

ROCKY BAY CAMPSITE LIMITED

A Technical and Financial Feasibility Study for Establishing a Fully Integrated Fish and Poultry Farm at Mkomba Village, Sengerema District in Mwanza Region, Tanzania

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1.0 EXECUTIVE SUMMARY-

1.1 Introduction

M/s Rocky Bay Campsite Limited of P.O. Box 16 Mwanza was incorporated on the 29th day of July 2017 under certificate of incorporation No: 140189. As the name would suggest, among other activities, the company was initially established for developing, establishing and managing a tourist-class resort with modern water sports facilities at Mkomba Village in Sengerema District along the shores of Lake Victoria. This is a TIC-registered project under Certificate No. 021243 dated 31st January, 2019.

Having accomplished the first planned activity, the directors of M/s Rocky Bay Campsite Limited are now looking at diversifying their business activities to include a fully integrated fish and poultry farm adjacent to their tourist resort on the shores of Lake Victoria at Mkomba Village, Sengerema District. This new project is targeting the mining industry as their major market.

The Project Concept

The first part of the project entails establishing ultra-modern fish farm on the shores of Lake Victoria. The fish farm project is designed to use on-shore ponds and tanks. The fish farm will comprise of three (3) major components: The first component will involve development of breeding ponds for the production of the highest quality sex-controlled (all males) 1.0-gram fingerlings for own requirements. The second component will involve construction of thirty (30) concrete fish ponds measuring 30m x 10m x 1.5m high with a holding capacity of 12,000 fish fingerlings each to produce portion size (500 to 700 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 three years: 10 ponds will be constructed during year one, 10 more in year two before completing the last ten during the third year. The last major component will involve establishing a very modern fish feed mill for production of good quality fish meal of international standards for the fish farm project.

The second part of the project involves establishing a modern poultry farm for rearing broilers to produce chicken meat for the local market. The project envisages developing a total of 21 chicken coops, each accommodating 2,500 chicks with a rotation of every 8 weeks; starting with 7 coops in year one, adding 7 more in year two and 7 in year three. As in the case of fish farm project, the last major component of the poultry project will involve establishing a modern chicken feed mill for production of good quality chicken feeds of international standards for the poultry farm project.

1.4 The Study Objectives

This document has been prepared for three (3) main reasons. Firstly, to determine the viability of the proposed project and serve as a business plan for establishing and running the proposed integrated fish and poultry farm. 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 TShs 511,000,000/= to supplement acquisition of fixed assets, and application of bank short term loan of TShs 150,000,000/= to finance working capital requirements.

1.5 The Project Promoters

The applicant is M/s Rocky Bay Campsite Limited of P. O. Box 491 Geita, Tanzania. The company was incorporated on the 29th day of December, 2017 under the Companies Act (2002) with Certificate of Incorporation Number 140189. The authorized share capital of the company is TShs 100,000,000/= divided into 100 equity shares of TShs 1, 000, 0000/= each.

The company is owned by two shareholders/directors – namely:

- Jozua Caleb Coetsee (40%)
- Hendrik Nicolaas Coetsee (40%)

The directors/shareholders are currently based in Geita Township where they operate as service providers to M/s Geita Gold Mines under the name of M/s Pro Mining Services Limited.

1.6 Location and Infrastructure

The proposed project site is located at Mkomba Village, Sengerema District, Mwanza Region along the shores of Lake Victoria. The project site consists of a piece of un-surveyed and measuring three (3) acres in which the fish and poultry farm facilities will be developed. The company plans to expand the site to at least ten acres more for further future developments. The site is located 25 kms from Sengerema Township, 2 kms away from Busisi Ferry.

The site is neither connected to water supply, nor electricity supply infrastructure. As such, it is planned that solar power system at 5kVA will be developed in addition to a power generator at capacity of 55kVA that will be procured to supply electricity to the fish and poultry farm. Likewise, water for use in the camp will be drawn from the lake and treated through electromagnetic radiation using ultra violet system

1.7 Capital Investment Structure

The directors and shareholders of Rocky Bay Campsite Limited plan to make substantial investments in the development of the integrated fish and poultry farm, including land acquisition, construction of breeding ponds, processing buildings, structures and related civil works, storage buildings, office buildings, construction of concrete fish ponds, and acquisition of ultra-modern processing facilities. The proposed project also involves acquisition of tools, equipment, and utility and administration vehicles.

Total project is estimated to cost TShs 1,277,500,000/= for financing fixed capital items, and additional TShs 150,000,000/= to finance working capital requirements as summarised hereto below:

CAPITAL INVESTMENT SUMMARY

| S/No. | Capital Item | Capital Investment (in TShs) |
|-------|---|---------------------------------|
| 1. | Land and Site Preparations | 18,000,000 |
| | Civil Works, Structures and Buildings | 506,500,000 |
| | <i>Sub total</i> | <i>524,500,000</i> |
| | | |
| 2. | Plant Machinery, Tools and Equipment | 433,000,000 |
| 3. | Utility and Admin Motor Vehicles | 165,000,000 |
| 4. | Furniture, Fixture and Office Equipment | 20,000,000 |
| 5. | Pre-operational Expenditures (including interest incurred during construction period) | 35,000,000 |
| 6. | Contingencies | 100,000,000 |
| | | |
| | TOTAL | 1,277,500,000 |
| 7. | Add: Working Capital Requirements | 150,000,000 |
| | GRAND TOTAL | 1,427,500,000 |

1.8 Proposed Financing Arrangement

Fixed assets cost of the project estimated to cost TShs 1,546,500,000/= is planned to be financed through owners' equity contributions and directors' (60%) and bank term loan (40%) 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 TShs 150,000,000/= is considered adequate for the initial working capital requirements.

1.9 Fingerlings/Chicks and Raw Materials Sources

The directors envisage obtaining the initial batch of tilapia fingerlings from nearby Uganda hatcheries before start harvesting fingerlings from own breeding ponds within the first year. Otherwise, day old chicks will mainly be obtained from M/s Misenani Agri Services Limited, a local hatchery located at Igombe Area, Ilemela Municipality in Mwanza. Materials for making own fish meal and chicken feeds including sardines, maize, polished rice, cotton cake, soya beans etc., will be obtained mainly from surrounding villages. However, premix (minerals, micro-element etc.) will be procured from Arusha, Nairobi and Kampala while some of them will be imported mainly from China.

1.10 Production Capacity

1.10.1 Fish Farm

Concrete 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 500 to 700 grams during the first year of production.

During the second year, 10 more concrete 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 third year.

Mortality rate is estimated to be about 20% given the fresh waters of Lake Victoria which has very little pollution compared to other similar water bodies.

1.10.2 Poultry Farm

Chicken coops (bandas) measuring 18m x 12m will be built for broiler chicken rearing. Initially, 7 chicken bandas will be constructed and utilized to accommodate 2,500 chickens per banda. Rotation has conservatively been estimated at 8 weeks, translating into 6.5 rotations per annum.

1.10.3 Poultry 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.

1.11 Production Costs

1.11.1 Fish Farm

It requires 1.3kgs of feeds to produce 1.0kgs of fish. Production cost is estimated at TShs 2,000/= per kilo. At full project production therefore, it will cost TShs 1,123,200,000/= to feed the entire population per annum. This computes to about 62% of total sales revenue. Fingerlings are estimated to cost TShs per piece.

The price of fish fingerlings is projected at only TShs 200/= per piece, translating to cost of TShs 48,000,000/= in year one, TShs 96,000,000/= in the second year and TShs 144,000,000 per annum from the third year onwards.

