ONE OF THE NIKIMU FISH PONDS

LOCATION OF PROJECT: Kamonkoli - Nasenyi-Swamp.

P.O. BOX 1040, MBALE
(UGANDA)
NI KI MU FI SH FARMING PROJECT

LOCATION OF PROJECT: Kamonkoli sub county Budaka district (Uganda)

IMPLEMENTING AGENT: NIKIMU FARMER &IECDA

PROJECT COST: 33810000 Ug.Sh ($13,003.85)

DONOR SUPPORT: 25530000Ug.Sh ($9,819.23)

NFFP& IECDA CONTRIBUTION: 8280000 Ug.Sh ($3185)

PROJECT DURATION: 1 YEAR

SUBMISSION DATE: April 2013.

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DIRECTOR/ CORDINATOR
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FORMER AGRICULTURAL OFFICER
Email: ronaldmulonde@gmail.com

Question: Can aquaculture make good the growing shortfall between the declining yield of capture fisheries and growing consumer demand for fish in Africa?
The answer is yes. The potential is there, as numerous pilot projects have demonstrated and this one will demonstrate and work for communities in Budaka District eastern Uganda
1.0. History and location

Nikimu fish farming project is found in Kamonkoli Sub County Budaka District, with the coordinating centre at Kamonkoli sub county 5 miles from Mbale along the Tirinyi- Kampala high way. The fish ponds were constructed in 1984 with an aim to supply the community with fish, fight poverty; ignorance and fight diseases by improving local people’s health, lack of funds hindered its goals and objectives. They were never achieved. The resent demand for fish in the area has motivated the project to restart as evidenced with the high demand of “Mugongo Wazi” (lugwere) remains of fish from the fish factory. The theme of this project is that Money in every one’s pocket. And priority issue is Unemployment and lack of basic services for the youth and the whole community in Budaka District Eastern Uganda.

1.1. Project summary

Nikimu Fish Farming Project (NFFP) is an innovative project run by a local fish farmer and Integrated Environment Conservation and Disaster Assessment for Africa (IECDAA) with an aim of mobilizing, organizing and serving small-holder fish farmers in Budaka district located in eastern Uganda. NFFP& IECDAA have designed a community-based sustainability project that will provide the tools and resources needed by youth, women, and other interested local people to fight poverty and improve on the livelihood and health, to feed themselves, their families, and their communities. This Fish farming project is also aimed at improving the nutrition of the local people and the neighboring communities by providing cheap source of fish protein, and by putting to ultimate self sustaining use of the available potential places of small scale fish farming in Kamonkoli sub county Budaka District. The project has already started with two fish ponds but without proper breeds of fish fingerlings.

2.0. Organizational overview

2.1. Vision

The vision of Nikimu Fish Farming Project is for every family to have adequate means of livelihood and every individual to experience joy with a productive life.

2.2. Mission

The mission of Nikimu Fish Farming Project is to promote growth to maturity in the physical/ health, socio-emotional, economic/ educational aspects of the communities such that the poor are equipped with life sustaining skills for self reliance.

3.0. PROJECT JUSTIFICATION

Fish protein and other fish products are important ingredients in brain development and provision of important animal proteins. Fish is the only cheapest source of animal protein free from cholesterol and calcification. The scarcity of fish has reached an alarming level, when you visit the fish market, people are just lamenting when the refrigerated skeletal fish bones “Mugongo Wazi” is not supplied when they expect it,
and how they scramble for it when it arrives is testimony enough of the need and demand for fish. The presence of abundant running water in streams in Nasenyi swamp and already existing ponds are resources with big potential to produce fish which can supply the most parts of Kamonkoli sub-county and parts of Budaka district. There is plenty of manual labor (unemployed youth) which will be used in excavation and masonry work to build extra fish ponds and there is easy means of transport to the market.

3.1. FISH FARMING POTENTIAL

Uganda has a surface area of 241,038km\(^2\) of which 18.3% are permanent wetlands and 9.4% are seasonal wetlands. These offer enormous potential for fisheries and aquaculture development, this could contribute to a potential of 45% of GDP, creating 80% employment opportunities.

