Investment Assets | | | | | | | | | | | | |
| **Buildings** | | | | | | | | | - | | | |
| Fish Ponds 20m x 20m x 1.5 | | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 | 30,000 |
| Breeding Tanks/Ponds | | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| WaterCollection Ponds | | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | 10,000 | |
| Chained Wire Fence | | 46,500 | | | | | | | | | | |
| Ostrich Grazing Area/Grasses | | 86,200 | | 86,200 | | | 86,200 | | 86,200 | | | |
| Staff Housesand Offices | | 72,000 | | 36,000 | | 36,000 | | | | | | |
| Stores/Warehouses | | 60,000 | | 30,000 | | | | | | | | |
| Ostrich Resting Areas/Sheds | | 20,000 | 20,000 | 20,000 | | | 20,000 | 20,000 | 20,000 | | | |
| Initial Ostrich Parent Stock | | 250,000 | | | | | | | | | | |
| | | **577,700** | **63,000** | **215,200** | **43,000** | **79,000** | ***129,200*** | **63,000** | **149,200** | **43,000** | **43,000** | **-** |
| | | | | | | | | | | | | |
| **Machinery Equipment** | | | | | | | | | | | | |
| Sinking Boreholes | | 20,000 | | | | | | | | | | |
| Solar System (1kW) & Electric Wiring | | 24,000 | | | | | | | | 24,000 | | |
| Standby 3 Power Generators (10kW) | | 15,000 | | | | | | | | 15,000 | | |
| Drilling Water Machine with accessories | | 13,000 | | | | | | | | | | |
| Water Pumps 50 cubic metres/hour wth accessories | | 40,000 | | | | | | | | 13,000 | | |
| Heavy Duty Pump for pumping Water from Wami | | 25,000 | | | | | | | | 40,000 | | |
| Water Pipesand Accoseries | | 10,000 | | | | | | | | 25,000 | | |
| Excavator | | 80,000 | | | | | | | | 10,000 | | |
| Ostrich Incubators | | 50,000 | | | | | | | | 50,000 | | |
| Chicken Incubators | | 50,000 | | | | | | | | 50,000 | | |
| Fish Hatcheries | | 10,000 | | | | | | | | 10,000 | | |
| | | **337,000** | | | | | | | | **237,000** | | |
| | | | | | | | | | | | | |
| **Motor Vehicles** | | | | | | | | | | | | |
| Delivery Vans (2) | | 30,000 | | 30,000 | | | 30,000 | 30,000 | 30,000 | | | |
| Pick ups (3) | | 15,000 | | 15,000 | 15,000 | | | | | | | |
| Light Trucks (2) | | - | | | 50,000 | | | | | | | |
| | | **45,000** | | **45,000** | **65,000** | | **30,000** | **30,000** | **30,000** | | | |
| | | | | | | | | | | | | |
| **Furniture, Fixture and Office Equipment** | | **33,000** | | | | | | | | **33,000** | | |
| | | | | | | | | | | | | |
| **Miscellaneous Expenses** | | **30,000** | **30,000** | | | | | | | | | |
| | | | | | | | | | | | | |
| **Pre-operation Expenses** | | **30,000** | **30,000** | | | | | | | **60,000** | | |
| | | | | | | | | | | | | |
| **Contingencies** | | **50,000** | **50,000** | | | | | | | | | |
| | | | | | | | | | | | | |
| Annual Investment Increment | | 1,102,700 | 173,000 | 63,497 | 1,061,517 | 1,306,700 | 159,200 | 93,000 | 179,000 | 373,060 | 11,452,261 | 13,452,261 |
| TOTAL ASSETS | | | | | | | | | | | | |

## ANNEX II: SUMMARIZED CAPITAL INVESTMENT COST (US$)

| COST ITEM/YEAR | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Buildings | | 577,700 | 63,000 | 215,200 | 43,000 | 79,000 | 129,200 | 63,000 | 149,200 | 43,000 | 43,000 | - |
| Machinery | | 337,000 | | | | | | | | 237,000 | | |
| Vehicles | | 45,000 | | 45,000 | 65,000 | | 30,000 | 30,000 | 30,000 | | | |
| Furniture & Office Equipment | | 33,000 | | | | | | | | 33,000 | | |