1.11.2 Poultry Farm

On the average, it requires 1.9kgs of feeds to produce 1.0kgs of broiler chicken. Production cost is estimated at TShs 900/= per kilo of chicken feed. At full project production therefore, it will cost TShs 1,312,959,375/= to feed the entire population of 341,250 broiler chicken accommodated in the rearing bandas per annum. This computes to about 72% of total sales revenue.

The price of broiler chick is projected at only TShs 200/= per piece, translating to cost of TShs 48,000,000/= in year one, TShs 96,000,000/= in the second year and TShs 144,000,000 per annum from the third year onwards.

Other major operating costs will include vaccines and medication, litter, heating, electricity, water and watering, cleaning and disinfecting of poultry house, slaughtering and processing, and packaging and distribution

1.12 Revenue Estimates

1.12.1 Fish Farm Project

The price of a kilogram of fish is conservatively estimated at TShs 8,500/= per kilo. Total production is estimated at 341,250 fully grown birds per annum at the average of 600 grams per piece at assumed mortality rate of 20%. Under these production assumptions, therefore the poultry farm project is projected to generate revenue of TShs 2,937,600,000/= per annum at full project implementation.

1.12.1 Chicken Farm Project

The price of broiler chicken is estimated at TShs 6,000/= per kilo. Total production is estimated at 341,250 birds per annum at the average of 2.25 kgs translating to 767,812.5 kgs per annum at assumed mortality rate of 20%. Under

these production assumptions, therefore the chicken farm project is projected to generate revenue of TShs 3,685,500,000/= per annum at full implementation.

1.14 Job Creation

The two projects envisage employing estimated number of 45 people among who three (3) will be foreign expatriate staff. Of the remaining 42 local employees, 24 will be skilled while 18 will be casual/unskilled workers. Furthermore, among the local employees, 22 are expected to be males while 20 are expected to be females.

1.13 Market and Marketing Aspects

The project targets mainly the local market and particularly the mining industry in Geita region and Lake Zone in general. The export market is not considered for the time being. The company is particularly considering taking advantage of the developed links between the company and the major foreign mining companies in the region.

1.14 Competition

So far, there are only a few large commercial tilapia fish farming projects in the region and within Lake Zone and 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. The project is expected to produce 450 tons of quality tilapia fish per year. This project uses ponds. Cage fish farming is rapidly expanding in Lake Victoria waters. The biggest cage fish farm within Tanzania borders is located at Bulamba Area, Bunda District under the ownership of JKT 822KJ- Bulamba Detach. The Bulamba JKT has to-date developed more than 50 cages. A few more cage farms have started appearing in Sengerema District.

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.

1.15 Financial Considerations

The attached Financial Projections annexure analyses the Total Production Costs, Annex I analyses Income Statement Projections while Annex II deals with Break-even Analysis as summarised hereto below. The analysis is well elaborated in the attached projections and summarised as follows:

- Internal Rate of Return on investment 27.6%
- The Normal Payback Period is 3 years when discounted at the assumed discount rate of 20%.

- NPV Ratio is positive and computes at 4.5

1.16 Environmental Aspects

The project activities involve construction of concrete fish ponds on-shore for production of tilapia fish, construction of poultry coops (bandas) for rearing of broiler chicken, production of fish meal and chicken feeds, cleaning and disinfection of poultry house, cleaning and packaging of whole fish and broiler chicken before packaging and chilling/freezing the products ready for transportation in refrigerated trucks to the markets. 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. Rocky Bay Campsite Limited will adhere to all the relevant regulations which guide fish farmers and processors on the necessary regulations the 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 Rocky Bay Campsite Limited 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 two members. The Board will formulate policy and offer strategic business guidance to management and regularly monitor and evaluate performance of the company.

The day to day management of the project will be vested in the Management Team. The Management Team will comprise of the General Manager who will be the overall in-charge of the project. The General Manager will be assisted by three heads of departments: Fish Farm Manager, Poultry Farm Manager; and Feeds Production Manager. The General Manager and his heads of departments will be further assisted with 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 fish diseases. However, this is highly unlikely as Lake Victoria waters are very clean, almost pollution-free compared to similar water bodies. Likewise, the project site is an excluded area where there is no contact with locally grown chicken. Besides, the chicken coops and their respective environments will be periodically cleaned and disinfected to prevent the breakdown of chicken diseases. This is in addition to regularly chicken vaccinations.

1.19 Social, Economic and Developmental Benefits

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

- The project envisages employing estimated number of 45 people among who three (3) will be foreign expatriate staff. Of the remaining 42 local employees, 24 will be skilled while 18 will be casual/unskilled workers. Furthermore, among the local employees, 22 are expected to be males while 20 are expected to be females.
- Salaries and wages to be earned by local workers are expected to change the economy of Sengerema District irreversibly;
- The entire production is geared for local consumption and in particular, mining companies within the Lake Zone. Therefore, the increased supply of 345.60 tons of tilapia fish and 614.25 tons of broiler chicken meat per year will not only influence to regulate fish and chicken 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.

1.20 Project Implementation Schedule

The company directors have the financial muscle, technology, 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 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 spread in three years. Phase One starts in October 2020, Phase Two in October, 2021 and Phase Three in October 2022.

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, Rocky Bay Campsite Limited be availed the required institutional assistance so as to enable them implement the proposed project. It is further recommended that an application for TIC Certificate of Investment Incentives be submitted to Tanzania Investment Centre with a view to benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act, 1997.

Meantime, TIC should be asked to obtain a Letter of No Objection on behalf of the company for the establishment of the fish processing factory in Sengerema District, Mwanza 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 first part of the project entails establishing ultra-modern fish farm on the shores of Lake Victoria. The fish farm project is designed to use on-shore ponds and tanks. The fish farm will comprise of three (3) major components: The first component will involve development of breeding ponds for the production of the highest quality sex-controlled (all males) 1.0-gram fingerlings for own requirements. The second component will involve construction of thirty (30) concrete fish ponds measuring 30m x 10m x 1.5m high with a holding capacity of 12,000 fish fingerlings each to produce portion size (500 to 700 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 three years: 10 ponds will be constructed during year one, 10 more in year two before completing the last ten during the third year. The last major component will involve establishing a very modern fish feed mill for production of good quality fish meal of international standards for the fish farm project.

The second part of the project involves establishing a modern poultry farm for rearing broilers to produce chicken meat for the local market. The project envisages developing a total of 21 chicken coops, each accommodating 2,500 chicks with a rotation of every 8 weeks; starting with 7 coops in year one, adding 7 more in year two and 7 in year three. As in the case of fish farm project, the last major component of the poultry project will involve establishing a modern chicken feed mill for production of good quality chicken feeds of international standards for the poultry farm project.

2.2 Location and Infrastructure

The proposed project site is located at Mkomba Village, Sengerema District, Mwanza Region along the shores of Lake Victoria. The project site consists of a piece of un-surveyed and measuring three (3) acres in which the fish and poultry farm facilities will be developed. The company plans to expand the site to at least ten acres more for further future developments. The site is located 25 kms from Sengerema Township, 2 kms away from Busisi Ferry.

The site is neither connected to water supply, nor electricity supply infrastructure. As such, it is planned that solar power system at 5kVA will be developed in addition to a power generator at capacity of 55kVA that will be procured to supply electricity to the fish and poultry farm. Likewise, water for use in the camp will be drawn from the lake and treated through electromagnetic radiation using ultra violet system

2.3 Ownership

The applicant is M/s Rocky Bay Campsite Limited of P. O. Box 491 Geita, Tanzania. The company was incorporated on the 29th day of December, 2017 under the Companies Act (2002) with Certificate of Incorporation Number 140189. The authorized share capital of the company is TShs 100,000,000/= divided into 100 equity shares of TShs 1, 000, 0000/= each.

