MEGA BUILDERS LIMITED

(Salt Farming Project)

Proposed Project for Salt Farming

at

Kerege Village, Bagamoyo District Coast Region

A BUSINESS PLAN

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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

1.1.1 Background Information

This report represents an objective analysis of the overall viability of engaging in salt farming using sal water as the basic raw materials by applying solar system as the water drying technique. The project is being promoted by Messrs. Mega Builders Limited (hereinafter referred as the company), a locally incorporated company. As the name would suggest, the company was formed way back on 10th December, 1985 under Certificate of Incorporation No. 11668 for the main objective of undertaking building works under the name of M/s Leco Engineers and Builders Limited. The name was changed to M/s Mega Builders on 26th July, 2002 under Certificate of Change of Name No. 11668.

Having been in the construction industry in Tanzania for more than 35 years, the Company is now desirous to diversify its business activities, and sees a very bright future in salt farming and processing. In preparations for venturing into this sector, M/s Mega Builders has entered into partnership with two Primary Mining Licences holders, Mr. William Kaisi and Nitin Malik who owns fifteen (15) PMLs jointly and equally located at Kerege Area, Bagamoyo District. These PMLs will be developed into active salt farming ponds.

1.1.2 The Project Concept

M/s Mega Builders Limited envisages development of modern salt extraction farm at Kerege Beach Village in Bagamoyo District after acquiring legally a project site with a total area measuring approximately 120 acres under fifteen (15) PMLs within the Village. The Company plans to extract salt from sea water. The proposed project entails design, finance, development, construction, establishment and operation of modern salt farm using seawater as the raw materials by applying gravity for filling in the ponds and solar system as water drying technique to obtain salt granules. In so doing, the company plans to construct 80 ponds per annum each measuring 50m x 50m x 0.6m over a period of three (3) consecutive years, thus develop a total of 240 ponds. Production capacity is estimated at 30 metric tons per pond within

a production cycle two months, translating to 180 metric tons per annum per pond. Full production capacity of the farm is therefore estimated at 43,200 metric tons when all the 240 ponds are fully operational from year three (3) onwards.

1.1.3 Objectives of the Study

The objectives of this study are three-fold. The first is to work out and determine technical, commercial and financial viability and operational feasibility of the proposed medium salt farming project in a five-year period; and if viable, use it as a business guide in implementing the project. The second objective is to present to the Bankers the Business Plan as a supporting document in processing a three-year term loan to finance part of the project costs. Third and last objective is to facilitate the application for Tanzania Investment Centre (TIC) Certificate of Incentives to access tax reliefs on duties, VAT and other benefits and protections as statutorily provided for under Tanzania Investment Act (1997) for the proposed project.

1.1.4 Scope of Assignment

The scope of the assignment includes standard requirements of a techno-economic feasibility study to facilitate appropriate investment decision. Hence such a study carried out professionally for this study must include, among others:

- Review of location and proposed site;
- Construction costs: processing sites, buildings, structures and civil works;
- Capital and deemed capital requirements, including machinery, tools, equipment;
- Salt production requirements and techniques (main raw materials, production technology and process, processing chemicals, processing costs etc.);
- Labour requirement and costs;
- Maintenance requirements and provisions made in the major capital items;
- Financial and economic analysis;

- Developmental Values/Economic Benefits;
- Risk Analysis;
- Review of Environmental Aspects;
- Project implementation schedule and management.

Most of the data has been compiled by the promoter, M/s Mega Builders Limited who has been conducting the study on the project in since May 2021. The promoters' own research and study has been very useful in preparation of this business plan. On the other hand, Environmental Management Plan and all environmental aspects referred to under this study was recently carried out by M/s M & E Jembe Consultants, a private Consultant on environment assessment and management. The financial projections have been carried out on the basis of market and cost information provided by the promoters of the project.

1.1.5 Layout of the Study

This report presents the Techno – economic and financial feasibility for setting up/operating a medium scale salt production project with operations based at Kerege Village in Bagamoyo District, Coast Region. The report is organised in nine (9) Chapters.

The Executive Summary is dealt with in this Chapter 1, followed by the Salt Farming Business Environment in Tanzania in Chapter 2. Chapter 3 deals with the project details (project concept, location and infrastructure, ownership, investment costs and financing plan). Chapter 4 provides technical aspects of the project (salt production process, logistics and supply of raw materials and inputs, raw materials requirement and availability, production costs and revenue estimates, environmental aspects and project implementation schedule).

A brief account on the manpower requirements and organization structure is as dealt with in chapter 5. Chapter 6 deals with project Financial Analysis (estimated capital cost and basic operating assumptions, and analysis of financial results). Chapter 7 covers Threats to Profitability and Running of the Project (risk analysis looked from the strengths and weaknesses of the project

environment). Chapter 8 deliberates on the Development Values/Economic Benefits (social and local economic benefits emanating from the project). The report ends with conclusion and recommendations in Chapter 9.

1.2 PROJECT SPONSORS

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.

1.3 LOCATION AND INFRASTRUCTURE

The proposed salt farming project will be located in an unsurveyed land measuring approximately 120 acres at Kerege Village, Bagamoyo District, Coast Region. The project location is south of Bagamoyo, approximately 2 kilomeres from the village centre off Dar-es-Salaam/Bagamoyo Road about 4 kms from Bagamoyo Township.

1.4 PRODUCTION TECHNOLOGY

Mega Builders Limited plans use state-of-the-art salt production and storage facilities. Big ponds, approximately 50m x 50m (2,500m^2) are filled with salt water. Then after sufficient evaporation of good part of the water, the salt concentration becomes such that the salt starts to turn solid. Workers collect

salt using shovels and rakes, then after packing this salt, the bags are loaded into trucks and transported to the godowns for storage.

1.5 PLANT CAPACITY AND UTILISATION

The company envisages construction of salt farm and recovery ponds measuring 50m x 50m x 0.6m with an installed production capacity of 180 metric tons of of salt granules per annum. Development will be carried out in three consecutive years at 80 ponds per year. On assumption that it takes 30 to 45 days to complete one (1) salt production full cycle (approximately 2 months), this translates into production of 30 metric tons per pond per cycle equivalent to 180 metric tons per annum. Total number of planned ponds is 240 at full production capacity from the third year onwards or 43,200 at full development and production capacity.

Plant Capacity Utilization is estimated at 60% in the first year, raising to 70% in the second year before stabilizing at 80% from year three onwards after the workers have acquired the necessary skills and experience in the field.