| Miscellaneous Expenses | | 30,000 | 30,000 | | | | | | | | | |
| Pre-operational Expenses | | 30,000 | 30,000 | | | | | | | | | |
| Contingencies | | 50,000 | 50,000 | | | | | | | | | |
| **Total Invest. costs** | | **1,102,700** | **173,000** | **260,200** | **108,000** | **79,000** | **159,200** | **93,000** | **179,200** | **313,000** | **43,000** | |
| **Depreciation** | | | | | | | | | | | | |
| Building (Scrap Value = 30%) | 5% | | 22,425 | 29,956 | 31,462 | 32,721 | 37,244 | 39,448 | 44,670 | 46,175 | 47,680 | 47,680 |
| Machinery Equipmene | 12.5% | | 27,381 | 27,381 | 27,381 | 27,381 | 27,381 | 27,381 | 27,381 | 27,381 | 27,381 | 27,381 |
| Vehicles | 20% | | 7,200 | 14,400 | 24,800 | 24,800 | 24,800 | 29,600 | 29,600 | 29,600 | 29,600 | 29,600 |
| Miscellaneous Expenses | 20% | | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | | | | | |
| Contingencies | 20% | | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 | | | | | |
| Pre-operational Expenses | 20% | | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | | | | | |
| **Depreciation** | | | **101,006** | **115,737** | **127,643** | **128,902** | **133,425** | **96,429** | **101,651** | **103,156** | **104,661** | **104,661** |
| Cummulative Depreciation | | | 101,006 | 216,743 | 344,386 | 473,288 | 606,713 | 703,142 | 804,793 | 907,949 | 1,012,610 | 1,117,271 |
| Cummulative Investment | | 1,102,700 | 1,275,700 | 1,535,900 | 1,643,900 | 1,722,900 | 1,882,100 | 1,975,100 | 2,154,300 | 2,467,300 | 2,510,300 | 2,510,300 |
| Book Value of the Assets | | 1,102,700 | 1,174,694 | 1,319,157 | 1,299,414 | 1,249,612 | 1,275,387 | 1,271,958 | 1,349,507 | 1,559,351 | 1,399,029 | 1,393,029 |

## ANNEX III: LOAN INTEREST AND REPAYMENT SCHEDULE($)

| **Years** | | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Loan Receipt | | 822,614 | | | | | | | | | | |
| | | | | | | | | | | | | |
| Loan Repayment | 5 years | | 164,523 | 164,523 | 164,523 | 164,523 | 164,522 | 0 | | | | |
| Loan interest | 8% | | 65,809 | 52,647 | 39,485 | 26,324 | 13,162 | 0 | | | | |
| Total Payment | | | | | | | | | | | | |
| Balance outstand | | 822,614 | 658,091 | 493,568 | 329,045 | 164,522 | - | | | | | |

## ANNEX IV: WORKING CAPITAL SCHEDULE($)

| Year | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Current Assets | | | | | | | | | | | | |
| Stock of materials | | | 1,850,400 | 1,912,800 | 1,975,200 | 2,037,600 | 2,100,000 | 2,162,400 | 2,237,800 | 2,287,200 | 2,349,600 | 2,412,000 |
| Stock of output | | | 129,335 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 | 258,670 |
| Current liabilities | | | | | | | | | | | | |
| | | | - | - | - | - | - | - | - | - | - | - |
| Total W/C | | | 301,814 | 431,147 | 431,147 | 431,147 | 431,147 | 431,147 | 431,147 | 431,147 | 431,147 | 431,147 |
| Incremental W/C | | | 301,814 | 99,333 | - | - | - | - | - | - | - | - |

| ANNEX VII: SOURCES AND USES OF FUNDS (US$) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SOURCES & USES/YEAR** | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| **Sources** | | | | | | | | | | | | |
| Equity | | 452,586 | | | | | | | | | | |
| Loan | | 822,614 | | | | | | | | | | |
| Sales Revenue | | | 4,770,000 | 4,911,362 | 5,053,443 | 5,195,524 | 5,337,605 | 5,479,686 | 5,647,767 | 5,763,848 | 5,905,929 | 6,048,010 |