The company is owned by two shareholders/directors as indicated in the table below:

COMPANY SHAREHOLDERS AND SHAREHOLDING STRUCTURE

| NAMES, ADDRESSES AND DESCRIPTIONS OF SUBSCRIBERS | NATIONALITY | NO. OF SHARES HELD | % SHAREHOLDING |
|---|--------------------|---------------------------|-----------------------|
| Jozua Caleb Coetsee Nyamalembo Area Geita Township P.O. Box 491 Geita | South African | 40 | 40% |
| Hendrik Nicolaas Coetsee Nyamalembo Area Geita Township P.O. Box 491 Geita | South African | 40 | 40% |
| Unallotted Shares | | 20 | 20% |

The integrated fish and poultry farm project is a well thought out project: a brain child of the two company directors of high net-worth and unquestionable integrity with wide experience in various disciplines ranging from mechanical engineering, civil construction and supply of engineering equipment and labour to the mining industry.

Both directors are high-net worth businessmen engaged in various activities. Their main activities at present include engineering designs, steel fabrication, civil works contractors and builders, plant maintenance, and supply of workshop and civil works materials and engineering equipment, with their main clients being the big mining companies in the lake region. They are currently located in Geita Township.

2.4 Planned Activities

2.4.1 Fish Farm

The Fish Farm project has three principal activities: breeding tilapia fish to produce 1.0-gram sex-controlled fingerlings; grow up all-male fingerlings in cages to

portion size fish (500 to 700 grams), process and package the fish so produced for sale mainly for the local market and particularly to the mining industry in Lake Zone; produce top quality fish meal for own project use and sell of excess production capacity to the market.

2.4.2 Poultry Farm

The Poultry project has likewise three principle activities: procure day old broiler chicks from local hatcheries, rear the chicks for about 8 weeks to produce chicken meat at an average of 2.25 kgs per chick; slaughter the fully grown chicken, process and package the broiler chicken so produced for sale mainly for the local market and particularly to the mining industry in Lake Zone; and produce top quality chicken feeds for own project use and sell of excess production capacity to the market.

Specifically, the company plans to do the following during the next 3 years:

- Obtain the necessary licences, permits and authorizations necessary to establish the fish and poultry farming, processing and selling locally;
- Develop a total of 30 concrete fish ponds measuring 20m long x 10m wide x 1.5m high with a holding capacity of 12,000 fish each over the next three years (10 annually) to produce all-male sex-controlled tilapia.
- Develop a total of 21 chicken coops (bandas) measuring 18m long x 10m wide with a holding capacity of 2,500 chicks per coop over the next three years (7 annually) to produce broiler chicken meat.
- Construct project buildings, storage facilities and related civil works;
- Procure and install new ultra-modern plant machineries and equipment for production of top quality fish meals and chicken feeds
- Procure new specialized fish and poultry transportation trucks and administration vehicles,

2.5 Strategies to be employed

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

- 2.5.1 Complete land registration and obtain TIC Land Derivative Right for the project site at Mkomba Village, Sengerema District as well as obtaining licences, permits and authorities to establish the project from relevant authorities;
- 2.5.2 Develop most modern Tilapia Fish Breeding Ponds to produce top quality all-males sex controlled fingerlings at the ratio of one (1) male to three (3) females. Total females in one pond are estimated at 100. Each female produces 4,000 eggs

per year, computing to 400,000 eggs per pond or 4,800,000 fingerlings per annum with mortality rate of slightly above 10%. Out of this production, 720,000 tilapia fingerlings will go to own tilapia fish farm while the rest will be sold out to other fish farmers, and 480,000 are expected to perish. The breeding stock will be obtained from Lake Victoria.

- 2.5.3 Construct 30 concrete fish ponds, each to accommodate 12,000 fingerlings. Mortality rate is estimated at 20%.
- 2.5.4 Develop twenty one (21) modern chicken coops to produce top quality broiler chicken for production of chicken meat. Each coop to accommodate 2,500 chicks with 6.5 rotations per annum. Day old broiler chicks are to initially be procured from M/s Misenani Agri services, the most modern hatchery in Mwanza.
- 2.5.5 Develop an ultra-modern fish and poultry feed mill to produce top quality feed mill to satisfy the project demand.
- 2.5.6 Construct at the project site processing and storage buildings, feed mill factory building and develop necessary civil works structures to accommodate all the proposed project facilities.
- 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 water treatment plant/effluent water 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 a new heavy duty 55 kVA Standby Electric Power Generator
 - Procurement of 2 units of refrigerated light trucks, 2 units light trucks for collection of feed materials from neighbouring villages.
- 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 we 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 to be TShs 1,277,500,000/=. In addition, there will be a need for about TShs 150,000,000/= to finance working capital requirements as indicated under the Financial Projections section 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 the table below.

PROPOSED CAPITAL INVESTMENT STRUCTURE (IN TSHS)

| | ITEM | YEAR 1 | YEAR 2 | YEAR 3 | TOTAL |
|------------|---|--------------------|--------------------|--------------------|--------------------|
| I: | LAND & BUILDING | | | | |
| 1. | Land and Site Preparations | 18,000,000 | | | 18,000,000 |
| 2. | Civil Works Structures, Buildings | | | | |
| 2.1 | Concrete Fish Ponds 20m x 10m x 1.5m high | 50,000,000 | 50,000,000 | 25,000,000 | 125,000,000 |
| 2.2 | Hatchery ponds | 15,000,000 | 15,000,000 | 7,500,000 | 37,500,000 |
| 2.3 | Feed Store 24m x 12m x 6m high | 40,000,000 | | 40,000,000 | 80,000,000 |
| 2.4 | Processing House | 20,000,000 | | 20,000,000 | 40,000,000 |
| 2.5 | Chicken Coops 18m x 12m | 60,000,000 | 60,000,000 | 20,000,000 | 140,000,000 |
| 2.6 | Chicken Slaughter and Processing House | 42,000,000 | | 42,000,000 | 84,000,000 |
| | Sub total | 245,000,000 | 125,000,000 | 154,500,000 | 524,500,000 |
| | | | | | |
| II: | PLANT, MACHINERY EQUIPMENT | | | | |
| 1. | Fish Processing facilities | 20,000,000 | | 20,000,000 | 40,000,000 |
| | Fish Meal Plant | 20,000,000 | | 20,000,000 | 40,000,000 |

| | | | | | |
|-------------|--|--------------------|--------------------|--------------------|----------------------|
| 2. | Generator 55kVA | | | | |
| | Packaging Plant | | 35,000,000 | | 35,000,000 |
| 3. | Chicken Processing line | 56,000,000 | | 56,000,000 | 112,000,000 |
| 4. | Poultry Feeds Making Plant | 20,000,000 | | 20,000,000 | 40,000,000 |
| 5. | Cold Rooms/Freezers | 15,000,000 | | 15,000,000 | 30,000,000 |
| 6. | Chick Incubators | 27,000,000 | 27,000,000 | 27,000,000 | 81,000,000 |
| 7. | Miscellaneous Tools and Equipment | 25,000,000 | 15,000,000 | 15,000,000 | 55,000,000 |
| | | | | | |
| | Sub total | 183,000,000 | 77,000,000 | 173,000,000 | 433,000,000 |
| | | | | | |
| III: | MOTOR VEHICLES | | | | |
| | | | | | |
| 1. | Refrigerated Light Trucks | | 55,000,000 | 55,000,000 | 110,000,000 |
| | Light Trucks | 25,000,000 | | 30,000,000 | 55,000,000 |
| | Sub total | 25,000,000 | 55,000,000 | 85,000,000 | 165,000,000 |
| | | | | | |
| IV: | Furniture, Fittings & Office Equipment: | 20,000,000 | | | 20,000,000 |
| | | | | | |
| V: | Pre-Operational Expenses | 35,000,000 | | | 35,000,000 |
| | | | | | |
| VI: | Contingencies | 50,000,000 | 25,000,000 | 25,000,000 | 100,000,000 |
| | | | | | |
| | TOTAL | 558,000,000 | 282,000,000 | 437,500,000 | 1,277,500,000 |
| | | | | | |
| VII: | Add: Initial Working Capital | 150,000,000 | | | 150,000,000 |
| | | | | | |
| | GRAND TOTAL: | 708,000,000 | 282,000,000 | 437,500,000 | 1,427,500,000 |