1.6 REVENUE ESTIMATES

The basis of revenue computations are on estimated salt recovery rate which has been conservatively projected at two (2) per cent of seawater volume collected in ponds measuring 50m x 50m x 0.6m height, translating into estimated recovery 30 metric tons per one collecting pond (pan) per one production cycle estimated to take 30 to 45 days to completion, thus six (6) production cycles per annum per pond, translating into production of 180 metric tons per pond per annum. It is further assumed that development of ponds will be implemented at 80 ponds per year, hence a total of 240 ponds will be available at the end of construction period at the end of the third year of implementation. Revenue per ton is estimated at US$ 43.48 (TShs 100,000). Total revenue per annum is therefore estimated at a maximum of US$ 1,878,336- when the plant is operating at 100% capacity utilization. Actual capacity utilization is assumed at 60% during the first year, 70% during the second, before it stabilises at 80% from the third year onwards.

Revenue Estimates per Annum

	YEAR 1	YEAR 2	YEAR 3onwards
Installed Production Capacity of per annum (tons)	14,400	28,800	43,200
Capacity Utilization (%)	60%	70%	80%
Average Salt Recovery (tons)	8,640	20,160	34,560
Average Farm Gate Price per ton (US$)	43.48	43.48	43.48
Revenue Estimates (US$)	375,522	876,522	1,502,608

1.7 RAW MATERIALS REQUIREMENT AND AVAILABILITY

Mega Builders Limited will be operating a salt farm production project using seawater to be obtained from the shores of the Indian Ocean and collected in salt farming ponds within Kerege Village as the source of raw material.

1.8 ESTIMATED INVESTMENT COSTS AND PROPOSED FINANCING

The capital investment for the proposed project is estimated at US$ 656,000- (including costs of construction of salt farming ponds, storage facilities residential camp and offices, acquisition of project sites, transportation facilities machinery, equipment and miscellaneous working tools, and initial working capital requirements) as given in Annex I.

It is proposed to finance the fixed investment costs of this project through equity at US$ 347,626- and seek a bank loan of US$ 308,174- to supplement the investment requirements. The Company envisages obtaining a short term loan of US$ 50,000- from a commercial bank in form of an overdraft facility to finance working capital requirements.

1.9 COLLATERAL SECURITY

The project promoters will mortgage all assets and developments thereon including plant and machinery located on the project site at Kerege Village, Bagamoyo District in Coast Region. Should they be required, the promoters will also issue directors' guarantee as additional security against the bank loans.

1.10 ORGANISATION AND MANAGEMENT

The project will be managed through the Board of Directors. 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 technical team. The technical team will comprise of the Project Manager who will be the overall in-charge of the project. The Project Manager will be assisted by Production Manager, Chemical Engineer/Quality Controller and Marketing/ Logistics & Procurement Manager. These will in turn be supported by qualified personnel in their areas of specializations.

On implementation, the proposed project plans to employ up to 64 people in its production facilities while 4 administration staff including an Accountant and Personnel & Administration Officer will also be employed to support operations of the project.

1.11 PROJECT IMPLEMENTATION

Mega Builders Limited has already acquired salt farming project site located in an un-surveyed land measuring approximately 120 acres at Kerege Village, Bagamoyo District, Coast Region. The initial project activities will include site preparations and developments including construction site selection, clearing trees and shrubs, land levelling, site fencing and procurement of construction materials. This will be followed by construction salt water collection and production ponds, temporary shelters and latrines.

Other activities are: installation of solar electricity system, procurement of standby power generator and construction of generator house. These are to be followed by construction of offices, storage and laboratory buildings. The project activities will likewise involve sinking of a borehole, construction of water reserve tank and water distribution system. These activities are scheduled to start in February/March 2022.

Procurement of all necessary machinery, working tools, equipment and development of infrastructure is scheduled to start in October, 2022 after

obtaining Tanzanian Investment Centre Certificate of Incentives and all other necessary licences and authorizations. It is expected that the project should start initial production by December 2022 and embark in full commercial production by January 2023.

1.12 FINANCIAL PROJECTIONS AND EVALUATIONS

Annex IV (Trading Account) of the attached Financial Analysis forms analyses the Total Production Costs, Annex V (Profit & Loss Account) analyses Income Statement Projections. The analysis is well elaborated in the attached projections and summarised as follows:

- Internal Rate of Return on investment 44.01%
- Internal Rate of Return on equity 53.75%
- Return on Equity average 1.42
- The Normal Payback Period is 2 years at zero discount rate and 2.5 years when discounted at the assumed discount rate of 8%.
- NPV Ratio is positive and computes at 1.27
- Breakeven Point ranges between 27.33% and 13.55% from the 1st year to the 5th year of production.

Company Net worth grows 9.8 fold during the assumed economic life of the project of 5 years, increasing from US$ 347,826- at the end of first year construction period in December 2022 to US$ 3,408,798- in 2027.

1.13 ENVIRONMENTAL CONSIDERATIONS

The economic, social, and environmental impacts of salt production study on the eastern coast of Pemba Island by Wolchok, Lauren, "Impacts of Salt Production on Pemba" (2006). *Independent Study Project (ISP) Collection*. 329. https://digitalcollections.sit.edu/isp_collection/329 reveals that solar salt production is associated with the clear cutting of mangrove forests, which are significant as soil stabilizers, animal habitats, and as an economic resource. An environmental assessment of this industry is necessary to determine whether the socio-economic gains from salt production justify the environmental costs.

Salt production, among other factors, has resulted in unsustainable deforestation, and continues to damage mangrove stands. [Farnsworth 1997; Semesi 1998] Elevated soil salinity and decreased water flow due to salt farms may stunt or kill mangroves or impede natural regeneration.

Risk Mitigation

- recommended that farmers be required to replant or facilitate natural regeneration of mangroves in unused or abandoned areas;
- The environmental protection agency should work in collaboration of local governments in the area to ensure the control illegal clearance of project sites larger than the permitted area;
- The government should stop clearance of mangroves and the start of farm construction prior to the site survey and receiving proper permission.

1.14 PROJECT DEVELOPMENT VALUES/BENEFITS

Implementation of this project will lead to realisation of a number of development values/social and economic benefits. The project will contribute substantially to local economies in form of sale direct job creation in the region of 84 as staff and temporary labourers in the proposed salt farm project.

The village in which salt farming will be taking place will also see a number of benefits besides the creation of jobs in the form of social services from the company's Corporate Social Responsibility. In addition, the project involves transfer of technology to Tanzania. Tanzanians will be trained on the job on modern salt farming and processing techniques. Finally, the local government will benefit from payment of village cess while the government will receive substantial amount in form of royalty and corporate tax.

1.15 CONCLUSION AND RECOMMENDATIONS

The project is:

- technically feasible
- financially viable
- economically viable

- socially desirable
- environmentally sound, sustainable and manageable

In view of the regional and global growing demand for salt and the benefits associated with this project as indicated in this report, the project is therefore strongly recommended for financing and subsequently implemented without unnecessary delays.