The National economy grew at an average of 6.5% per annum, the fisheries sector growth is about 3% but with a potential to raise to 7%.

The fisheries sector in Uganda provides a vital source of food, providing about 50% of animal protein. It has a current per capita consumption of 11kg. It is also a source of employment, the sector employs close to 80,000 people who are directly involved in catching fish, and a further 800,000 people who are involved in down stream activities related to fishing. It is also a form of recreation; trade with over US $ 80 millions earned per annum from fish exports making the sector second to coffee as foreign exchange earner and socio economic well being for the people of Uganda and the global community.

The total fish production has leveled at 220,000 tones, worth shillings 110 billions at production centre of open waters and aquaculture (ponds and dams). The main open water bodies include Lake Victoria, Albert, Kyoga, Edward, George and Kazinga Channel, Lake Wamala plus about 165 minor lakes. The main rivers are Victoria Nile, Albert Nile and Aswa. There are about 3,000 fish ponds averaging 200m\(^2\) operating in the whole country. Most of these are in Central and Western parts of Uganda and aimed at production for export.

There are over 300 endemic fish species in Uganda, but the commercially exploited species are *Lates niloticus* (Nile perch), *Alestes Clarias*, *Barbus hydrocynus*, *Rastrioneobola* and *Barbus haplochromis*.

A total of 20 fish processing plants were licensed to operate, 9 are operating fully the rest have failed to take off due to insufficient fish supply, competition and government restriction against over fishing due to scarce fishery resources. In the resent years the ministry of agriculture is planning to close a number of fishing sites as a result of the over fishing in Lake Victoria which has resulted into reduction, low catch fish. This project aims at providing and increasing on the production of fish in Uganda.
NFFP will mainly do the following:-
- Establish more two fish ponds
- Harvesting of fish for sale, marketing.
- Provide fish farming knowledge to other interested local farmers.
- Finding Market for fish produced by local farmers
- Establish proper fish harvesting and management measures.
- To encourage unemployed youth in the community to engage them selves in fish farming

3.2. Needs to be addressed

Rural unemployed women and youth in Budaka district face a triple crisis of poverty, environmental degradation, and land conflict (conflicts between the Bagwere and Bagisu to control Namatala wet land). Many are struggling to provide enough food to keep their families from starving. Mothers often go hungry when their husbands fail to return with food at home, to ensure that their children can eat many women and youth engage in rice farming in near by wet lands. This is likely to result in the food gap (time taken for rice to mature and harvest). Despite this their energy sacrifice, they end up with little to feed their children and sale to by other needs. Thus resulting into the problem of malnutrition, when it rains during rainy season men always run to wet lands to hunt for fish (see below).therefore providing little fund for this kind of project can be seen as a solution for most family problems.

4.0. PROJECT OBJECTIVES AND GOALS

The overall objectives are to conserve the environment in Kamonkoli wetlands; demonstrate the feasibility of fish faming; and encourage small scale fish farmers with a long term goal to overcome fresh fish scarcity and overcome poverty in Eastern parts of Uganda. And to provide an avenue for the local people (unemployed youths,
women,) to support their own living in having access to basic services, and be self-reliant through earning their own income through the sales of their fish.

4.1. The specific objectives of the project:

   a) Provide employment to people of Kamonkoli sub county-Budaka District.
   b) Increase income and standard of living in the community.
   c) Show that unemployed and uneducated youths are not a problem to the Community of Kamonkoli but assets to the community.
   d) Mobilize youths, the local people to work together for common benefits.

There are two major goals for Nikumu Fish Farming project.

   a) To improve the diet of the local community around Kamonkoli Sub County especially those who can not afford to buy meat, milk.
   b) To effectively use fish pond farming as a method of conserving the wetlands.

Clientele

There is one different clientele group for this project.

- The first clientele groups are the local people in the community who will participate in the Project as consumers and as workers. This clientele group is represented in the project objectives for Goal 1.
- This clientele group is important and essential component of this project. It is expected that significant attitude change will take place in this clientele group.