Proposed Financing Arrangement

Fixed assets cost of the project estimated to cost TShs 1,277,500,000/= is planned to be financed through owners' equity contributions and directors' (60%) and bank term loan (40%) 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 TShs 150,000,000/= is considered adequate for the initial working capital requirements, thus:

| | Source of Finance | Amount (TShs) |
|--|---|----------------------|
| | Owners' Equity Contributions/Directors' Loans | 766,500,000 |
| | Bank Term Loan | 511,000,000 |
| | <i>Sub total</i> | <i>1,277,000,000</i> |
| | Add: Working Capital | 150,000,000 |
| | Total Financing | 1,427,500,000 |

M/s Rocky Bay Campsite 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

Fish fingerlings are produced in breeding ponds where the parent stock will be obtained from Lake Victoria. The fingerlings are treated with hormones through feeds to ensure only males are produced. Fingerlings are transferred to 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 500 to 700grams which is the standard market size. Thereafter, tilapia fish will be harvested and taken to the processing building. Here they will be cleaned, ready for packaging.

Note should be taken that the company will sell whole fish. Apart from cleaning, no further processing will be done.

2.7.2 Broiler Chicken Production

Broiler chickens (the type raised for meat) generally take up to seven weeks to reach market weight (2.0 to 2.5 kgs). Once they've reached the proper size and weight, they are transferred into holding cages specifically designed for transport to the processing plant. Technology makes slaughter extremely quick to minimize discomfort. After slaughter, birds enter a process where their feathers are removed. This begins by putting the chicken through a bath of hot water, which is designed to help loosen feathers. Feather removal is performed by a machine called a "picker," which includes hundreds of little rubber "fingers" that rotate around to remove the feathers.

After feathers are removed, the birds are sent to an “eviscerating” line which removes internal organs and feet, also known as “paws.” After the organs are removed, the carcasses are then cleaned before being inspected. Before this process, which includes chilling the birds to a lower temperature to keep fresh and clean, company quality assurance and food safety personnel inspect them once again for quality, food safety and wholesomeness. They follow strict regulatory and company standards for each bird entering the chilling process.

After properly tested and chilled, the carcass is typically cut and deboned to accommodate a variety of different products. Depending on the processing plant, these products may include the fresh or frozen chicken sold in stores, chicken used in restaurants or exported. This includes convenience products sold in “tray-packs” most commonly seen at local grocery stores, such as drumsticks, thighs, leg quarters, wings, breasts and more.

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 container will thus carry 2,500 cartons.

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

2.8.2 Broiler Chicken Packaging and Storage

Once chicken is cut up into parts, it is packed in trays and wrapped. The wrapped product is then inspected again to ensure that it meets or exceeds both consumer and customer expectations. Wrapped product is placed into baskets and sent through a “blast tunnel” to receive a chill. This is done so that the product can have an extended shelf life by keeping it fresh longer. Though the product is significantly cooled during this process, it does not freeze.

After the product is properly chilled, it is weighed and price and safe handling instructions are affixed to the package. Labels on chicken packages must be approved by the national foods authority prior to application on a product.

Finally, the product is packaged into boxes where a label is placed on the exterior of the box. This label displays the date packaged, food authority seal of approval and the establishment number of the plant, so that the product can be traced to the establishment where it was produced.

2.9 Production Capacity

2.9.1 Fish Farming

Concrete 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 500 to 700 grams during the first year of production.

During the second year, 10 more concrete 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 third year.

Fish Production Capacity

| Production Details | Fish Production (in Numbers) | | |
|--|------------------------------|----------------|----------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Total Number of Concrete Ponds | 10 | 20 | 30 |
| Holding Capacity (Fingerlings) per pond | 12,000 | 12,000 | 12,000 |
| Number of Cycles per annum | 2 | 2 | 2 |
| Production (Grown Fish of 500g to 700g) per annum | 240,000 | 480,000 | 720,000 |

Mortality rate is estimated to be about 20% given the fresh waters of Lake Victoria which has very little pollution compared to other similar water bodies.

2.9.2 Poultry Farming

Chicken coops (bandas) measuring 18m x 12m will be built for broiler chicken rearing. Initially, 7 chicken bandas will be constructed and utilized to accommodate 2,500 chickens per banda. Rotation has conservatively been estimated at 8 weeks, translating into 6.5 rotations per annum.

Chicken Production Capacity

| Production Details | Chicken (Broiler) Production (in Numbers) | | |
|--|---|----------------|----------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Total Number of Chicken Bandas | 7 | 14 | 21 |
| Holding Capacity (Chicks) per Banda | 2,500 | 2,500 | 2,500 |
| Number of Rotations per annum | 6.5 | 6.5 | 6.5 |
| Production (Grown Broiler Chicken of 2.0 to 2.5 kgs) per annum (about 2.25 kgs each | 113,750 | 227,500 | 341,250 |

2.9.3 Poultry 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 2,000/= per kilo. At full project production therefore, it will cost TShs 1,123,200,000/= to feed the entire population per annum. This computes to about 62% of total sales revenue.

2.10.1.1 Fish Feeds Requirement and Cost

| Cost Details | Fish Feeds Cost | | |
|---|--------------------|--------------------|----------------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Fish Production per annum (in pieces) | 240,000 | 480,000 | 720,000 |
| Average Weight per fish (grams) | 600 | 600 | 600 |
| Total Weight (kgs) | 144,000 | 288,000 | 432,000 |
| Feeds Requirement) - Kgs | 187,200 | 374,400 | 561,600 |
| Cost of Feeds per Kg (TShs) | 2,000 | 2,000 | 2,000 |
| Total Cost of Feeds per annum (Tshs) | 374,400,000 | 748,800,000 | 1,123,200,000 |

2.10.1.2 Cost of Fingerlings

The price of fish fingerlings is projected at only TShs 200/= per piece, translating to cost of TShs 48,000,000/= in year one, TShs 96,000,000/= in the second year and TShs 144,000,000 per annum from the third year onwards.

| Cost Details | Fish Feeds Cost | | |
|---|-------------------|-------------------|--------------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Fish Production per annum (in Numbers) | 240,000 | 480,000 | 720,000 |
| Cost per Fingerling | 200 | 200 | 2009 |
| Total Cost of Fingerlings per annum (Tshs) | 48,000,000 | 96,000,000 | 144,000,000 |

2.10.2 Poultry Farm

On the average, it requires 1.9kgs of feeds to produce 1.0kgs of broiler chicken. Production cost is estimated at TShs 900/= per kilo of chicken feed. At full project production therefore, it will cost TShs 1,312,959,375/= to feed the entire population of 341,250 broiler chicken accommodated in the rearing bandas per annum. This computes to about 72% of total sales revenue.

