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MATRIC NUMBER: 18/ENG03/045

DEPARTMENT: CIVIL ENGINEERING

LEVEL: 200

COURSE: AFE 212

Feasibility report

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INTRODUCTION

Fish farming as well as other agricultural enterprise is an important aspect of the economy or the nation as a whole. Fish provides nutrients and micronutrients that are essential to physical development especially in children and are important part of a healthy diet. Globally, more than 300 million people depend directly on fisheries and aquaculture for their livelihoods and millions are employed in fishery. Nigeria like most of the developing countries suffers from protein deficiency in the diet of the people. This problem is becoming more and more acute with the increase in population. Increase in fish production through Aquaculture could be an important source of animal protein. The successful implementation of an aquaculture project depends upon a number of parameters, such as proper selection of site, soil and water quality, project management on scientific lines etc. The very poor often rely on fishing as a primary source of income. Improving the productivity of fisheries and aquaculture is vital to reducing hunger and poverty for millions in the developing world. Also, productive fisheries and aquaculture improves food and nutrition security, increase income and improve livelihoods, promote economic growth and protect our environment and natural resources. It also has Some economic importance of which includes;;

* Food value:
* Nutritive value**:** Fish is highly nutritious. The protein content in fishes varies from 15-30% on wet weight basis and 60-80% on dry weight basis. The protein of fish is highly digestible and with well- balanced amino acids. It is also a good source of vitamins A, B and D**.**
* Medicinal value:Fish is low in fat, high in protein and an excellent source of Omega-3 fatty acids. Regular consumption of fish can reduce the risk of various diseases and disorders.
* Food supply for human
* For ornamental purposes

Purpose

The purpose of the study is to assess the viability of the establishment of a fish farm at French quarter in Ika Local Government Area, Akwa ibom State, Nigeria by attempting to provide data for the following:

* The entire concept of the project
* The most viable dimension of the project including construction and structures
* The production technology
* The cost and revenue estimates
* Expansion/development and implication schedule
* Cash flow and financial plan of the project

Project background and concept

Ukalom’s fishing industry and Aquaculture LTD is a world class and licensed Fish and Seafood Aquaculture Company that will be located in the riverine area in the French quarter in Ika LGA, Akwa Ibom State, Nigeria. We have carried out our detailed market research and feasibility studies with regards to the project.The fish farm project is for the purpose of producing fish (catfish) for sale. The project would produce fish and fingerlings.

The labor required would be available, particularly the unskilled, which are readily available in the project area. Manual construction would be adopted for the construction of the fishponds because of the economic advantages. There is abundant unskilled manpower in the project environmentOur fish and seafood farm is going to be a standard fish and seafood farm hence will be involved in raising fin fish l(catfish), shellfish (oysters), raising and harvesting ornamental fish (tropical fish), raising and harvesting aquaculture species to augment or replenish wild habitats.

In times past, In order to meet up with demand in the community, fish traders purchase fish from other towns and markets as there is no fish farm in the area. However with this project, we hope to curb such problem and make products available to the locals with ease.

PROJECT DESCRIPTION

The project is socio-economically viable. It would create employment and has no discernible hazardous impact on the environment. There would be no difficulty in the introduction of the technology to be adopted for the project. The manager of the project will be an adequately trained personnel with skills in fish farming.

The projections for the project take care of bills payable from the first year and even at that the profit would be high.The fishery plan is for the purpose of producing different types of fish and selling them. The market existing in the area has not been exploited thus, the project market is therefore unlimited and all fish would be a ready market. The demand for fish exceeds the supply.

Required electric power would be supplied by a 9KVA generator. The electric supply would be used in pumping water from the borehole.

There would be no difficulty in the introduction of technology to be adopted for this project. The manager of the project will be an adequately trained personnel with skills in fish farming.

PROJECT LOCATION

A careful consideration has been given to an area with easy accessibility of sufficient supply of water, easy accessibility to the site, easy accessibility of production work inputs and implements, socio-economic aspects, marketing channels, among others. The project would be located on a piece of land at the boarders close to the monastery primary school. Currently, there is no fish farm in the area and the decision is to locate the proposed fish farm there was based on the market value for the product in that large area which is rather large and can be profitable. Also, the cost of the land is considerably low because it is presently not used for any major economic venture.

PROJECT TECHNICAL FEASIBILITY

The project would be in two distinct compartments(fish production and a hatching unit). The fish production section would be concerned with the production of table size fishes for consumption and marketing. The layout of the production would start with two fish ponds measuring about 30m2 each. In the first year of operation, the ponds would be constructed and stocked. The two initial ponds would have a total fish density of about 15,000 fingerlings when stocked. In the second year, two additional production ponds of the exact same measurement would be constructed and stocked as seen fit.

