

KAZIE NNENNA MECHATRONICS 18/ENG05/026

A FEASIBILITY REPORT / BUSINESS PLAN FOR THE DEVELOPMENT OF A FISH FARM AT AMAEKE ITEM, BENDE LGA, ABIA STATE, NIGERIA

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I. Executive Summary

This business plan examines the feasibility of development a fish farm at Amaeke Item, Abia State, SE Nigeria.

The planned fish farm is planned to cover an area of shall 50 hectare when fully developed, with 50% of the area covered by fish ponds, 35% by processing facilities for fertilizer and animal feed, and the remaining area for other farm infrastructure.

However, project plan is to start off with 5 acres of family-owned land, and expand over 3 – 5 years by leasing community land, with option to buy outright.

In full production, the farm will produce about 5700 tonne of fish as well as 3000 tonne of animal feed and 1900 tonne of organic fertilizer in a six-month production cycle.

The target market is the southeastern states. Presently there is very little direct competition from fresh fish products. Dried fish and fresh fish products from the Niger Delta regions are highly valued, and costly.

Also fertilizer and animal feed for poultries are generally non-organic.

In addition to the fairly limited profitability of the project, the potential for creating job opportunities, improving the nutrition of people in this area, especially students and the elderly are considered important reasons to establish the project.

We will ensure that we hold ourselves accountable to the highest standards by meeting our client's needs precisely and completely. We will cultivate a working environment that provides a human, sustainable approach to earning a living, and living in our world, for our partners, employees and for our clients.

With assistance from extension officers and with the employment of skilled and trained workers, Kaz Farm aims to rise above the competition.

II. Sponsorship, Management and Technical Assistance

Sponsorship

The project is sponsored by The Kaz Initiative, a Non-Governmental Organization (NGO). The Kaz Initiative has acquired a reputation for developing and managing successful community-based projects to boost local economies while maintaining the integrity of the local ecosystem. On this project, The Kaz Initiative will be working with the Abia State Rural Development Board, and The Food and Agricultural Organization's (FAO) Office for Fisheries and Aquatic Farming.

Funding is being sought from Bank of Agriculture.

Management

The management team has already been selected. They will be led by David Umande, as project manager/farm manager. David who has over 5 years of experience developing rural agricultural farms, with the last 4 years managing the very successful Tangiba Fish Farms in Gambia. David will be supported by a small team that includes Mubarak Amadi, Chidimma Meze, Ogbonnaya Emekus and Devina Ray.

Technical Assistance

The Kaz Initiative is working together with the FAO's Office for Fisheries and Aquatic Farming and the Abia State Rural Development Board.

The Office for Fisheries and Aquatic Farming shall provide access to research and other resources on fish farming, especially in tropical regions, while the Rural Development Board shall provide support for relationships with other government and quasi-government bodies. This will include support with getting extension support staff.

Kaz Fish access finance for all machineries and equipment from BOI (Bank of Industry) at the rate of 9%.

A loan would also be requested from the commercial banks to commence the building phase

III. Market and Sales

The primary markets for the fresh fish products are as follows:

Amaeke Item and surrounding towns, including Ohafia, Abriba, Alayi – total population approx. 200

Umuahia, the capital of Abia State. This is approximately one hour away from Amaeke Item.

Aba, Abia state (and Nigeria's) prime market town. This is approximately 1.5 hours from Amaeke Item.

Presently, the few fresh fish products come into Aba from the Niger Delta areas. They are highly prized – and very expensive.

Iced fish is somewhat more widely available than fresh fish products. But again, due to the need for regular power supply, in addition to the poor quality of inter-state highways around here, the cost of even iced fish is still beyond the reach of most people around here.

Another form of competition would be chicken – fresh or frozen, and meat products. These are equally expensive relative to the incomes of people here.

For this reason, the people of this area tend to be deprived of the rich nutritional value to be obtained from fish

The sales of fish comes with a lot of profit, as fish is not just a source of food but plays numerous roles which include:

- Fish as a source of oil: Fish oil is oil derived from the tissues of oily fish which contains the omega-3 fatty acids.
- Fish Fertilizer/Emulsion: Fish emulsion is a fertilizer emulsion that is produced from the fluid remains of fish processed for fish oil and fish meal industrially.
- Fish as a Source of Animal Feed: Fish meal is a brown powder which is made from both the whole fish and the bones while offal is made from processed fish which used as a high-protein supplement in aquaculture feed.

Competition Analysis

Our main competitors in this fish farming business are the importers of frozen fish and co-fish-farmers. Survey data has shown that fresh fish is preferred to the frozen ice-fish in taste and nutritional value. Being that the fish farming is situated right within my premises, which makes supervision easier and effective, Kaz Fish has a competitive edge over others. The land situation and climate of the area are all very suitable for fish production. The overhead expenses relatively low with few staff presently to match the present production capacity.