2.10.2.1 Chicken Feeds Requirement and Cost

| Cost Details | Chicken Feeds Cost | | |
|--|--------------------|--------------------|----------------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Chicken Production per annum (in Numbers) | 113,750 | 227,500 | 341,250 |
| Average Weight per Chick (kgs) | 2.25 | 2.25 | 2.25 |
| Total Weight of Chicken reared per annum (kgs) | 253,687.5 | 511,875 | 767,812.5 |
| Feeds Requirement) - Kgs | 482,006.25 | 972,562.5 | 1,458,843.75 |
| Cost of Feeds per Kg (TShs) | 900 | 900 | 900 |
| Total Cost of Feeds per annum (Tshs) | 433,805,625 | 875,306,250 | 1,312,959,375 |

2.10.2.2 Cost of Chicks

The price of broiler chick is projected at only TShs 200/= per piece, translating to cost of TShs 48,000,000/= in year one, TShs 96,000,000/= in the second year and TShs 144,000,000 per annum from the third year onwards.

Cost of Chicks

| Cost Details | Fish Feeds Cost | | |
|--|--------------------|--------------------|--------------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Chicken Production per annum (in Numbers) | 113,750 | 227,500 | 341,250 |
| Price per Chick (TShs) | 1,500 | 1,500 | 1,500 |
| Total Cost of Chicks per annum (TShs) | 170,625,000 | 341,250,000 | 511,875,000 |

2.10.2.3 Operating Costs

Other major operating costs will include vaccines and medication, litter, heating, electricity, water and watering, cleaning and disinfecting of poultry house, slaughtering and processing, and packaging and distribution

| OPERATING COSTS (IN TSHS) | | | | |
|----------------------------------|---|-------------------------|-------------------------|-------------------------|
| | COST IEM | YEAR 1 | YEAR 2 | YEAR 3 onwards |
| 1 | Fish Fingerlings | 48,000,000.00 | 96,000,000.00 | 144,000,000.00 |
| 2 | Fish Meal | 374,400,000.00 | 748,800,000.00 | 1,123,200,000.00 |
| 3 | Day-old Chicks | 170,625,000.00 | 341,250,000.00 | 511,875,000.00 |
| 4 | Chicken Feed | 433,805,625.00 | 875,306,250.00 | 1,312,959,375.00 |
| 5 | Vaccinations and Medications | 23,887,500.00 | 71,662,500.00 | 107,493,750.00 |
| 6 | Litter | 6,825,000.00 | 13,650,000.00 | 20,475,000.00 |
| 7 | Heating | 28,437,500.00 | 56,875,000.00 | 85,312,500.00 |
| 8 | Electricity | 17,062,500.00 | 34,125,000.00 | 51,187,500.00 |
| 9 | Water and Watering | 5,687,500.00 | 11,375,000.00 | 17,062,500.00 |
| 10 | Cleaning & Disinfection (poultry house) | 34,125,000.00 | 68,250,000.00 | 102,375,000.00 |
| 11 | Fish Processing | 14,662,500.00 | 29,376,000.00 | 4,064,000.00 |
| 12 | Slaughter and Chicken Processing | 31,850,000.00 | 63,700,000.00 | 95,550,000.00 |
| 13 | Fish Packaging and Storage | 9,775,000.00 | 19,584,000.00 | 29,376,000.00 |
| 14 | Chicken Packaging and Storage | 12,285,000.00 | 24,457,000.00 | 36,855,000.00 |
| 15 | Salaries, Wages & Allowances | 108,000,000.00 | 216,000,000.00 | 324,000,000.00 |
| 16 | Repair & Maintenance | 22,650,000.00 | 29,250,000.00 | 42,150,000.00 |
| 17 | Miscellaneous Expenses | 50,000,000.00 | 5,000,000.00 | 50,000,000.00 |
| | TOTAL | 1,392,078,125.00 | 2,704,660,750.00 | 4,057,935,625.00 |

2.10.2.4 Depreciation and Amortization Costs

| DEPRECIATION AND AMORTIZATION COSTS | | | | | | | |
|--|-------------------|--------------------|--|-------------------|-------------------|-------------------|-------------------|
| CAPITAL ITEM | DEPR. RATE | SCRAP VALUE | DEPRECIATION AND AMORTIZATION COSTS | | | | |
| | | | YEAR 1 | YEAR2 | YEAR 3 | YEAR 4 | YEAR 5 |
| Buildings/Structures | 5.00% | 50% | 5,675,000 | 8,800,000 | 12,662,500 | 12,662,500 | 12,662,500 |
| Plant Machinery Equipment | 12.50% | 35% | 14,868,750 | 21125000 | 35181250 | 35181250 | 35181250 |
| Motor Vehicles | 20.00% | 20% | 4000000 | 12800000 | 26400000 | 26400000 | 26400000 |
| Furniture | 12.50% | 15% | 2,125,000 | 2,125,000 | 2,125,000 | 2,125,000 | 2,125,000 |
| Pre-operational Expenditures | 20.00% | 0% | 7000000 | 7000000 | 7000000 | 7000000 | 7000000 |
| TOTAL DEPRECIATION/AMORTIZATION COSTS | | | 33,668,750 | 51,850,000 | 83,368,750 | 83,368,750 | 83,368,750 |

2.11 Revenue Estimates

2.11.1 Fish Farm Project

The price of a kilogram of fish is conservatively estimated at TShs 8,500/= per kilo. Total production is estimated at 341,250 fully grown birds per annum at the average of 600 grams per piece at assumed mortality rate of 20%. Under these production assumptions, therefore the poultry farm project is projected to generate revenue of TShs 2,937,600,000/= per annum at full project implementation.

Revenue Estimates from Fish Farm Project

| Production Details | Fish Production (in Numbers) | | |
|---|-------------------------------------|----------------------|-----------------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Production (Fully Grown Fish) per annum | 240,000 | 480,000 | 720,000 |
| Survival Rate (%) | 80% | 80% | 80% |
| Grown Fish Available for Sale (pieces) | 192,000 | 384,000 | 576,000 |
| Average Weight per piece (grams) | 600 | 600 | 600 |
| Total Weight of Fish Available for Sale (kgs) | 115,000 | 230,400 | 345,600 |
| Price per Kg (TShs) | 8,500 | 8,500 | 8,500 |
| Revenue per annum (TShs) | 977,500,000 | 1,958,400,000 | 2,937,600,000 |

2.11.2 Chicken Farm Project

The price of broiler chicken is estimated at TShs 6,000/= per kilo. Total production is estimated at 341,250 birds per annum at the average of 2.25 kgs translating to 767,812.5 kgs per annum at assumed mortality rate of 20%. Under these production assumptions, therefore the chicken farm project is projected to generate revenue of TShs 3,685,500,000/= per annum at full implementation.

Revenue Estimates from Poultry Farm Project

| Cost Details | Chicken Feeds Cost | | |
|--|----------------------|----------------------|----------------------|
| | Year 1 | Year 2 | Year 3 onwards |
| Chicken Production per annum (in Numbers) | 113,750 | 227,500 | 341,250 |
| Survival Rate (%) | 80% | 80% | 80% |
| Fully Grown Birds Available for Sale (Numbers) | 91,000 | 182,000 | 273,000 |
| Average Weight per Chick (kgs) | 2.25 | 2.25 | 2.25 |
| Weight of Birds Available for sale per annum (kgs) | 204,750 | 409,500 | 614,250 |
| Price per Kg of Chicken Meat (TShs) | 6,000 | 6,000 | 6,000 |
| Total Revenue per annum (TShs) | 1,228,500,000 | 2,457,000,000 | 3,685,500,000 |

2.12 Project Organization, Management and Labour Requirement

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

The day to day management of the project will be vested in the Management Team. The Management Team will comprise of the General Manager who will be the overall in-charge of the project. The General Manager will be assisted by three heads of departments: Fish Farm Manager, Poultry Farm Manager; and Feeds Production Manager. The General Manager and his heads of departments will be further assisted with qualified personnel in their various areas of specializations. The two projects envisage employing estimated number of 45 people among who three (3) will be foreign expatriate staff. Of the remaining 42 local employees, 24 will be skilled while 18 will be casual/unskilled workers. Furthermore, among the local employees, 22 are expected to be males while 20 are expected to be females.