The hatchery section starts in the second year of production. At this time, all the fingerlings required for the production ponds would be supplied from the hatchery in fill.. In this section, the catfish would be artificially induced to spawn by hormonal treatment using pituitary hormone (growth hormone that affect the pituitary gland and enhances growth) within the hatching units. As a result of this the fish will mature in about a period of 3-6 months . In the hatchery, about 5 female brood fish each weighing about 400-500g are able to produce about 15% body weight of eggs. The rate of hatching is estimated at about 50%-55% and the survival rate of fry to fingerling at about 20%-30% which means that the hatchery can produce 20,000-25,000 fingerlings from the 5 brood fishes which is sufficient to meet the fingerling requirements of the production ponds after the initial cropping.

PROJECT EXECUTION PLAN

Once the project is fully implanted, a total of 1 brooder and 2 nursery transition ponds would be constructed. The brooder ponds measure 5x5m (25m2) and the nursery ponds measure 4x5m (20m2). Four production ponds would also be constructed and stocked for the production ponds with the same measurement as the brooder ponds.

PROJECT TIMELINE

The project should be completed within a year preferably July ,2017 to August, 2018 because land option and clearing, cultivation and work is best done during the dry seasons. However the first year, with a profitable outcome and a comforting standard of living of the society brought about by the project, the project will increase in its growth and development rates.

ECONOMIC/FINANCIAL PLAN

|  |  |
| --- | --- |
| ACTIVITY | Estimated amount (N) |
| * **Cost of land and development** |  |
| Land acquisition | 3,000,000 |
| Survey of land | 200,000 |
| Pond construction | 1,000,000 |
| **TOTAL** | **4,200,000** |
| * **Fish farm infrastructure development** |  |
| Cost of farm house | 2,500,000 |
| Fish shade | 400,000 |
| Fencing | 1,000,000 |
| Electricity | 100,000 |
| Borehole | 100,000 |
| Water pump | 1,000,000 |
| Water tanks | 600,000 |
| **TOTAL** | **5,700,000** |
| * **Fish production and hatchery materials** |  |
| Equipments and implementation | 1,000,000 |
| **TOTAL** | **1,000,000** |
| * **Salaries and wages of staff** |  |
| Farm supervisor | 500,000 |
| Farm assistants | 300,000 |
| Security | 250,000 |
| **TOTAL** | **1,050,000** |
| * **Variable inputs** |  |
| fingerlings | 380,000 |
| Feed | 200,000 |
| Organic fertilizer and supplements | 20,000 |
| Transportation | 400,000 |
| **TOTAL** | **1000,000** |
| * **Other costs** |  |
| Petrol and fuel | 50,000 |
| Equipment maintenance | 200,000 |
| Pond maintenance | 100,000 |
| Stationery | 30,000 |
| **TOTAL** | **380,000** |
| GRAND TOTAL | 13,330,000 |

OPERATIONAL COSTS

Includes the cost of the day to day management of the hatching, the wages and salaries of staff and procurements of the other operational inputs stated in the table above. salaries of staff and procurement of other operational inputs. The purchases for all the materials making up the hatchery equipment will be made from Warri state and transported to the project site.

Risks /challenges

* The town is located in a rural area and the supply of power to the area is poor. For the project to be successful, a rather large power supply from the generator is plant would be required, which could increase the operational cost of the project.
* During the dry season, the water supply in the area drops to a critically low level. This would put a lot of stress on the pumping machine and could result in frequent break down and malfunctions. I’m the long run this would increase the operational cost of the project.
* Security -There are security challenges in the area which may result in loses if not properly managed. However, this can be managed by using locals who are conversant with the environment as security personnel.
* ESTIMATED REVENUE

For the purpose of this feasibility report, the revenue expected is restricted to the operation of the production ponds. However, it’s no news the hatchery ponds would produce the fingerlings required for the production ponds after the 1st year of operation. The production ponds when fully stocked would have a total fish density of about 15,000 fingerlings, making provision for mortality at about 50%-55% mature fishes as stated earlier. It is estimated that catfish would sell for N1000 per kg. Sales and total estimated revenue for the 1st year of production would therefore, is N6,000,000. With an estimated 10% annual increase in the prices of fish, the estimated revenue accruing from the project for the first 5 years would be;

* Year 1– 6,600,000
* Year 2– 7,200,000
* Year 3– 7,800,000
* Year 4– 8,400,000
* CONCLUSION

The project, when in full operation would have an enormous economic and financial impact on the society, and also on the socio economic well-being of the people in Ika local government area. Fish has become a very scarce commodity because of the ecological changes due to changes in climate. It is therefore recommended for funding. The fish farm would be a highly profitable project which would generate sufficient revenue to sustain production from the second year. The project would provide direct employment for the indigenes of the community as a certain amount of unskilled labor is required. This is a significant contribution to the economic well being of the people and social improvement of the project environment.