2.0 SALT FARMING INDUSTRY IN TANZANIA

2.1 Introduction

Sea salt is mostly composed of sodium chloride, a compound that helps regulate fluid balance and blood pressure in the body. Sea salt is made by evaporating salt water. People around the world have used it since prehistoric times, and it's commonly found in many kitchens today. Aside from its culinary uses, sea salt is often added to body scrubs, baths, beverages, and countless other products. Since it's minimally processed, it contains some minerals, including potassium, iron, and calcium. This is one reason why it's often considered nutritionally superior to table salt, which is heavily ground and has had most of its nutrients removed. Getting enough sodium, regardless of the type of salt is from, it is important for hydration and bllod pressure. Some researchers suggest it may also aid digestion and improve skin issues when added to baths.

2.2 The Salt Industry Environment

Salt has been a valuable commodity in East Africa. Today it is the second most valuable mineral product in Tanzania, and Tanzania's Second Five-Year Development Plan envisages a steady rise in the production and utilization of it as it becomes more easily available due to increased production and refining and better organized distribution. The bulk of salt is produced in modern salt works at Uvinza, Kigoma and along the Coast Sections. Traditionally, salt is produced from evaporation of brine, gathering of salt crust around spring or lake, or dissolving salt from salty soil.

2,3 Salt Production

Thousands of salt producers are scattered across Tanzania, inland and on the coast. Inland in the region of Dodoma, salt is harvested from interior brine using salt boilers. Along the coast, in the regions of Pemba and Mtwara/Lindi, salt is harvested from seawater using solar evaporation. In both cases, the salt from small-scale producers has a large crystal size and often includes impurities which darken the colour of the salt. At markets and retailers, this domestic salt

is sold alongside salt imported from Kenya, which is highly refined and packaged in small quantities. Across this diverse salt industry, transformation is now underway to help consolidate efforts in order to improve the salt supply and assure that salt contains adequate iodine to meet the nutritional needs of Tanzanians. Sufficiently iodized salt will increase I.Q. and boost the economy.

Tanzania has had a successful Universal Salt Iodization (USI) program which has contributed to the nation's economic development, but with this success, those in the field recognize that we need to focus on program enhancement and sustainability. At the national level, Tanzania has achieved optimal iodine status, overcoming a historically high prevalence of iodine deficiency. Tanzania is considering a model rolled out in Ethiopia. In the past year, Ethiopia successfully achieved iodine sufficiency after a long struggle with iodine deficiency and a poor supply of iodized salt. Ethiopia faces similar challenges as Tanzania and Mozambique with regard to the salt industry. Diverse salt sources and production methods lead to heterogeneous raw salt, and manual iodization methods used by small producers lead to inconsistent quality of iodized salt. To address these challenges, Ethiopia centralized its salt iodization. The IGN, working with the Government and other partners established a Central Iodization Facility (CIF) which now serves as the intermediary between the many raw salt suppliers and the relatively few wholesalers and salt traders. The CIF purchases raw salt from suppliers and transports it to a centralized site, where salt undergoes processing which includes washing, refining and iodization before it is packaged, and distributed. Concrete steps have already been identified to consolidate the salt industry in Tanzania to improve the national supply of iodized salt by working with key partners including Salt Producer Associations, Government Ministries and international development partners to establish centralized salt processing facilities. This arose from a comprehensive inter-agency program review that IGN undertook of the USI situation in Tanzania, together with UNICEF, GAIN, Nutrition International (formerly Micronutrient Initiative) and national stakeholders to better understand the situation.

In Tanzania, the consolidation approach would require nothing short of industry transformation. Procurement of raw salt and iodizing at scale would enable a more cost-effective operation, more rigorous quality assurance, and other efficiencies of scale including a reasonable profit margin. Stakeholders agree that it will be a priority to target the regions identified with the lowest iodine intake, along with the producers supplying those regions.

Already, we have been able to achieve a high level of consensus and commitment from stakeholders to move toward this solution. The IGN together with partners held Tanzania's first National Summit on Food Fortification along with GAIN, the Bill and Melinda Gates Foundation, TECHNOSERVE, HKI, and AMREF. USI and the opportunities for program enhancement were featured at the Summit and the stage is set to accelerate the process.

Bagamoyo is among the major salt producing areas in the country, production concentrating in and around the port of Bagamoyo on Tanzania's Indian Ocean coast. Tanzania is a major producer of salt in Africa, with tens of thousands of tons of salt produced annually. Salt producers range from large industrial operations to small, manual operations where the salt bags are filled by hand. In coastal areas, water is piped from the sea to evaporating ponds. Regulations require this salt to have iodine added to overcome iodine deficiency disease (IDD).

3.0 THE PROJECT

3.1 The Project Concept

3.1.1 The Core Business Activities

M/s Mega Builders Limited envisages development of modern salt extraction farm at Kerege Beach Village in Bagamoyo District after acquiring legally a project site with a total area measuring approximately 120 acres under fifteen (15) PMLs within the Village. The Company plans to extract salt from sea water. The proposed project entails design, finance, development, construction, establishment and operation of modern salt farm using seawater as the raw materials by applying gravity for filling in the ponds and solar system as water drying technique to obtain salt granules. In so doing, the company plans to construct 80 ponds per annum each measuring 50m x 50m x 0.6m over a period of three (3) consecutive years, thus develop a total of 240 ponds. Production capacity is estimated at 30 metric tons per pond within a production cycle two months, translating to 180 metric tons per annum per pond. Full production capacity of the farm is therefore estimated at 43,200 metric tons when all the 240 ponds are fully operational from year three (3) onwards.

3.1.2 Project Implementation Activities

Implementation of the proposed project will involve the following major activities:

- Site preparation and development including sinking of a borehole, construction water reserve tank and ponds;
- Development of civil works, structures and buildings, including construction of residential camp and facilities for key staff, office building, staff canteen and facilities for workers, and storage facilities for materials and equipment;
- Construction of seawater collection and salt processing ponds Installation of salt processing plant, laboratory for salt testing etc.;

- Establishing a workshop and acquisition of workshop machines, tools and equipment;
- Acquisition and installation of ancillary infrastructure including solar system, heavy duty standby power generators, installation of security system etc.;
- Procurement and installation of environmental protection plant equipment
- Procurement of light trucks for transportation of salt granules from the ponds to the storage facilities. Other utility vehicles will include pickups and motorcycles to facilitate movement.
- Purchase of furniture and equipment for the office and basic furniture and equipment for the staff residential camp.
- Fencing of the site compound and storage yard.

3.2 Ownership

The project is being promoted by Messrs. Mega Builders Limited (hereinafter referred as the company), a locally incorporated company. As the name would suggest, the company was formed way back on 10th December, 1985 under Certificate of Incorporation No. 11668 for the main objective of undertaking building works under the name of M/s Leco Engineers and Builders Limited. The name was changed M/s Mega Builder on 26th July, 2002 under Certificate of Change of Name No. 11668. The company envisaged diversification of its activities by establishing gold processing project in Tanzania.