3.0 MARKET EVALUATION

3.1 Market and Marketing Aspects

The project targets mainly the local market and particularly the mining industry in Geita region and Lake Zone in general. The export market is not considered for the time being. The company is particularly considering taking advantage of the developed links between the company and the major foreign mining companies in the region.

3.2 Competition

So far, there are only a few large commercial tilapia fish farming projects in the region and within Lake Zone and 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. The project is expected to produce 450 tons of quality tilapia fish per year. 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.

Likewise, on the poultry farming front, there are only a few big chicken farmers producing chicken broiler meat in the Lake Zone which does not satisfy demand. M/s Rocky Bay Campsite Ltd will apply two strategies to deal with completion: first, it will use its close connections with the mining industry, the target market to obtain reliable supply contracts. Secondly, through its economies of scale, it will cut of competition by cutting down prices.

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 Sheets;
- Projected Cash Flow;
- Discounted Cash Flow
- Projected Balance Sheets;
- Net Present Value; and
- The 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 five (5) years.
- 4.2.2 The fixed capital cost of the proposed project is TShs 1,277,500,000/=
- 4.2.3 All the calculations throughout the economic lifetime of the project are constant with October 2020 being the base date
- 4.2.4 The projected direct operational costs are shown under Annex V
- 4.2.5 The main revenue source is from sales of tilapia fish and broiler chicken products
- 4.2.6 Capital expenditure has been assumed to be incurred for a continuous period of 3 years.
- 4.2.7 The financial plan is for the shareholders to finance fixed assets of the project through a bank term loan at TShs 511,000,000/=- (40%) at the prevailing bank interest of 20%, while the balance of TShs 776,500,000/= (60%) 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 depreciation rates in this project:
 - Building and Civil Works are depreciated at 5% Straight line. Most buildings are supposed to last for about 25 years.
 - 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 sixth 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 TShs 150,000,000/= which will be borrowed from bank 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 Appendix XII - Projected Profit and Loss Statement

Net Profits for the 5-year project after providing for interest, depreciation and corporate tax generated by the project in year one of operation is TShs 435,719,999/= (20% of sales), rising to TShs 1,010,114,000/= (23%) in year two before reaching TShs 2,173,847,000/= (29%) in year five.

Total sales revenue ranges from TShs 2,206,000,000/= to TShs 7,617,760,000/= during the five-year period operations period.

4.3.2 Appendix IX - Cash flow Projections for Financial Planning

The project generates surplus cash inflows throughout the period of the financial projections.

The projected Cash flow for Financial Planning indicates that the project will generate enough cash to meet its financial obligations. Net cash from operating activities increases from TShs 469,388,000/= in year one to range between TShs 1,061,964,000/= and TShs 2,257,216,000/= during the 5-year operations period. The cumulative cash balances during the same period increases from TShs 2,243,781,000/= in the first year of operation to TShs 4,246,875,000/= in the 5th and last year of operations. This is a positive indication that the project is liquid enough to meet its cash requirements to support its trading operations.

4.3.3 Appendix XIV - Projected Balance Sheets

The balance sheets indicate a favourable state of affairs of the project throughout the projected period. Similarly, current liabilities are well covered by the current assets, the ratio ranging from 1.57 to 1.86.

4.3.4 Appendix X - Discounted Cash flow

Project cash flows have been discounted using 20%. This rate is the approximated cost of capital for this project. This has produced a Net Present Value (NPV) ration of 4.5 indicating that this is a profitable and feasible project, which must be undertaken. The project has been further discounted using 20% and 30% as discounting rates to test the sensitivity of the project to variable cost of capital

factors. In both cases, the project has yielded positive NPVs thus reinforcing the conclusion about the attractiveness of the project.

These Net Present Values indicate that the Internal Rate of Return is 27.6% which is much higher than the assumed cost of capital of 20%. Again, this is an indicator that this project is viable and should therefore be undertaken.

4.3.5 Appendix XIII - Breakeven Analysis

The break-even analysis sales revenue ranges from 0.22- (year one) to 0.36 (year five)- while the break-even point ratio stands at 51.57% and 64.35% during the same period.

4.3.6 Key Financial Ratios

The key ratios are acceptable with Internal Rate of Return (IRR) at 27.6%, positive NPV Ratio of 4.5 and a Payback Period of 3 years at the Dynamic Payback at the assumed 20% discount rate (interest).

4.3.7 Pay-back Period

The project's normal payback period is 3 years.

5.0 ENVIRONMENTAL ASPECTS

5.1 Introduction

The project activities involve construction of concrete fish ponds on-shore for production of tilapia fish, construction of poultry coops (bandas) for rearing of broiler chicken, production of fish meal and chicken feeds, cleaning and disinfection of poultry house, cleaning and packaging of whole fish and broiler chicken before packaging and chilling/freezing the products ready for transportation in refrigerated trucks to the markets. 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. Rocky Bay Campsite Limited will adhere to all the relevant regulations which guide fish farmers and processors on the necessary regulations the 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 Rocky Bay Campsite Limited 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 fish diseases. However, this is highly unlikely as Lake Victoria waters are very clean, almost pollution-free compared to similar water bodies. Likewise, the project site is an excluded area where there is no contact with locally grown chicken. Besides, the chicken coops and their respective environments will be periodically cleaned and disinfected to prevent the breakdown of chicken diseases. This is in addition to regularly chicken vaccinations.

7.0 SOCIAL, ECONOMIC AND DEVELOPMENTAL BENEFITS

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

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

- The project envisages employing estimated number of 45 people among who three (3) will be foreign expatriate staff. Of the remaining 42 local employees, 24 will be skilled while 18 will be casual/unskilled workers. Furthermore, among the local employees, 22 are expected to be males while 20 are expected to be females.
- Salaries and wages to be earned by local workers are expected to change the economy of Sengerema District irreversibly;
- The entire production is geared for local consumption and in particular, mining companies within the Lake Zone. Therefore, the increased supply of 345.60 tons of tilapia fish and 614.25 tons of broiler chicken meat per year will not only influence to regulate fish and chicken 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.

8.0 CONCLUSIONS AND RECOMMENDATION.

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, Rocky Bay Campsite Limited be availed the required institutional assistance so as to enable them implement the proposed project. It is further recommended that an application for TIC Certificate of Investment Incentives be submitted to Tanzania Investment Centre with a view to benefit from investment benefits and protection as statutorily allowed under Tanzania Investment Act, 1997.

Meantime, TIC should be asked to obtain a Letter of No Objection on behalf of the company for the establishment of the fish processing factory in Sengerema District, Mwanza region as part of TIC facilitation services to investors as provided for under Section 6(d) of Tanzania Investment Act, 1997.