Competitive Analysis would have been necessary had it been that fish farming business has become institutionalized in Nigeria, but the reverse is the case.

Of course, we still envisage indirect competition, from meat, example beef, pork, chicken, snail, goat meat, frozen fish, stock fish. Again, meat tests different from fish. Other fish farmers are excluded because, put together, we cannot produce enough for now.

Tariff and Import Restriction

Tariff and Import Restriction: Nigeria's Minister Adesina of Agriculture announced in October 2013 that the government would ban fish imports over four years, and raise the import duty up from 10 per cent to 50 per cent, and possibly as high as 100 per cent. Late in December 2013, the government replaced the import ban decision with a new policy to cut fish imports into the country by 25 per cent per year by introducing import quotas starting in January 2014. A decision that would favour fish farming

Market Potential

The market opportunity for fish farming in Nigeria is huge. Nigerians consume nearly 2 million tons of fish per year, and the country's growing population ensures demand will continue to boom. Demand far outweighs current national production, making it necessary for more and more fish farmers to emerge.

Profitability

Fish farming is very **profitable**. With proper planning and good management, N3 million investment in **fish farming** could easily result in N4million of pure **profit** within six months. Profitability is affected by Natural, Socio-Cultural, Economic and Financial, and Technical and Biological Factors.

IV. Technical Feasibility, Resources and Environment

Technical Feasibility

There are certain factors that contribute to a successful fish farm and makes a project feasible. At Kaz farm all these factors have been put in consideration and the project can be said to be technically feasible.

They include:

- Cost of Labor, Cost of material, cost of fingerlings, Feed cost, Water type, Location, Marketing and Distribution

In terms of location which plays a vital role in fish farming as it helps decide the kind of fish to be reared and fish pond to be constructed. Usually, areas with swampy environments can be used for fish farming in Nigeria.

Kaz Fish Farm is located at Amaeke Item, which has numerous hills and flats, with a lot of flat lands near the river.

The people of Amaeke Item are majorly farmers and because of this and a couple of other determinants such as geographical setting, labor is Cheap.

There is also the question of fish feed, Feed Cost varies, while the cost of foreign feeds are generally more expensive than that of local feeds, the local feeds still maintains the high levels of protein just as in the foreign.

And this feed is readily available as it is produced locally.

Resources

In considering the resources needed for the project, the cost has to be considered as well. A page containing all financial cost can be found below.

Of these costs are Fish, Feed, Tools, Equipment and Vehicles amongst others

Environment

The discharge of waste from aquaculture operations on continuous basis leads to eutrophication and destruction of natural ecosystem in receiving water body. The release of solid wastes is mainly a function of the digestibility of various dietary components while the release of dissolved wastes is mainly a function of the metabolism of nutrients by the fish. Using Controlled wastes production strategies alongside the construction of good quality buildings to maintain sustainable aquaculture growth into the future. Kaz Fish farm causes little to no harm to their immediate environment

V. Government Support and Regulation

Nigeria has no specific legislation on aquaculture at national level, nor is this activity mentioned in the Sea Fisheries Decree and Regulations (respectively 1992 and 1971). However, the Inland Fisheries Decree (1992) makes a single provision empowering the Minister in charge of fisheries matters to determine whether the setup of enclosures, such as pens and cages, should be subject to a license fee. Only federal legislation will be reviewed in the present study.

From an institutional point of view, the authority competent for the management of fisheries and for the preparation of policies and programmes for the development of fisheries is the Federal Department of Fisheries (FDF) of the Federal Ministry of Agriculture and Natural Resources, which provides technical support to State Departments of Fisheries (SDF). Likewise, the latter provide support to Local Government Authorities (LGA) on fisheries matters. Moreover, fisheries and aquaculture research is carried out by the Nigerian Institute for Oceanography and Marine Research (NIOMR) and by the National Institute for Freshwater Fisheries Research (NIFFR), while aquaculture training is ensured by the African Regional Aquaculture Centre (ARAC).

The support from the above authorities would provide better market opportunities.

In return, the fish farm would provide employment and contribute a part in increasing the nation's GDP.