Presently, the Company is registered with authorized share capital of 200,000,000/= divided into 200,000 shares of TShs 1,000=. The current shareholders and shareholding structure of Mega Builders Limited as as shown in the table below:

Name of Current Shareholders	Nationality	No. of Shares	% Shareholding
Balbir Singh Malik Msasani Ward, Mikoroshoni Area P.O. Box 5767 **Dar es Salaam**	Indian	5,500	3.25%
Aruna Malik Msasani Ward, Mikoroshoni Area P.O. Box 5767 **Dar es Salaam**	Indian	5,400	2.7%
Asha Selemani Lindonde Msasani Ward, Mikoroshoni Area P.O. Box 5767 **Dar es Salaam**	Tanzanian	500	0.25%
Nitin Malik Msasani Ward, Mikoroshoni Area P.O. Box 5767 **Dar es Salaam**	Indian	6,500	3.5%
Un-alloted Shares		181,100	90,55
TOTAL		**200,000**	**100%**

The directors and shareholders of the company are experienced business people in a variety of business activities in the country with an experience of over thirty five (35) years in the construction industry. They have now started to look for opportunities for diversification of their economic activities, and foresee a big opportunity in the mining industry, considering the vast minerals available to in country and the attractive policies in the industry.

3.3 Estimated Investment Cost and Financing Plan

The initial capital investment for the proposed project is estimated at US$ 656,000- (including costs of development of the processing camp, acquisition of salt production facilities, transportation facilities initial inputs, and working capital requirements) as given in Annex 1 (and summarised here below:

3.3.1 CAPITAL INVESTMENT STRUCTURE (IN US$)

CAPITAL ITEM	YEAR 0	YEAR 1	YEAR 2	TOTAL
LAND, BUILDINGS & STRUCTURES				
Land Acquisition	15,000			15,000
Ponds Construction	52,000	52,000	52,000	156,000
Storage Facilities	80,000			80,000
Residential Camp & Offices	65,000			65,000
	212,000	**52,000**	**52,000**	**316,000**
MACHINERY EQUIPMENT				
Equipment	75,000			75,000
Solar System Panels and Installations	30,000	30,000		60,000
Miscellaneous Working Tools & Equipment	15,000	15,000		30,000
	120,000	**45,000**		**165,000**
MOTOR VEHICLES				
2 Pickups	50,000			50,000
Light Truck	35,000			35,000
	85,000			**85,000**
FURNITURE & OFFICE EQUIPMENT	25,000			25,000
PRE-OPERATIONAL EXPENDITURES	15,000			15,000
INITIAL WORKING CAPITAL	50,000			50,000
TOTAL INVESTMENT	**507,000**	**97,000**	**52,000**	**656,000**

3.3.2 CAPITAL INVESTMENT SUMMARY

S/N	CAPITAL ITEM	COST (US$)
1.	Land and Buildings	316,000
2.	Plant Machinery and Equipment	165,000
3.	Utility Motor Vehicles	85,000
4.	Furniture, Fittings and Office Equipment	25,000
6.	Pre-operational Expenditures	15,000
	Total Investment Costs	*606,000*
6.	Add: Initial Working Capital	50,000
	GRAND TOTAL	**656,000**

It is proposed to finance the fixed investment costs of this project through equity at US$ 347,826- and seek a bank loan of US$ 258,174- to supplement the investment requirements. The Company envisages obtaining a short term loan from a commercial bank in form of an overdraft facility to finance working capital requirements of US$ 50,000-. The project financing arrangement is given in the table below:

SOURCE	AMOUNT (US$)	As% age of total
Developer's Contribution to Capital Investment	347,826	53%
Long Term Loan	258,174	39%
Total Long Term Finances	**606,000**	
Short Term Finance	50,000	8%
TOTAL FINANCING	**656,000**	**100%**

3.4 Collateral Security

The project promoters will mortgage all assets and development thereon including plant and machinery located on the project site at Kerege Village, Bagamoyo District in Coast Region. Should they be required, the promoters will also issue directors' guarantee as additional security against the bank loans.

4.0 TECHNICAL ASPECTS

4.1 Salt Production Technology

4.1.1 Introduction

Sea salt is made by evaporating salt water. People around the world have used it since prehistoric times. For centuries, people of Bagamoyo in the Coast Region have been producing sea salt as an alternative means of income. The industry has the potential to generate substantial revenue for Bagamoyo and to provide long-term employment to coastal peoples. **Solar Evaporation Method** is the oldest method of salt production. It has been used since salt crystals were first noticed in trapped pools of sea water. Its use is practical only in warm climates where the evaporation rate exceeds the precipitation rate, either annually or for extended periods, and ideally, where there are steady prevailing winds.

4.1.2 Methods of Production

Solar salt production takes advantage of the natural salinity of seawater. Normal ocean water has a salinity of 3% to 3.5%, or approximately 35 g salt per kg seawater. [Hill 1989]. Table salt, or sodium chloride (NaCl), comprises 77.8% of the ionic salts in seawater. Magnesium, calcium, potassium, and chlorine, sulfate, and bromine make up the remaining ions. [Mbarouk 2005]. Salinity can be measured as an osmotic potential in atmospheres, a specific gravity, or as a concentration using the Baume scale. 1 Be is equivalent to 10 grams NaCl per kg water, or 1%. Most salt farmers monitor the salinity of water circulating through their pans with Baume hydrometers provided by UNICEF.

Salt production involves four types of pans. Water floods **the reservoirs/ concentrating pan** during the spring high tides and begins to mature there for 14 to 30 days before flowing to the **condenser** pans. The sun heats the water in the condenser pan and evaporation continues until a salinity of 7 to 10 Be is reached, at which point the brine is pumped or flows by gravity into the **shallow pre-harvesting pans**. Well-designed farms will allow water to pass

through a series of condenser and pre-harvesting pans for about one month. This sort of slow circulation aids evaporation and allows for precipitation of waste salts as their saturation points are reached. The **crystallization** series begins with calcium carbonate, followed by calcium sulfate, and finally sodium chloride. Salt quality is judged based on purity and color. High grade table salt should be at least 96% pure NaCl and should appear clear; the presence of impurities give salt a cloudy, off-white color. [Mbarouk 2005]. For the purest product, water should enter the harvesting pans near the salinity at which sodium chloride begins to precipitate at 25 to 26 Be.

4.1.3 Harvesting

The first harvest usually requires one week until salt precipitates and an additional week until it is ready to be harvested at 30 Be. The thin layer of salt precipitate is harvested, packed in 50 kg sacks, and sold to vendors. Evaporative salt production in Bagamoyo occurs during the dry seasons. The production season begins in during the southeast monsoon, as farmers begin collecting seawater in June, July or August. They harvest for the first time in August, September, or October. The timing of the process depends heavily on weather, as rain lowers salinity and clouds retard evaporation. Under the calm, sunny conditions, water should spend a total of 41 to 42 days in the condenser, pre-harvesting, and harvesting pans before the first harvest. However, many farmers in Bagamoyo harvest the salt early and so produce salt of lower quality. Second and later harvests do not require as much time because residual salt in the pans acts as yeast to speed up the crystallization process. Production stops during the short rains during November and December, then picks up again from January to March during the northeast monsoon. No salt is produced during the long rains which occur from late March to early June, but farmers may begin maintenance work and pan preparation in late May or June.