| Total Sources | | 1,275,200 | 4,770,000 | 4,911,362 | 5,053,443 | 5,195,524 | 5,337,605 | 5,479,686 | 5,647,767 | 5,763,848 | 5,905,929 | 6,048,010 |
| | | | | | | | | | | | | |
| Use of Funds | | | | | | | | | | | | |
| Total Invest. Costs | | 1,102,200 | 173,000 | 260,200 | 108,000 | 79,000 | 159,200 | 93,000 | 179,200 | 313,000 | 43,000 | - |
| Total Operating costs | | | 2,385,000 | 2,445,680 | 2,526,720 | 2,597,760 | 2,668,800 | 2,739,840 | 2,823,880 | 2,881,920 | 2,952,960 | 3,024,000 |
| Incremental W/C | | | - | (-228,562) | (-10,119) | (-113,081) | (-222,281) | (-75,881) | (-254,281) | (-249,881) | (-127,919) | (99,081) |
| Loan Repayment | | | 164,523.00 | 164,523.00 | 164,523.00 | 164,523.00 | 164,522.00 | 0 | | | | |
| Loan interest | | | 65,809 | 52,647 | 39,485 | 26,324 | 13,162 | 0 | | | | |
| Tax at | 30% | | 665,456 | 680,189 | 707,878 | 771,432 | 756,665 | 782,425 | 816,819 | 833,031 | 854,492 | 875,804 |
| Total Uses | | 1,102,200 | 3,453,788 | 3,831,801 | 3,556,725.00 | 3,752,120 | 3,984,630 | 3,691,146 | 4,074,180 | 4,277,832 | 3,850,452 | 3,899,804 |
| | | | | | | | | | | | | |
| Balance | | - | (-1,316,212) | (-1079,561) | 1,496,718 | 1,443,404 | 1,352,975 | 1,788,540 | 1,573,587 | 1,486,016 | 2,055,477 | 2,148,206 |
| Balance/CF | | - | (-1,316,212) | (-2,395,773) | (-899,053 | 544,351 | 1,897,326 | 3,685,866 | 5,259,453 | 6,745,514 | 8,800,991 | 10,949,197 |
| Return to Equity | | (-452,586) | (-1,768,798) | (-2,848,359) | (-1,351,641) | 91763 | 1,444,738.00 | 3,233,278 | 4,806,865 | 6,292,881 | 8,348,358 | 10,496,540 |
| NPV to Equity at 8% | | | | | | | | | | | | |
| IRR to Equity | | | | | | | | | | | | |

| ANNEX V: TRADING ACCOUNT (US$) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ITEM/YEAR | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Materials | | | 1,850,400 | 1,912,800 | 1,975,200 | 2,037,600 | 2,100,000 | 2,162,400 | 2,237,800 | 2,287,200 | 2,349,600 | 2,412,000 |
| Salaries/Wages/Allowances | | | 445,200 | 452,400 | 459,600 | 466,800 | 474,000 | 481,200 | 488,400 | 495,600 | 502,800 | 510,000 |
| | | | 89,400 | 90,480 | 91,920 | 93,360 | 94,800 | 96,240 | 97,680 | 99,120 | 100,560 | 102,000 |
| **Total Operating costs** | | - | **2,385,000** | **2,455,680** | **2,526,720** | **2,597,760** | **2,668,800** | **2,739,840** | **2,823,880** | **2,881,920** | **2,952,960** | **3,024,000** |
| Sales Revenue | | | 4,770,000 | 4,911,362 | 5,053,443 | 5,195,524 | 5,337,605 | 5,479,686 | 5,647,767 | 5,763,848 | 5,905,929 | 6,048,010 |
| Trading Profit | | | 2,385,000 | 2,455,682 | 2,526,723 | 2,597,764 | 2,668,805 | 2,737,846 | 2,823,887 | 2,881,926 | 2,952,969 | 3,024,010 |
| **ITEM VI: PROFIT AND LOSS ACCOUNT(US$)** | | | | | | | | | | | | |
| **Years** | | **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| Trading Profit | | | 2,385,000 | 2,455,682 | 2,526,723 | 2,597,764 | 2,668,805 | 2,737,846 | 2,823,887 | 2,881,926 | 2,952,969 | 3,024,010 |
| Total depreciation | | | 101,006 | 115,737 | 127,643 | 128,902 | 133,425 | 96,429 | 101,651 | 105,156 | 104,661 | 104,661 |
| Loan interest | | | 65,809 | 52,647 | 39,485 | 26,324 | 13,162 | - | - | - | - | - |
| **Net Profit** | | | **2,218,185** | **2,267,298** | **2,359,595** | **2,442,538** | **2,522,218** | **2,641,417** | **2,722,731** | **2,776,770** | **2,848,308** | **2,919,349** |