FINANCIAL PROJECTIONS

| CAPITAL INVESTMENT SUMMARY - FISH AND POULTRY FARM | | | | |
|--|--------------------------|--------------------------|--------------------------|----------------------------|
| | 1st YEAR | 2nd YEAR | 3rd YEAR | TOTAL |
| <u>A. LAND AND BUILDINGS</u> | | | | |
| Land and site preparation | 18,000.00 | 0 | 0 | 18,000.00 |
| Concrete Fish Ponds 20M X 10M X 1.5M | 50,000.00 | 50000 | 25000 | 125,000.00 |
| Hatchery ponds | 15,000.00 | 15000 | 7500 | 37,500.00 |
| Feed store 24mx12mx6m high | 40,000.00 | 0 | 40000 | 80,000.00 |
| Processing House | 20,000.00 | | 20000 | 40,000.00 |
| Chicken Coops 18mx12m | 60,000.00 | 60000 | 20000 | 140,000.00 |
| Chicken Slaughter and Processing House | 42,000.00 | | 42000 | 84,000.00 |
| <u>SUB TOTAL</u> | <u>245,000.00</u> | <u>125,000.00</u> | <u>154,500.00</u> | <u>524,500.00</u> |
| <u>B. PLANT, MACHINERIES EQUIPMENTS</u> | | | | |
| Fish processing facilities | 20,000.00 | 0 | 20000 | 40,000.00 |
| Fish meal plant | 20,000.00 | 0 | 20000 | 40,000.00 |
| Generator 55KVA | 40,000.00 | 0 | 0 | 40,000.00 |
| Packaging Plants | 0.00 | 35000 | 0 | 35,000.00 |
| Chicken processing line | 26,000.00 | 0 | 56000 | 82,000.00 |
| Poultry feeds making plant | 20,000.00 | 0 | 20000 | 40,000.00 |
| Cold rooms/freezers | 15,000.00 | 0 | 15000 | 30,000.00 |
| Chicken Incubators | 17,000.00 | 27000 | 27000 | 71,000.00 |
| Miscellaneous Tools and Equipments | 25,000.00 | 15000 | 15000 | 55,000.00 |
| <u>SUB TOTAL</u> | <u>183,000.00</u> | <u>77,000.00</u> | <u>173,000.00</u> | <u>433,000.00</u> |
| <u>C.MOTOR VEHICLES</u> | | | | |
| Refrigerated light trucks | 0.00 | 55000 | 55000 | 110,000.00 |
| Light trucks | 25,000.00 | 0 | 30000 | 55,000.00 |
| <u>SUB TOTAL</u> | <u>25,000.00</u> | <u>55,000.00</u> | <u>85,000.00</u> | <u>165,000.00</u> |
| <u>D.FENITURE, FITTINGS & OFFICE EQUIPMENTS</u> | | | | |
| Feniture, fittings & office equipment | 20,000.00 | 0 | 0 | 20,000.00 |
| Pre operational expenses | 35,000.00 | 0 | 0 | 35,000.00 |
| Contingencies | 50,000.00 | 25000 | 25000 | 100,000.00 |
| <u>SUB TOTAL</u> | <u>105,000.00</u> | <u>25,000.00</u> | <u>25,000.00</u> | <u>155,000.00</u> |
| <u>E. WORKING CAPITAL</u> | | | | |
| Initial working capital | 150,000.00 | 0 | 0 | 150,000.00 |
| <u>SUB TOTAL</u> | <u>150,000.00</u> | <u>0.00</u> | <u>0.00</u> | <u>150,000.00</u> |
| <u>GRAND TOTAL</u> | <u>708,000.00</u> | <u>282,000.00</u> | <u>437,500.00</u> | <u>1,427,500.00</u> |
| <u>EQUITY + BANK LOANS</u> | | | | |
| Own Contribution | | | | 766,500.00 |
| Bank Term Loan | | | | 511,000.00 |
| Operating soft loan | | | | 150,000.00 |
| <u>TOTAL EQUITY</u> | | | | <u>1,427,500.00</u> |

Income Statement Projections

(all numbers in 000)

| Revenue | | | | | | | |
|--------------------------------|---------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| | <u>Year 0</u> | <u>Year 2020</u> | <u>Year 2021</u> | <u>Year 2023</u> | <u>Year2024</u> | <u>Year 2025</u> | <u>TOTAL</u> |
| Chicken sales Revenue | - | 977,500 | 1,958,400 | 2,937,600 | 3,231,360 | 3,554,496 | 12,659,356 |
| Fish Sales revenue | - | 1,228,500 | 2,457,000 | 3,685,500 | 3,869,775 | 4,063,264 | 15,304,039 |
| Total Operating Revenue | - | 2,206,000 | 4,415,400 | 6,623,100 | 7,101,135 | 7,617,760 | 27,963,395 |

| Expenses | | | | | | | |
|-----------------------------------|---------------|------------------|------------------|------------------|------------------|------------------|-------------------|
| | <u>Year 0</u> | <u>Year 2020</u> | <u>Year 2021</u> | <u>Year 2023</u> | <u>Year2024</u> | <u>Year 2025</u> | <u>Total</u> |
| Salaries | | 90,000 | 180,000 | 189,000 | 198,450 | 208,373 | 865,823 |
| Social Charges & Pension Payments | | 9,000 | 18,000 | 18,900 | 19,845 | 20,837 | 86,582 |
| Fish fingerings | | 48,000 | 96,000 | 114,000 | 119,700 | 125,685 | 503,385 |
| Fish meals | | 374,400 | 748,800 | 1,123,200 | 1,179,360 | 1,238,328 | 4,664,088 |
| Day old Chicks | | 170,625 | 341,250 | 511,875 | 537,469 | 564,342 | 2,125,561 |
| Chicken Feeds | | 433,806 | 875,306 | 1,312,959 | 1,378,607 | 1,447,538 | 5,448,216 |
| Vaccinations and medications | | 23,888 | 71,663 | 107,494 | 112,868 | 118,512 | 434,424 |
| Litter | | 6,825 | 13,650 | 20,475 | 21,499 | 22,574 | 85,022 |
| Heating | | 28,438 | 56,875 | 85,313 | 89,578 | 94,057 | 354,260 |
| Electricity | | 17,063 | 34,125 | 51,188 | 53,747 | 56,434 | 212,556 |
| water and watering | | 5,688 | 11,375 | 17,063 | 17,916 | 18,811 | 70,852 |
| Cleaning &Disinfection | | 34,126 | 68,250 | 102,375 | 107,494 | 112,868 | 425,113 |
| Fish processing | | 14,663 | 29,376 | 4,064 | 4,267 | 4,481 | 56,850 |
| Slaughter and chicken Processing | | 31,850 | 63,700 | 95,550 | 100,328 | 105,344 | 396,771 |
| Repair & maintenance | | 22,650 | 29,250 | 42,150 | 44,258 | 46,470 | 184,778 |
| Miscellaneous Expenses | | 50,000 | 50,000 | 50,000 | 52,500 | 55,125 | 257,625 |
| Total Operating Costs | | 1,361,019 | 2,687,620 | 3,845,605 | 4,037,885 | 4,239,779 | 16,171,907 |

| | | | | | | |
|---|---------|-----------|-----------|-----------|-----------|------------|
| Operational Net Earnings before Depreciation, Interest & Tax | 844,981 | 1,727,780 | 2,777,495 | 3,063,250 | 3,377,981 | 11,791,488 |
| <i>%age Gross Contribution</i> | 38 | 39 | 42 | 43 | 44.34 | 206.85 |
| Depreciation | 33,669 | 51,850 | 83,369 | 83,369 | 83,369 | 1,061,234 |
| Net Earnings before Tax & Interest | 811,313 | 1,675,930 | 2,694,127 | 2,979,881 | 3,294,612 | 10,730,254 |
| Interest Paid (Bank Loan) | 132,200 | 114,435 | 93,117 | 67,535 | 36,837 | 444,125 |
| Tax (30%) | 243,394 | 551,381 | 886,368 | 980,381 | 1,083,927 | 3,745,451 |
| Net Earnings | 435,719 | 1,010,114 | 1,714,642 | 1,931,965 | 2,173,847 | 7,266,287 |