The technology used in salt harvesting varies, but production of high quality salts requires flow of water by gravity or use of water pumps. Well-constructed farms may allow water to flow passively between pans, but active pumping is usually required at some stages in the production process.

4.1.4 Permits and Authorizations

Permits for the construction of salt farms in Tanzania are issued through the Mining Ministry after consultation with the National Environmental Management Commission (NEMC). For Sustainable development, NEMC policies specifies that projects involving reclamation of land requires Environmental Impact Assessments (EIA), of which it is supposed to carry out a preliminary site survey, either directly or through authorized and Registered Consultants.

4.2 Raw Materials Requirements and Availability

Mega Builders Limited will be operating a salt farm production project using seawater to be obtained from the shores of the Indian Ocean and collected in salt farming ponds within Kerege Village as the source of raw material. The developer plans will construct big ponds, approximately 50m x 50m (2,500m^2) to be filled with salt water. Then after sufficient evaporation of good part of the water, the salt concentration becomes such that the salt starts to turn solid.

4.3 Location and Infrastructure

As stated elsewhere, the proposed salt farming project will be located in an unsurveyed land measuring approximately 120 acres at Kerege Village, Bagamoyo District, Coast Region. The project location is south of Bagamoyo, approximately 2 kilomeres from the village centre off Dar-es-Salaam/Bagamoyo Road about 4 kms from Bagamoyo Township.

4.4 Environmental Aspects

The economic, social, and environmental impacts of salt production study on the eastern coast of Pemba Island by Wolchok, Lauren, "Impacts of Salt Production on Pemba" (2006). *Independent Study Project (ISP) Collection.* 329. https://digitalcollections.sit.edu/isp_collection/329 reveals that solar salt production is associated with the clear cutting of mangrove forests, which are significant as soil stabilizers, animal habitats, and as an economic resource. An

environmental assessment of this industry is necessary to determine whether the socio-economic gains from salt production justify the environmental costs.

Salt production, among other factors, has resulted in unsustainable deforestation, and continues to damage mangrove stands. [Farnsworth 1997; Semesi 1998] Elevated soil salinity and decreased water flow due to salt farms may stunt or kill mangroves or impede natural regeneration. The following were some of the observations of the study mentioned above:

4.4.1 Social Effects

- The proposed salt farming project provides a source of income to approximately 64 staff permanent employees. The number of day laborers benefiting from the project is estimated at 80 individuals over the course of the season.
- The most common social consequence of construction of salt farms was the deviation of water currents to impact nearby areas of cultivation, particularly rice. flooded with salt water due to shifting tidal flow associated with construction of salt farms.

4.4.2 Environmental Effects

- The environmental footprint of salt farms was noted to extend beyond the farm boundaries. It was expected that salt farms would be overwhelmingly detrimental to the environment, but the data seem to suggest that salt farms may be less harmful than anticipated. In some way, salt farms may even have a positive effect. Majority of salt farm owners in the research area (Pemba) reported an increase in the number of birds around the farm. They attributed this to the presence of fish in the reservoirs, where the birds were seen roosting and feeding. Thus, birds seem to benefit from the salt farms. On a national level, Tanzanian salt farms are noted to be significant as habitats for 300 000 migratory waders. [Ruitenbeek 2005]

  However, additional studies are necessary to determine the overall ecosystem effects of attracting large bird populations. Although a presence of birds is generally viewed as an indicator of environmental health, it is possible that salt

farms are changing bird behavior or species diversity in the area. These changes may or may not have beneficial environmental consequences.

- Salt farms seem to have mixed consequences for erosion. It was expected that farms would exacerbate erosion by deforesting the mangroves. Some farmers in had reported exacerbated erosion due to the salt farms.
- Effects on fish are also mixed, but crab populations are thought to decline due to salt farms. While owners reported an increase of fish due to the presence of fish in the reservoirs, Shehas mentioned that certain species of fish living in estuary environments were poisoned by increased salinity from the salt farm. Sharif Mohammed at the Department of Fisheries also mentioned that crab populations are much lower near salt farms. These changes may be linked to the destruction of mangroves, which serve as nurseries and habitats for species of fish and crabs. Apart from aquaculture and fishing in the reservoirs of salt farms, fishing did not seem to be a common activity in the vicinity of the salt farms. There is no evidence that local fisheries are affected by the salt farms.Salt farms were observed to have a clear negative impact on mangroves. First, mangroves are clear cut during farm construction. Some farms occupy inland areas that were previously bare, but most are located within the intertidal zone and among mangroves.
- Shehas noted that farmers sometimes clear plots larger than the permitted area or expand their farms after the initial construction without permission.
- In other cases, it was observed that salt farms increase pressure on the surrounding mangroves by encouraging their use. 78% of farmers reported using mangroves near the farms. Current usage is also greater than usage before the salt farm, when the areas were lightly used for firewood and building material. The two major uses of the mangroves surrounding the salt farms are for pegs, used in pan construction, and for construction of mabanda, the huts for storing salt at the salt farm. Use of mangroves for pegs and huts is directly linked to the presence of the salt farms, themselves. If there were no salt farms in the area, then those mangroves would not be used for pegs or huts.
- Elevated salinity near the salt farms may also have a harmful effect on mangroves there. A 2003 report recorded an average salinity near salt farms of

4.97 Be during the dry season. This is elevated compared to the average measured salinity of 3.55 Be in non-salt farm areas, although no statistical difference was found. [Faki 2003] In this study, salinity was measured during the rainy season and no increase in salinity was found. The particularly heavy rains during the study likely influenced the results, but the data contradict the hypothesis that salt farms cause long-term changes in salinity. Rather, salinity is elevated only during the production season. These data imply that mangrove regeneration in abandoned salt farms should not be impaired due to elevated salinity levels.

4.4.3 Risk Mitigation Measures

- The major negative social impact identified concerns the frequency of work-related health problems and the lack of protective gear.

  Many of the health problems could be avoided if employees and day laborers are provided with rain boots, gloves, sunglasses, and hats. Rain boots and gloves reduce burns from the hot water in the pans, while sunglasses will address complaints of painful light reflection in workers' eyes as well as retinal damage from ultraviolet radiation. Hats will help prevent sun-related headaches. This basic equipment is inexpensive and can dramatically improve work conditions;

- It is recommended that farmers be required to replant or facilitate natural regeneration of mangroves in unused or abandoned areas;

- The environmental protection agency should work in collaboration of local governments in the area to ensure the control illegal clearance of project sites larger than the permitted area;

- The government should ensure it stops iilegal clearance of mangroves and the start of farm construction prior to the site survey and receiving proper permission.