| Cumm. Net Profit | | | 2,218,185 | 4,485,483 | 6,845,078 | 8,787,616 | 11,309,834 | 13,951,251 | 16,673,982 | 19,450,752 | 22,299,060 | 25,218,409 |
| Tax at | 30% | | 665,456 | 680,189 | 707,878 | 771,432 | 756,665 | 782,425 | 816,819 | 833,031 | 854,492 | 875,804 |
| **Net Profit After Tax** | | | **1,552,729** | **1,587,109** | **1,651,697** | **1,671,106** | **1,765,553** | **1,858,992** | **1,905,912** | **1,943,739** | **1,003,816** | **2,043,545** |
| Cumm. Net Profit after tax | | | 2,152,729 | 3,749,838 | 5,401,535 | 7,072,641 | 8,838,194 | 10,697,186 | 12,603,098 | 14,546,837 | 15,550,853 | 17,594,198 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| APPENDIX ONE - RODUCTION COST - OSTRICH FARMING - MIHUGA AND VIKUMBURU VILLAGES | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FINANCIAL ANALYSIS WORK SHEET (US$) | | | | | | | | | | | |
| | | | | | | | | | | | |
| **COST ITEM/YEAR** | **YEAR 0** | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** | **YEAR 7** | **YEAR 8** | **YEAR 9** | **YEAR 10** |
| | | | | | | | | | | | |
| Parent Stock (100 malse and 100 females) | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 | 200.00 |
| **Purchase Price: US$ 1,250- each (US$)** | **250,000.00** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| **Feeds/Vaccines/Medication: US$ 100- per bird p.a (US$)** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** | **240,000.00** |
| | | | | | | | | | | | |
| **In-house Production of Fully Grown Ostriches for Sale** | | | | | | | | | | | |
| Eggs: 40 eggs per hen per annum x 100 hens (Eggs) | | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 |
| EggsAvailable for Hatching | | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 | 4,000.00 |
| | | | | | | | | | | | |
| Incubation Success Rate | | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| Number of Chicks Hatched Successfully | | 2,400.00 | 2,400.00 | 2,400.00 | 2,400.00 | 2,400.00 | 2,400.00 | 2,400.00 | 2,400.00 | 2,400.00 | 2,400.00 |
| **Feeds/Vaccines/Medication: US$ 50- per bird up to 12 months p.a (US$)** | | **120,000.00** | **120,000.00** | **120,000.00** | **120,000.00** | **120,000.00** | **120,000.00** | **120,000.00** | **120,000.00** | **120,000.00** | **120,000.00** |
| | | | | | | | | | | | |
| Survival Rate up to 12 months | | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |
| ChicksSurvived up to 24 months | | 1,680.00 | 1,680.00 | 1,680.00 | 1,680.00 | 1,680.00 | 1,680.00 | 1,680.00 | 1,680.00 | 1,680.00 | 1,680.00 |
| **Feeds/Vaccines/Medication: US$ 75- per bird up to 24 monthsp.a (US$)** | | **126,000.00** | **126,000.00** | **126,000.00** | **126,000.00** | **126,000.00** | **126,000.00** | **126,000.00** | **126,000.00** | **126,000.00** | **126,000.00** |
| | | | | | | | | | | | |
| **Cost Summary** | | | | | | | | | | | |
| Feeds/Vaccines/Medication: US$ 100- per bird p.a (US$) | | 240,000.00 | 240,000.00 | 240,000.00 | 240,000.00 | 240,000.00 | 240,000.00 | 240,000.00 | 240,000.00 | 240,000.00 | 240,000.00 |
| Purchase Price Parent Stock: US$ 1,250- each (US$) | 250,000.00 | - | - | - | - | - | - | - | - | - | - |
| Feeds/Vaccines/Medication: US$ 50- per bird up to 12 months p.a (US$) | | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 |