CASH FLOW STATEMENT FROM INVESTING ACTIVITIES FOR FIVE YEARS

(all numbers in 000)

| | <u>Year 2020</u> | <u>Year 2021</u> | <u>Year 2023</u> | <u>Year2024</u> | <u>Year 2025</u> |
|---|------------------|------------------|------------------|------------------|------------------|
| <u>CASH FLOW FROM OPERATING ACTIVITIES</u> | | | | | |
| Cash receipts from Sales | 2,206,000 | 4,415,400 | 6,623,100 | 7,101,135 | 7,617,760 |
| Cash paid to suppliers and employees | (1,361,019) | (2,687,620) | (3,845,605) | (4,037,885) | (4,239,779) |
| Cash generated from operations | 844,981 | 1,727,780 | 2,777,495 | 3,063,250 | 3,377,981 |
| Dividends received* | 0 | 0 | 0 | 0 | 0 |
| Interest received | 0 | 0 | 0 | 0 | 0 |
| Interest paid | (132,200) | (114,435) | (93,117) | (67,535) | (36,837) |
| Tax paid | (243,394) | (551,381) | (886,368) | (980,381) | (1,083,927) |
| Net cash flow from operating activities | 469,388 | 1,061,964 | 1,798,011 | 2,015,334 | 2,257,216 |
| <u>CASH FLOW FROM INVESTING ACTIVITIES</u> | | | | | |
| Replacement of equipment | 0 | 0 | 0 | 0 | 0 |
| Proceeds** from sale of equipment | 0 | 0 | 0 | 0 | 0 |
| Net cash flow from investing activities | 0 | 0 | 0 | 0 | 0 |
| <u>CASH FLOW FROM FINANCING ACTIVITIES</u> | | | | | |
| Proceeds from capital contributed | 766,500 | 0 | 0 | 0 | 0 |
| Proceeds from loan | 661,000 | 0 | 0 | 0 | 0 |
| Payment of loan | (88,825) | (106,590) | (127,908) | (153,490) | (184,187) |
| Net cash flow from financing activities | 1,338,675 | (106,590) | (127,908) | (153,490) | (184,187) |
| <u>NET INCREASE/ DECREASE IN CASH</u> | | | | | |
| | 1,808,063 | 955,374 | 1,670,103 | 1,861,844 | 2,073,028 |
| Cash at the beginning of the period | 435,719 | 1,010,114 | 1,714,642 | 1,931,965 | 2,173,847 |
| Cash at the end of the period | 2,243,781 | 1,965,488 | 3,384,745 | 3,793,809 | 4,246,875 |

| PRO FORMA BALANCE SHEET | | | | | |
|---------------------------------------|------------------|------------------|------------------|------------------|------------------|
| (all numbers in US\$) | <u>Year 2020</u> | <u>Year 2021</u> | <u>Year 2023</u> | <u>Year2024</u> | <u>Year 2025</u> |
| ASSET | | | | | |
| Current asset | 435,719 | 1,010,114 | 1,714,642 | 1,931,965 | 2,173,847 |
| Fixed asset | 708,000 | 282,000 | 437,500 | 459,375 | 468,563 |
| Liquid means | 844,981 | 1,727,780 | 2,777,495 | 3,063,250 | 3,377,981 |
| TOTAL ASSET | 1,988,700 | 3,019,894 | 4,929,637 | 5,454,590 | 6,020,390 |
| EQUITY & LIABILITIES | | | | | |
| Equity | 1,427,500 | 1,465,186 | 1,595,060 | 1,736,446 | 1,890,365 |
| Reserves | 63,113 | 730,452 | 2,143,816 | 2,433,369 | 2,741,704 |
| Total Own Equity | 1,490,613 | 2,195,638 | 3,738,876 | 4,169,815 | 4,632,069 |
| Provisions | | | | | |
| Long term loan | 221,025 | 221,025 | 221,025 | 221,025 | 221,025 |
| Short term Liabilities | 277,063 | 603,231 | 969,736 | 1,063,750 | 1,167,296 |
| Total Equity & Liabilities | 1,988,700 | 3,019,894 | 4,929,637 | 5,454,590 | 6,020,390 |
| Financial Ratios | | | | | |
| Equity to total Liabilities | 1.57 | 1.67 | 1.77 | 1.82 | 1.86 |
| Net worth to total Liabilities in % | 21.91 | 33.45 | 34.78 | 35.42 | 36.11 |
| Long term debt to net Assets | 0.11 | 0.07 | 0.04 | 0.04 | 0.04 |
| Current Asset to Current Liabilities | 1.57 | 1.67 | 1.77 | 1.82 | 1.86 |
| RIO | 0.31 | 0.69 | 1.07 | 1.11 | 1.15 |
| Break Even Point | 51.57 | 58.46 | 61.73 | 63.07 | 64.35 |
| Break Even Ratio | 0.22 | 0.33 | 0.35 | 0.35 | 0.36 |
| Equity/Liabilities | 71.78 | 48.52 | 32.36 | 31.83 | 31.40 |
| NPV Ratios | 4.5 | 5.6 | 6 | 7.2 | 8 |

Loan Information and Payment Schedule
All numbers in 000'

| Loan Data | | Loan Summary | |
|----------------------|------------|-----------------------------|--------------|
| Original Principal | 661,000.00 | Scheduled Payments | 221,024.98 |
| Loan Term (Years) | 5.00 | Scheduled number of payment | 5.00 |
| Annual Interest Rate | 0.20 | Actual number of payment | 5.00 |
| Payments per Year | 1.00 | Total Early Payment | - |
| Payment | 447088.00 | Total Interest | 1,470,885.00 |

| Year | Payment | Interest | Cumulative Interest | Principal | Balance |
|------|-----------|-----------|---------------------|-----------|-----------|
| 0.00 | | | | | 661000.00 |
| 1.00 | 221024.98 | 132200.00 | 132200.00 | 88824.98 | 572175.02 |
| 2.00 | 221024.98 | 114435.00 | 246635.00 | 106589.98 | 465585.04 |
| 3.00 | 221024.98 | 93117.01 | 339752.01 | 127907.98 | 337677.06 |
| 4.00 | 221024.98 | 67535.41 | 407287.42 | 153489.57 | 184187.49 |
| 5.00 | 221024.98 | 36837.50 | 444124.92 | 184187.49 | 0.00 |

IRR for the Project

(all numbers in 000')

| | | |
|-----------|------------------------------|---------------|
| | Initial Investment | 1,427,500 |
| Year 2020 | Additional Annual Net Profit | 435,719 |
| Year 2021 | Additional Annual Net Profit | 1,010,114 |
| Year 2022 | Additional Annual Net Profit | 1,714,642 |
| Year 2023 | Additional Annual Net Profit | 1,931,965 |
| Year 2025 | Additional Annual Net Profit | 2,173,847 |
| | IRR (in 5 years) | 27.60% |

The IRR above indicates that the expected return on the 1,427,500 initial investments after 5 years is 27.6%.

Payback Period Analysis

| | Year | Beginning Balance | Net Cash Flows | Ending Balance |
|--------------------|------|-------------------|----------------|----------------|
| Cost of investment | 0.00 | 1,427,500.00 | 0.00 | 1,427,500.00 |
| | 1.00 | 1,427,500.00 | 435,718.84 | 991,781.16 |
| | 2.00 | 991,781.16 | 1,010,114.19 | 18,333.03 |
| | 3.00 | 18,333.03 | 1,714,641.96 | 1,732,974.99 |
| | 4.00 | 1,732,974.99 | 1,931,965.00 | 3,664,939.99 |
| | 5.00 | 3,664,939.99 | 2,173,847.09 | 5,838,787.08 |

| | | |
|-------------------------|-------------|--------------|
| Payback Period = | 3.00 | Years |
|-------------------------|-------------|--------------|