  Comparing the above-mentioned environmental hazards and the proposed risk mitigation measures, Mega Builders Limited operations will have a minimal impact on the environment of the area. Therefore, social and economic benefits outweigh the negative impacts of establishing the proposed project.

4.5 Implementation Schedule

The project is expected to be implemented within a period not exceeding 10 months. Important activities identified for implementation of the proposed project are funds mobilisation, civil works, construction of buildings, procurement and installation of plant and machinery, furniture/equipment, motor vehicles and fittings.

Mega Builders Limited has already acquired salt farming project site located in an un-surveyed land measuring approximately 120 acres at Kerege Village, Bagamoyo District, Coast Region. The initial project activities will include site preparations and developments including construction site selection, clearing trees and shrubs, land levelling, site fencing and procurement of construction materials. This will be followed by construction salt water collection and production ponds, temporary shelters and latrines.

Other activities are: installation of solar electricity system, procurement of standby power generator and construction of generator house. These are to be followed by construction of offices, storage and laboratory buildings. The project activities will likewise involve sinking of a borehole, construction of water reserve tank and water distribution system. These activities are scheduled to start in February/March 2022.

Procurement of all necessary machinery, working tools, equipment and development of infrastructure is scheduled to start in October, 2022 after obtaining Tanzanian Investment Centre Certificate of Incentives and all other necessary licences and authorizations. It is expected that the project should start initial production by December 2022 and embark in full commercial production by January 2023.

5.0 ORGANISATION AND MANAGEMENT

5.1 Board of Directors

The project will be managed through the Board of Directors. The Board will formulate policy, offer strategic business guidance to management and regularly monitor and evaluate performance of the company. The Board of Directors will comprise of the company directors and possibly the local joint venture partner. However, only the shareholders will have the right to vote.

5.2 Management and Organizational Structure

The project will be managed through the Board of Directors. 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 technical team. The technical team will comprise of the Project Manager who will be the overall in-charge of the project. The Project Manager will be assisted by Production Manager, Chemical Engineer/Quality Controller and Marketing/ Logistics & Procurement Manager. These will in turn be supported by qualified personnel in their areas of specializations.

On implementation, the proposed project plans to employ up to 64 people in its production facilities (excluding daily labourers estimated at 80 a day, especially during harvest time). Four (4) administration staff including an Accountant and Personnel & Administration Officer will also be employed to support operations of the project.

6.0 FINANCIAL ANALYSIS

6.1 Financial Assumptions

The estimated capital cost and basic operating assumptions are summarised in the financial projections as shown in Annexure I to VII and Appendices 1 to 3 and In the financial analysis the following major assumptions have been taken into considerations:

- By taking into consideration gradual increase in plant production capacity, the financial projections are for 5 years.
- For convenience and stability, all financial figures have been quoted in United States Dollar at US$ 1 = 2,300/=TShs.
- Total capital investment cost is estimated at US$ 656,000-.
- It is proposed to finance the total Investment costs of this project through equity contribution (53%), as well as bank term loan (39%). The Initial Working Capital Requirements estimated at US$ 50,000- will be financed through a bank short-term loan in form of overdraft facility to be charged interest at the rate of 8%.
- Implementation period of six (10) months has been taken into consideration to allow for development of production site, construction of salt pans/ponds, storage facilities, residential camp for key staff, necessary infrastructure, and installation of plant machinery equipment,
- Discounting rate has been assumed to be 8%
- Depreciation of fixed assets and amortisation of the pre-operational expenses rates used are as follows:

Land ……..……..0.00%
Buildings, Civil Works, Structures 5.00%
Salt Farming Pans/Ponds…….20.00% straight line basis
Plant and Machinery…… 12.50% straight line basis
Furniture/Equipment and Fittings……..15.00% straight line basis

Motor Vehicles……..…….... 20.00% straight line basis

Pre-operational Expenses ……..……20.00% straight line basis

- Plant capacity utilization is estimated at 60% in the first year, raising to 70% in second year before stabilizing at 80% from year three onwards.

- The price of rawsalt is assumed to be US$ 43.48- per ton farm gate price. This price has been based on the prevailing rate in the market at nearby established farms. The price has been conservatively maintained constant over the projected period, although it is obvious it will be rising from time to time.

- Direct production costs shown in Appendix 3 are based on current rates.

  - Salaries, Wages and Allowances have been based on the prevailing scales in the private sector. There is provision of 20% to cover company contribution to Social Security Fund (10%) and other social welfare benefits (10%).

  - Administrative/Overhead and Factory Overhead costs are based on the prevailing rates in the market and needs of the proposed project.

6.2 MAJOR OPERATING COSTS

The following will be the major production cost items per annum. The table below indicates individual operating cost as a percentage of revenue estimates.

These will include:

1. Salaries, Wages and Allowances;
2. Packaging Materials & other Factory Supplies;
3. Water Supplies & Treatment;
4. Electricity;
5. Repairs and Maintenance;
6. Motor Vehicles Running Expenses;

7. Factory Overheads;
8. Administrative Overheads;
9. Licenses, Permits & Authorizations;
10. Marketing & Travelling;
11. Transport Expenses;
12. Royalties and Village cess.

- Corporate Tax is fixed at 30% of taxable profits.
  The project will be granted a Tanzania Investment Centre (TIC) Certificate of Incentives and therefore enjoy tax relief on both capital and deemed capital goods, including investment allowance on all capital goods with a loss carry forward allowance against future profits.

6.3 Analysis of Financial Results

Following are highlights of the financial projections and analysis:

Annex V – Profit & Loss Account

Operations of the project are profitable right from year 1 when the company posts a net profit of US$ 133,358-. The profitability position remains stable during the subsequent years, rising to US$ 396,157- in year two, 643,257- in year three before climaxing at US$ 648,939-- by end of the 5th and last assumed economic life of the project.

Appendix VI – Sources and Uses of Funds

The projected Cash flow for Financial Planning indicates that the project will generate enough cash to meet its financial obligations. Net cash surplus balance increases from US$ 508,447- in year one to US$ 1,285,649- by the 5th year of operation. The cumulative cash balance during the same period grows over nine fold, increasing from US$ 508,447- to US$ 3,408,798-. This is a positive indication that the project is liquid enough to meet its cash requirements to support its trading operations.

Appendix VII - 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 6.57 to 25.31.

The company net-worth grows 9.8 fold during the economic life of the project, increasing from US$ 347,826- at the end of construction period to US$ 3,408,798- by end of the 5th year, a significant growth in the value and profitability of the company.

Discounted Cash flow

The Discounted Cash flow yields an Internal Rate of Return (IRR) of 44.01%, which is well above the assumed cost of capital at 8%. This confirms the financial viability of the proposed project.

Payback Period

The Normal Payback Period is 2 years at zero discount rate and 2.5 years when discounted at the assumed discount rate of 8%.