| Feeds/Vaccines/Medication: US$ 75- per bird up to 24 monthsp.a (US$) | | 126,000.00 | 126,000.00 | 126,000.00 | 126,000.00 | 126,000.00 | 126,000.00 | 126,000.00 | 126,000.00 | 126,000.00 | 126,000.00 |
| **Total Cost** | **250,000.00** | **486,000.00** | **486,000.00** | **486,000.00** | **486,000.00** | **486,000.00** | **486,000.00** | **486,000.00** | **486,000.00** | **486,000.00** | **486,000.00** |
| | | | | | | | | | | | |
| **Incubation of Chicks for Sale** | | | | | | | | | | | |
| Number of Eggs Purchased for Hatching | | 200,000.00 | 200,000.00 | 200,000.00 | 200,000.00 | 200,000.00 | 200,000.00 | 200,000.00 | 200,000.00 | 200,000.00 | 200,000.00 |
| **Cost of Eggs: purchased s per annum @ US$ 1.5 (US$)** | | **300,000.00** | **300,000.00** | **300,000.00** | **300,000.00** | **300,000.00** | **300,000.00** | **300,000.00** | **300,000.00** | **300,000.00** | **300,000.00** |
| Incubation Success Rate | | 60% | 60% | 60% | 60% | 60% | 60% | 60% | 60% | 60% | 60% |
| Number of Chicks Hatched Successfully | | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 | 120,000.00 |
| **Feeds/Vaccines/Medication: US$ 2.5- per bird up to 3 months (US$)** | | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 |
| | | | | | | | | | | | |
| Chicks Incubation Cost Summary | | | | | | | | | | | |
| Cost of Eggs: purchased s per annum @ US$ 1.5 (US$) | | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 |
| Feeds/Vaccines/Medication: US$ 2.5- per bird up to 3 months (US$) | | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 | 300,000.00 |
| **Total Cost** | | **600,000.00** | **600,000.00** | **600,000.00** | **600,000.00** | **600,000.00** | **600,000.00** | **600,000.00** | **600,000.00** | **600,000.00** | **600,000.00** |
| | | | | | | | | | | | |
| **Consolidated Cost Summary** | | | | | | | | | | | |
| In-house Production of Full Grown Ostriches for Sale | 250,000.00 | 486,000.00 | 486,000.00 | 486,000.00 | 486,000.00 | 486,000.00 | 486,000.00 | 486,000.00 | 486,000.00 | 486,000.00 | **486,000.00** |
| Incubation of Chicks for Sale | | 600,000.00 | 600,000.00 | 600,000.00 | 600,000.00 | 600,000.00 | 600,000.00 | 600,000.00 | 600,000.00 | 600,000.00 | **600,000.00** |
| **Total Consolidated Cost** | **250,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** | **1,086,000.00** |

| APPENDIX TWO - PROJECTED SALES REVENUE -OSTRICH FARMS - MIHUGA & VIKUMBURU VILLAGES | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FINANCIAL ANALYSIS WORK SHEET (US$) | | | | | | | | | | | |
| | | | | | | | | | | | |
| SALES ITEM/YEAR | YEAR 0 | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 | YEAR 7 | YEAR 8 | YEAR 9 | YEAR 10 |
| | | | | | | | | | | | |
| **Sale of Fully Grown Ostriches** | | | | | | | | | | | |
| 24-month old Ostriches Available for Sale (Nos) | | | 1,680 | 1,680 | 1,680 | 1,680 | 1,680 | 1,680 | 1,680 | 1,680 | 1,680 |
| Selling Price per Bird (US$) | | | 430 | 300,000 | 300,000 | 300,000 | 300,000 | 300,000 | 300,000 | 300,000 | 300,000 |
| **Total Sales (US$)** | | | **722,400** | **722,400** | **722,400** | **722,400** | **722,400** | **722,400** | **722,400** | **722,400** | **722,400** |
| | | | | | | | | | | | |
| **Sale of 3 months Chicks** | | | | | | | | | | | |
| 3-month old Chicks Available for Sale (Nos) | | | 96,000 | 96,000 | 96,000 | 96,000 | 96,000 | 96,000 | 96,000 | 96,000 | 96,000 |