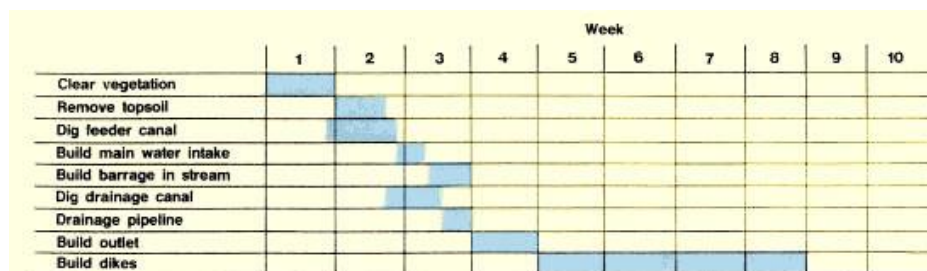
VI. Project Timeline

The project will be completed within 8 weeks preferably between April 2020 and June 2020 because land clearing is mostly done in the dry season.

And the stages involved are:

Clearing Vegetation, Removing top soil, digging of feeder canal, Building Main Water Intake, Building barrage in stream, Digging drainage canal and pipeline, and building outlets and dikes.

The information is given in the Gantt chart below.



VII. Financial Evaluation -Estimated Project Costs and Revenue

Total Expenses

COSTS					
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Capital costs	4,370,000	350,000	30,350,000	10,350,000	10,350,000
Operational costs	10,520,000	10,520,001	131,500,013	131,500,013	131,500,013
TOTAL	14,890,000	10,870,001	161,850,013	141,850,013	141,850,013

REVENUE					
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Fish sales	6,000,000	12,000,000	75,000,000	150,000,000	150,000,000
Fertilizer sales	1,500,000	3,000,000	18,750,000	37,500,000	37,500,000
Animal feed sales	350,000	700,000	4,375,000	8,750,000	8,750,000
Consultancies	-	-	300,000	650,000	650,000
TOTAL	7,850,000	15,700,000	98,425,000	196,900,000	196,900,000

Capital Costs

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Land	350,000	350,000	10,350,000	10,350,000	10,350,000
Buildings	3,000,000		6,000,000		
Concrete Ponds	320,000		4,000,000		
Vehicles	400,000		3,000,000		
Generators	50,000		3,000,000		
Power	250,000		4,000,000		
TOTAL	4,370,000	350,000	30,350,000	10,350,000	10,350,000

Running Costs

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Labour costs	14,482,000	14,170,000	34,632,000	34,632,000	34,632,000
Consultancies	1,000,000	1,000,000	1,100,000	1,100,000	1,100,000
Govt & Regulatory					
Fingerlings	960,000	960,000	12,000,000	12,000,000	12,000,000
Feed	1,800,000	1,800,000	22,500,000	22,500,000	22,500,000
Medicaments	5,400,000	5,400,000	67,500,000	67,500,000	67,500,000
Fuels etc.	1,800,000	1,800,000	22,500,000	22,500,000	22,500,000
Waste disposal	360,000	360,000	4,500,000	4,500,000	4,500,000
Poster printing	200,000	200,001	2,500,013	2,500,013	2,500,013
TOTAL	10,520,000	10,520,001	131,500,013	131,500,013	131,500,013

Community Costs

Description	NGN				
	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Payment to Family for 4 hectares	350,000	0	0	0	0
Lease of 46 hectares, with option to buy	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
"Homage" - once for all	100,000	0	0	0	0
Community development project - annually	300,000	300,000	300,000	500,000	500,000
TOTAL	5,750,000	5,300,000	5,300,000	5,500,000	5,500,000

Labour Cost

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Farm manager	5,200,000	5,200,000	6,240,000	6,240,000	6,240,000
Cashier	650,000	650,000	780,000	780,000	780,000
Farm hands	1,872,000	1,560,000	7,800,000	7,800,000	7,800,000
Driver	1,040,000	1,040,000	4,992,000	4,992,000	4,992,000
Cleaners	1,560,000	1,560,000	4,680,000	4,680,000	4,680,000
Security	3,120,000	3,120,000	7,800,000	7,800,000	7,800,000
Interns	1,040,000	1,040,000	2,340,000	2,340,000	2,340,000
TOTAL	14,482,000	14,170,000	34,632,000	34,632,000	34,632,000

Consultancies	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Feasibility study	300,000	300,000	330,000	330,000	330,000
Fish pond development and management	500,000	500,000	550,000	550,000	550,000
Accounting and tax management	200,000	200,000	220,000	220,000	220,000
TOTAL	1,000,000	1,000,000	1,100,000	1,100,000	1,100,000

VIII. Funding Mechanism

The Kaz initiative would provide 3500 tonnes of fingerlings and 1500 tonnes of feed to support the organization.

Ukiyo equity investor will provide equity for working capital and for equipment and vehicles purchase. The FAO will also supply tools and machinery to facilitate the construction of the fish ponds.

IX. Conclusion

The project is technically feasible and commercially viable, it is therefore recommended for Funding.