Key Financial Ratios

- The ratio between Net Profit + Interest to Investment ranges from 32.33% to 37.99%.
- Return on Equity (ROE) average sat 1.42, translatint to a return of 1.42 for every equity dollar invested in the project.

Breakeven Analysis

Highest breakeven capacity is estimated at 27.33% and the lowest breakeven capacity is just 13.55%.

Sensitivity Analysis

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

7.0 DEVELOPMENT VALUES/BENEFITS

Implementation of this project will lead to realisation of a number of development values/social and economic benefits. The project will contribute substantially to local economies in form of sale direct job creation in the region of 84 as staff and temporary labourers in the proposed salt farm project.

The village in which salt farming will be taking place will also see a number of benefits besides the creation of jobs in the form of social services from the company's Corporate Social Responsibility. In addition, the project involves transfer of technology to Tanzania. Tanzanians will be trained on the job on modern salt farming and processing techniques. Finally, the local government will benefit from payment of village cess while the government will receive substantial amount in form of royalty and corporate tax.

8.0 CONCLUSION AND RECOMMENDATIONS

Analysis of the project confirms that the project is:

- Technically feasible,
- Financially and Economically viable,
- Socially desirable,
- Environmentally sound, manageable and sustainable.

A timely financing and implementation of the project is therefore highly recommended in order to realise the anticipated benefits outlined in this study/report. Provided all other economic factors remain substantially the same, it is strongly recommended that the project be implemented with immediate effect. It is further recommended that applications for Processing Licence for the proposed processing site and Environmental Impact Assessment for the proposed plant site be submitted forthwith. 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.

FINANCIAL PROJECTIONS

FINANCIAL ANALYSIS OF PROJECTS - MEGA BUILDERS LTD

Salt Farming Project - Bagamoyo

ANNEX I: INVESTMENT, REPLACEMENT AND DEPRECIATION SCHEDULES (IN US$)

Year		YEAR 0	1	2	3	4	5	TOTAL
Buildings, Ponds & Structures		212,000	52,000	52,000	-	-	-	316,000
Machinery, Tools & Equipment Salt		120,000	45,000					165,000
Vehicles		85,000						85,000
Furniture & Office Equipment		25,000						25,000
Pre-operational Expenses		15,000						15,000
Initial Working Capital		50,000						50,000
Total Investment Cost		**507,000**	**97,000**	**52,000**				**656,000**
Depreciation								
Buildings, Ponds & Structures			17,650	28,050	38,450	38,450	38,450	161,050
Machinery, Tools & Equipment	12.5%		15,000	20,625	20,625	20,625	20,625	97,500
Vehicles	20%		13,600	13,600	13,600	13,600	13,600	68,000
Furniture & Office Equipment	12.5%		1,875	1,875	1,875	1,875	1,875	9,375
Pre-operational Expenses	20%		5,000	5,000	5,000	5,000	5,000	25,000
Total Depreciation			**53,125**	**69,150**	**79,550**	**79,550**	**79,550**	**360,925**
Cummulative Depreciation			53,125	122,275	201,825	281,375	360,925	
Cummulative Investment			507,000	604,000	656,000	656,000	656,000	
Book Value of the Assets		**507,000**	457,875	481,725	454,175	374,625	295,075	
Balance outstand		200000	200000	200000	180000	160000	140000	120000

ANNEX II: LOAN, INTEREST AND REPAYMENT SCHEDULE($)

Years		**0**	**1**	**2**	**3**	**4**	**5**	
Loan Receipt		308,174						
Loan Repayment	3		102,725	102,725	102,724			308,174
Loan interest	8%		24,654	16,436	6,218			47,308
Total Payment			127,379	119,161	108,942			355,482
Balance outstanding		308,174	205,449	102,724	-		-	

ANNEX III: WORKING CAPITAL SCHEDULE($)

Year		0	1	2	3	4	5	
Current Assets								
Stock of materials			139,793	258,036	384,423	384,423	384,423	

Stock of output			129,335	258,670	258,670	258,670	258,670	
Current liabilities			61,304	102,374	123,025	123,025	123,025	
Total W/C			330,432	592,617	833,205	833,205	833,205	
Incremental W/C			-	(262,185)	(-240,588)	-	-	
ANNEX IV: TRADING ACCOUNT (US$)								
ITEM/YEAR		0	1	2	3	4	5	
Materials			139,793	258,036	384,423	384,423	384,423	1,551,098
Salaries/Wages/Allowances			200,348	334,581	448,782	448,782	448,782	1,881,275
			340,141	592,617	833,205	833,205	833,205	3,432,373
Total Operating costs		-	340,141	592,617	833,205	833,205	833,205	**3,432,373**
Sales Revenue			626,087	1,252,172	1,878,261	1,878,261	1,878,261	7,513,042
Trading Profit			285,946	679,555	1,045,056	1,045,056	1,045,056	4,100,669
			46%	54%	56%	56%	56%	
ITEM V: PROFIT AND LOSS ACCOUNT(US$)								
Years		**0**	**1**	**2**	**3**	**4**	**5**	
Trading Profit			285,940	679,555	1,045,056	1,045,056	1,045,056	4,100,663
Total depreciation			70,775	97,200	118,000	118,000	118,000	**521,975**
Loan interest			24,654	16,436	8,218	-	-	49,308
Net Profit			**190,511**	**565,910**	**918,938**	**927,056**	**927,056**	**3,529,471**
			30%	45%	49%	49%	49%	
Cumm. Net Profit			190,511	756,421	1,675,359	2,602,415	3,529,471	
Tax at	30%		57,153	169,773	275,681	278,117	278,117	1,058,841.00
Net Profit After Tax			**133,358**	**396,137**	**643,257**	**648,939**	**648,939**	**2,470,630**
			21%	32%	34%	35%	35%	
Cumm. Net Profit after tax			133,358	529,495	1,172,752	1,821,691	2,470,630	
ANNEX VI: SOURCES AND USES OF FUNDS (US$)								
SOURCES & USES/YEAR		0	1	2	3	4	5	
Sources								
Equity		347,826						
Loan		308,174						
Sales Revenue			626,087	1,252,174	1,878,261	1,878,261	1,878,261	7,513,044
Total Sources		656,000	626,087	1,252,174	1,878,261	1,878,261	6,290,783	
Use of Funds								
Total Invest. Costs		656,000	507,000	97,200	52,000			656,200