| Selling Price per Chick (US$) | | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Total Sales | | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 |
| | | | | | | | | | | | |
| **Combined Sales (US$)** | | **960,000** | **1,682,400** | **1,682,400** | **1,682,400** | **1,682,400** | **1,682,400** | **1,682,400** | **1,682,400** | **1,682,400** | **1,682,400** |
| | | | | | | | | | | | |
| Gross Profit & Loss Account | | | | | | | | | | | |
| Combined Sales (US$) | | 960,000 | 1,682,400 | 1,682,400 | 1,682,400 | 1,682,400 | 1,682,400 | 1,682,400 | 1,682,400 | 1,682,400 | 1,682,400 |
| Total Consolidated Cost | 250,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 | 1,086,000.00 |
| Gross Profit/Loss | (-250,000) | (-126 0000) | 506,400.00 | 506,400.00 | 506,400.00 | 506,400.00 | 506,400.00 | 506,400.00 | 506,400.00 | 506,400.00 | 506,400.00 |
| Profit/Loss CarriedForward | (250,000.00) | (-376,000) | 200,400.00 | 706,800.00 | 1,213,200.00 | 1,719,600.00 | 2,226,000.00 | 2,732,400.00 | 3,238,800.00 | 3,745,200.00 | 4,251,600.00 |

| APPENDIX THREE - PRODUCTION COST AND SALES REVENUE - CHICKEN HATCHERIES - KEREGE VILLAGE | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FINANCIAL ANALYSIS WORKSHEET (US$) | | | | | | | | | | | |
| | | | | | | | | | | | |
| **COST ITEM** | **YEAR 0** | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** | **YEAR 7** | **YEAR 8** | **YEAR 9** | **YEAR 10** |
| Number of eggs requirement for incubation | | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 |
| Cost per egg (US$) | | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| Eggs Purchase Cost (US$) | | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 |
| | | | | | | | | | | | |
| **Incubation** | | | | | | | | | | | |
| Number of Eggs Incubated p.a | | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 | 2,400,000 |
| Incubation Success Rate (%) | | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Number ofChicks Successfully Incubated p.a | | 1,920,000 | 1,920,000 | 1,920,000 | 1,920,000 | 1,920,000 | 1,920,000 | 1,920,000 | 1,920,000 | 1,920,000 | 1,920,000 |
| | | | | | | | | | | | |
| Sales Price per Chick (US$) | | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| **Total Sales** | | **1,651,200** | **1,651,200** | **1,651,200** | **1,651,200** | **1,651,200** | **1,651,200** | **1,651,200** | **1,651,200** | **1,651,200** | **1,651,200** |
| | | | | | | | | | | | |
| **Cost of Sales** | | | | | | | | | | | |
| cost of Eggs | | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 |
| **GrossProfit** | | **835,000** | **835,000** | **835,000** | **835,000** | **835,000** | **835,000** | **835,000** | **835,000** | **835,000** | **835,000** |

| APPENDIX FOUR - - PROJECTED PRODUCTION COST AND SALES REVENUE - FISH FARMING AND FISH HATCHERIES - KEREGE & MIHUGA VILLAGES | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FINANCIAL ANALYSIS WORKSHEET (US$)_ | | | | | | | | | | | |
| | | | | | | | | | | | |
| **COST ITEM** | **YEAR 0** | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** | **YEAR 7** | **YEAR 8** | **YEAR 9** | **YEAR 10** |
| | | | | | | | | | | | |
| Number of Brooders (100 males and 300 females1.0 t0 | 400 | | | | | | | | | | |
| Purchase Cost (US$) | 2,069 | | | | | | | | | | |