5.0. METHODS

The primary methods for achieving the goals and objectives of the Project will be:

- The resuming Nikimu pond fish farming in Kamonkoli Sub County that will become a focal point for providing information on fish diet, and one-on-one counseling of local fish farmers, and group counseling of local fish farmers.
- The development of training program supervised with experienced personnel’s in fish farming sector from the district head quarters.
- In addition, a Documentation/Dissemination Plan will be developed by staff to guarantee the systematic collection of information about the operation of the Project and provide the basis for sharing information with other similar projects in Budaka district.

5.0. EVALUATION PLAN

Project evaluation will be the responsibility of the Project Evaluator and consist of two different evaluative strategies - formative and summative.
1. **Formative Evaluation** - Primarily qualitative in nature, the formative evaluation will be conducted through interviews and open-ended questionnaires local community and the involved fish farmers in community and District will be asked about the day-to-day operation of the project, and questions will be asked to provide feedback for the ongoing improvement of the operation of the Project. The Project Evaluator will meet regularly with project staff to share findings from the formative evaluation effort. Periodic reports will be prepared that identify the major findings of the formative evaluation and how they have been used to improve Project operation.

2. **Summative Evaluation** - Primarily quantitative in nature, the summative evaluation will begin with the establishment of baseline data at the beginning of the Project (using a random sample of fish farmers to assess their improvement in fish farming knowledge) and then be conducted at 6 month intervals. A yearly report will be issued that presents the formative and summative findings.

5.1. **Activities**
- Mobilize local community, experts and do awareness of the project
- Purchasing of the fish fingerlings (baby fish) and fish feed to make the two fish pond operative.
- Planning and designing of other fish ponds in the area
- Purchasing of the materials for constructing the other fish pond
- Inspection and certification by Provincial Fisheries experts
- Construction of the whole project components
- Monitoring of the pond water quality and final inspections by experts
- Transferring fingerlings into ponds, feeding and monitoring carefully
- Negotiating for possible buyers or markets
- Transferring of fish into sizes to different ponds
- Start making sales to different buyers
- Creating a bank account and keep the income to make the project a sustainable project by starting again and expanding the size of the project.
- Evaluating of the whole project and provide report to the funder.

5.2. **Action needed**
- a) Discuss with community leaders, fisheries authorities in the district, possible markets or buyers, youths, local people and organizations involved to get written commitments to part take in where ever areas they will support.
- b) Also we really need the funding to plan, prepare and implement the projects as Planned so that its within the timeframe planned.

6.0. **Out Comes and Beneficiaries**
6.1. **Outcomes**
Expected results of the Nikimu Fish Farming Project (NFFP) are:
- Improve diets of Kamonkoli fish farmers and their families as they gain access to higher-quality and more regular sources of nutrition;
- Introduce youth, women and rural fish farmers who have not previously had access to credit or participated in income-generating projects to the
commercial sector and the market; give youth, women and rural fish farmers experience with credit, profit, and savings; and help them move toward economic self-sufficiency; and increase status of these farmers in their homes and communities and, as they take on responsibility outside the home, enable them to negotiate distribution of work in the household with family members and provide positive role models for their children, both in terms of hard work and innovations.

6.2. Beneficiaries

NFFP project will include both youth, women, interested fish farmers and will benefit these individuals and their family members, more than 1000 people. Some of the participants in the project will include fish farmers, sellers, buyers, and workers. Many participants targeted have lived in Kamonkoli for a number of years, but have had limited access to agricultural support, and other government farm aid programs. Some of them may have been left out as a result of lack of land to carry out farming. Due to financial and social constraints, many of the youth, women have not had access to joining vocational institutions and have little means of generating income for their families. Thus this project may pave way to solve these financial and social constraints.

7.0. PROJECT MANAGEMENT

- The project will be managed by the Project Coordinator, who will work hand in hand with the project committee comprising of employers, district fisheries technical support office, and a member from the donor organization who will ensure timely and quality project implementation and accountability.
- The implementing committee will comprise of the Project Coordinator and the project committee who will hire and supervise the employers on feeding and the overall stocking and management of the project.
- The Project Coordinator is the accounting officer, who will keep all the records of transactions, with evidence of genuine receipts, bank statements of all the transactions. Will submit progressive and completion reports with full accountability to Donors and District Authorities who will be concerned about the project.
- The district and national fisheries and Environment offices will provide the needed technical support and supervision during the implementation stage.
- The monitoring and evaluation will be carried out by the Project Committee and Coordinator who will be answerable to the board of directors, donors. This will be done through periodic meetings.