Total Operating costs			339,141	592,617	833,205	833,205	833,205	3,431,373
Incremental W/C			-	(-253,476)	(-240,588)	-	-	
Loan Repayment			102,725	102,725	102,724	-	-	308,174
Loan interest			24,654	16,436	6,218	-	-	47,308
Tax at	30%		57,153	169,773	275,681	278,117	278,117	1,058,841
Total Uses		656,000	1,030,673	339,141	592,618	1,111,322	3,729,754	3,729,754
Balance		-	(-404,586)	913,033	1,285,643	766,939	766,939	
Balance/CF		-	(-404,586)	508,447	1,794,090	2,561,029	3,327,968	
Return to Equity			0.38	1.14	1.85	1.87	1.87	
Average ROE = 1.42								
NPV to Equity at 8%								
IRR to Equity								
ANNEX VII: PROJECTED BALANCE SHEET AT THE END OF EACH YEAR ($)								
PERIOD		**YEAR 0**	**YEAR 1**	**YEAR 2**	**YEAR 3**	**YEAR 4**	**YEAR 5**	
ASSETS								
Current Assets								
Cash C/F			133,358	529,495	1,172,752	1,821,691	2,470,630	
Stock of materials			139,793	258,036	384,423	384,423	384,423	
Stock of output			129,335	258,670	258,670	258,670	258,670	
Total			**402,486**	**1,046,201**	**1,815,845**	**2,464,784**	**3,113,723**	
Investment Assets								
Buildings, Ponds & Structures		212,000	246,350	287,950	249,500	211,050	172,600	
Machinery, Tools & Equipment		120,000	151,594	138,166	124,782	111,376	97,970	
Vehicles		85,000	71,400	57,800	44,200	30,600	17,000	
Furniture & Office Equipment		25,000	21,813	18,626	15,439	12,252	9,065	
Pre-operational Expenses		15,000	12,000	9,000	6,000	3,000	-	
Total Investment Book Value		**457,000**	**503,157**	**481,725**	**454,175**	**374,625**	**295,075**	
TOTAL ASSETS		**507,000**	**905,643**	**1,527,926**	**2,270,020**	**2,839,409**	**3,408,798**	
LIABILITIES AND EQUITY								
Current liabilities			61,304	102,374	123,025	123,025	123,025	
Other Liabilities			157,706	445,507	626,417	546,867	467,317	
Loan outstanding		308,174	205,449	102,724	-	-	-	

Equity		198,826	347,826	347,826	347,826	347,826	347,826	
Cumm. Net Profit after tax		-	133,358	529,495	1,172,752	1,821,691	2,470,630	
TOTA LIABILITIES AND EQUITY		**507,000**	**905,643**	**1,527,926**	**2,270,020**	**2,839,409**	**3,408,798**	

APPENDIX 1: CAPITAL INVESTMENT STRUCTURE (IN US$)				
CAPITAL ITEM	**YEAR 0**	**YEAR 1**	**YEAR 2**	**TOTAL**
LAND, BUILDINGS & STRUCTURES				
Land Acquisition	15,000			15,000
Ponds Construction	52,000	52,000	52,000	156,000
Storage Facilities	80,000			80,000
Residential Camp & Offices	65,000			65,000
	212,000	**52,000**	**52,000**	**316,000**
MACHINERY EQUIPMENT				
Equipment	75,000			75,000
Solar System Pannels and Installations	30,000	30,000		60,000
Miscellaneous Working Tools & Equipment	15,000	15,000		30,000
	120,000	**45,000**		**165,000**
MOTOR VEHICLES				
2 Pickups	50,000			50,000
Light Truck	35,000			35,000
	85,000			**85,000**
FURNITURE & OFFICE EQUIPMENT	25,000			25,000
PRE-OPERATIONAL EXPENDITURES	15,000			15,000
INITIAL WORKING CAPITAL	50,000			50,000
TOTAL INVESTMENT	**507,000**	**97,000**	**52,000**	**656,000**
DEPRECIATION				
Land, Buildings & Structures		17,650	28,050	45,700
Machinery Equipment		15,000	20,625	35,625
Motor Vehicles		13,600	13,600	27,200
Furniture & Office Equipment		1,875	1,875	3,750
Pre-operational Expenditures		5,000	5,000	10,000

		53,125	69,150	360,925

APPENDIX 2: OPERATIONAL COSTS Salt Farming Project								
				YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Salaries, Wages & Allowances (8% of Gross Sales)				125,218	250,435	373,652	373,652	373,652
Labour Overhead Costs (20% of Salaries, Wages &				25,044	50,087	75,130	75,130	75,130
Packaging Materials and other Factory Supplies				28,800	57,600	86,400	86,400	86,400
Water Supply & Treatment				15,000	15,000	15,000	15,000	15,000
Electricity				12,000	12,000	12,000	12,000	12,000
Rapairs & Maintenance 5%, 7.5% & 8% of Invest				24,100	45,300	52,480	52,480	52,480
Motor Vehicle Running Expenses (15% of Purchase				10,200	10,200	10,200	10,200	10,200
Factory Overheads (3% of Gross Sales)				18,783	37,565	56,348	56,348	56,348
Administrative Overheads (2% of Gross Sales)				12,522	25,043	37,565	37,565	37,565
Licences, Permits and Authorizations				7,500	7,500	7,500	7,500	7,500
Marketing & Travelling				9,391	12,522	18,782	18,782	18,782
Transport Expenses				11,800	11,800	11,800	11,800	11,800
Royalties				18,783	37,565	56,348	56,348	56,348
Local Government Cess				20,000	20,000	20,000	20,000	20,000
				339,141	**592,617**	**833,205**	**833,205**	**833,205**

APPENDIX 3: ANNUAL DEPRECIATION AND AMORTIZATION OFASSETS								
CAPITAL ITEM/YEAR		YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
Buildings, Ponds & Structures		212,000	52,000	52,000				316,000
Commulative Investment		212,000	264,000	316,000	316,000	316,000	316,000	
Annual Depreciation			17,650	28,050	38,450	38,450	38,450	
Book Value - Buildings		212,000	246,350	287,950	249,500	211,050	172,600	
Machinery, Tools & Equipment		120,000	45,000					165,000
Cumulative Investment		120,000	165,000	165,000	165,000	165,000	165,000	
Annual Depreciation			13,406	13,406	13,406	13,406	13,406	
Book Value		120,000	151,594	138,166	124,782	111,376	97,970	
Vehicles		85,000						85000
Cumulative Investment		85,000	85,000	85,000	85,000	85,000	85,000	
Annual Depreciation			13,600	13,600	13,600	13,600	13,600	
Book Value		85,000	71,400	57,800	44,200	30,600	17,000	
Furniture & Office Equipment		25,000						25,000
Cumulative Investment		25,000	25,000	25,000	25,000	25,000	25,000	
Annual Depreciation			3,187	3,187	3,187	3,187	3,187	
Book Value		25,000	21,813	18,626	15,439	12,252	9,065	
Pre-operational Expenses		15,000						15,000
Cumulative Investment		15,000	15,000	15,000	15,000	15,000	15,000	
Annual Depreciation			3,000	3,000	3,000	3,000	3,000	
Book Value		15,000	12,000	9,000	6,000	3,000	-	
Total Cummulative Book Value		457,000	503,157	511,542	439,921	368,278	296,635	