| | | | | | | | | | | | |
| Number of Ponds | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| | | | | | | | | | | | |
| Eggs Production per Fish (Nos.) p.a | | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 |
| Number of Females Brooders | | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 | 300 |
| Total No. of Eggs Produced | | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 |
| | | | | | | | | | | | |
| Fish Farm Requirement (pcs) | | 240,000 | 480,000 | 720,000 | 960,000 | 1,200,000 | 1,440,000 | 1,680,000 | 1,920,000 | 2,160,000 | 2,400,000 |
| Fish Fingerlings Hatchery for Sale | | 3,360,000 | 3,120,000 | 2,880,000 | 2,640,000 | 2,400,000 | 2,160,000 | 1,920,000 | 1,680,000 | 1,440,000 | 1,200,000 |
| Total Number of Fingerlings Produced/required | | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 | 3,600,000 |
| | | | | | | | | | | | |
| **FISH PRODUCTION** | | | | | | | | | | | |
| Number of Ponds | | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| Holding Capacity per Pond (Fish) | | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | 12,000 | |
| Production Cycles per annum (Nos.) | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Total Fish Production (Nos.) | | 240,000 | 480,000 | 720,000 | 960,000 | 1,200,000 | 1,440,000 | 1,680,000 | 1,920,000 | 2,160,000 | 2,400,000 |
| Survival Rate (%) | | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| Number of Fish Available for Sale (0.5 kgs each) | | 192,000 | 384,000 | 576,000 | 768,000 | 960,000 | 1,152,000 | 1,344,000 | 1,536,000 | 1,728,000 | 1,920,000 |
| | | | | | | | | | | | |
| **Fish SalesRevenue** | | | | | | | | | | | |
| Number of Kgs Equivalent (Kgs) | | 96,000 | 192,000 | 288,000 | 384,000 | 480,000 | 576,000 | 672,000 | 768,000 | 864,000 | 960,000 |
| Sales Price (US$) | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| **Total Sales per annum (US$)** | | **144,000** | **288,000** | **432,000** | **576,000** | **720,000** | **864,000** | **1,008,000** | **1,152,000** | **1,296,000** | **1,440,000** |
| | | | | | | | | | | | |
| **Fish Feeds Requirements** | | | | | | | | | | | |
| Number of Fish Weight Harvested (kgs) | | 96,000 | 192,000 | 288,000 | 384,000 | 480,000 | 576,000 | 672,000 | 768,000 | 864,000 | 960,000 |
| Feeds Requirement per kilo of fish | | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| Weight of Feeds Required (kgs) | | 124,800 | 249,600 | 374,400 | 499,200 | 624,000 | 748,600 | 899,600 | 998,400 | 1,123,200 | 1,246,000 |
| Cost of Feeds per kg (US$) | | 0.50 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 |
| Total Cost of Feeds | | 62,400 | 124,800 | 187,200 | 249,600 | 312,000 | 374,400 | 449,800 | 499,200 | 561,600 | 624,000 |
| | | | | | | | | | | | |
| **Fish Production Cost and Revenue Summary** | | | | | | | | | | | |
| Total Sales (US$) | | 144,000 | 288,000 | 432,000 | 576,000 | 720,000 | 864,000 | 1,008,000 | 1,152,000 | 1,296,000 | 1,440,000 |
| Cost of Sales | | 62,400 | 124,800 | 187,200 | 249,600 | 312,000 | 374,400 | 449,800 | 499,200 | 561,600 | 624,000 |
| **Gross Profit** | | **81,600** | **163,200** | **244,800** | **326,400** | **408,000** | **489,600** | **556,200** | **652,600** | **734,400** | **816,000** |
| | | | | | | | | | | | |
| **FINGERLINGS PRODUCTION FOR SALE** | | | | | | | | | | | |
| Number of Fingerlings Sold | | 3,360,000 | 3,120,000 | 2,880,000 | 2,640,000 | 2,400,000 | 2,160,000 | 1,920,000 | 1,680,000 | 1,440,000 | 1,200,000 |
| Sales Price per piece (US$) | | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 | 0.06 |
| **Sales Revenue** | | **201,600** | **187,200** | **172,800** | **158,400** | **144,000** | **129,600** | **115,200** | **100,800** | **86,400** | **72,000** |
| | | | | | | | | | | | |
| **Combined Production Cost ad SalesRevenue** | | | | | | | | | | | |
| Total Sales per annum (US$) | | 144,000 | 288,000 | 432,000 | 576,000 | 720,000 | 864,000 | 1,008,000 | 1,152,000 | 1,296,000 | 1,440,000 |
| Sales Revenue | | 201,600 | 187,200 | 172,800 | 158,400 | 144,000 | 129,600 | 115,200 | 100,800 | 86,400 | 72,000 |
| Combined Revenue | | 345,600 | 475,200 | 604,800 | 734,400 | 864,000 | 993,600 | 1,123,200 | 1,252,800 | 1,382,400 | 1,512,000 |
| Cost of Sales | | 62,400 | 124,800 | 187,200 | 249,600 | 312,000 | 374,400 | 449,800 | 499,200 | 561,600 | 624,000 |
| **Gross Sales Revenue** | | **283,200** | **350,400** | **417,600** | **484,800** | **552,000** | **619,200** | **673,400** | **803,600** | **820,800** | **888,000** |

| APPENDIX FIVE - CONSOLIDATED PRODUCTION COST AND SALES REVENUE - MEGA LIVESTOCK PROJECT | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FINANCIAL ANALYSIS WORKSHEET (US$) | | | | | | | | | | | |
| | | | | | | | | | | | |
| SALES ITEM/YEAR | YEAR 0 | YEAR 1 | YEAR 2 | YEAR 3 | YEAR 4 | YEAR 5 | YEAR 6 | YEAR 7 | YEAR 8 | YEAR 9 | YEAR 10 |
| Fully Grown Ostriches (24 months) | | | 722,400 | 722,400 | 722,400 | 722,400 | 722,400 | 722,400 | 722,400 | 722,400 | 722,400 |
| Three (3 )-month Ostrich Chicks | | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 | 960,000 |
| Day-old Chicken Chicks | | 1,651,200 | 1,651,200 | 1,651,200 | 1,651,200 | 1,651,200 | 1,651,200 | 1,651,200 | 1,651,200 | 1,651,200 | 1,651,200 |
| Portion Size Fish (o.5kgs) | | 144,000 | 288,000 | 432,000 | 576,000 | 720,000 | 864,000 | 1,008,000 | 1,152,000 | 1,296,000 | 1,440,000 |
| Fish Fingerlings | | 201,600 | 187,200 | 172,800 | 158,400 | 144,000 | 129,600 | 115,200 | 100,800 | 86,400 | 72,000 |
| **Consolidated Sales Revenue** | | **2,956,800** | **3,808,800** | **3,938,400** | **4,068,000** | **4,197,600** | **4,327,200** | **4,456,800** | **4,586,400** | **4,716,000** | **4,845,600** |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| COST OF SALES (IN US$) | | | | | | | | | | | |
| Fully Grown (24 months old) Ostriches | | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 |
| Three (3)-month old Ostrich Chicks | | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 | 486,000 |
| Chicken Egg Procurement | | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 | 816,000 |
| Fish Meal | | 62,400 | 124,800 | 187,200 | 249,600 | 312,000 | 374,400 | 449,800 | 499,200 | 561,600 | 624,000 |
| **Consolidated Cost of Sales** | | **1,850,400** | **1,912,800** | **1,975,200** | **2,037,600** | **2,100,000** | **2,162,400** | **2,237,800** | **2,287,200** | **2,349,600** | **2,412,000** |
| | | | | | | | | | | | |
| **CONSOLIDATED GROSSS PROFIT** | | **1,106,400** | **1,896,000** | **1,963,200** | **1,968,000** | **2,097,600** | **2,164,800** | **2,219,000** | **2,299,200** | **2,366,400** | **2,433,600** |