8.0. ENVIRONMENTAL IMPACT

- Fish farming in ponds is environmentally friendly and will not have adverse environmental impact on the ecosystem in the swamp.
- The water will circulate freely in the swamps Plants, flowers and trees will be planted on the pond pavements to regulate the aeration in the ponds.
- There will not be significant garbage from the fish project; any garbage produced will be deposited in gazette areas.
- The project has maintained proper environmental procedures for example as seen in the picture above (one of the fish pond) trees are maintained at the
boundaries of the fish pond, grasses are left outside inlet to help in filtering the water entering the pond.

8.0. The physical and social benefits of the project will be:

- Improved health of the communities.
- Provision of fish protein, which will enhance brain development in children and improved brain power in adults.
- Increased creativity and innovativeness among the youth, and local people.
- Provision of fresh fish protecting people from eating fish skeletal bones.
- Provision of employment to the local people.
- The project after seed money from partners will become self sustaining and the generated income will be used as seed funds to help individual farmer members to start their own fish ponds to increase availability of fresh fish in the region.
- Socially the project will benefit the youths by providing employment to both trained and untrained.
- The community will generate money, from the sale of fish, which will enable every family to keep at least two Friesian cows for production of milk. This will also enable parents send their children to school. The families will also be enabled to meet medical expenses.

8.1. PROJECT INDICATORS

- Increased involvement of families in fish farming.
- Increased demand and supply of fish.
- Decreased mortality and morbidity of children.
- Improved standards of living and health in families.
- Improved school performance standards and creativity among the people.
- Increased youth involvement into fish farming.
- Ensured food security
- Eradicated poverty in kamonkol Sub county Budaka district
BUDGET FOR THE NIKIMU FISH FARMING PROJECT (NFFP)

*Note: 1 USD is budgeted at Ushs. 2600*

<table>
<thead>
<tr>
<th>DESCRIPTION OF ACTIVITY</th>
<th>QUANTITY</th>
<th>UNIT COST (Ug. Shs)</th>
<th>TOTAL COST (Ug. Shs)</th>
<th>Total Cost (USD)</th>
<th>GRANT REQUEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) In let and out let channels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Plumbing materials</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4PVC pipes</td>
<td>60000</td>
<td>240000</td>
<td>92</td>
<td>Funding</td>
<td></td>
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<tr>
<td>4 PVC T-joints</td>
<td>18000</td>
<td>72000</td>
<td>28</td>
<td>Funding</td>
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</tr>
<tr>
<td>5 PVC Elbow joints</td>
<td>1800</td>
<td>9000</td>
<td>3</td>
<td>Funding</td>
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<tr>
<td><strong>Sub Total</strong></td>
<td></td>
<td><strong>930000</strong></td>
<td><strong>358</strong></td>
<td></td>
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<tr>
<td>2 Acquisition and stocking of ponds with fish fingerlings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Cat fish fingerling seeds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) Nile tilapia fingerling seeds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub total</strong></td>
<td></td>
<td><strong>7000000</strong></td>
<td><strong>2692</strong></td>
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<td></td>
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<tr>
<td>3. Fencing</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Fencing woven wire</td>
<td>6</td>
<td>120000</td>
<td>277</td>
<td>Funding</td>
<td></td>
</tr>
<tr>
<td>(b) Nails</td>
<td>8kgs</td>
<td>80000</td>
<td>31</td>
<td>Funding</td>
<td></td>
</tr>
<tr>
<td>(c) Labour</td>
<td>Lamp sum</td>
<td>200000</td>
<td>77</td>
<td>Funding</td>
<td></td>
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<tr>
<td>(d) Poles</td>
<td>20</td>
<td>2000</td>
<td>77</td>
<td>Funding</td>
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<tr>
<td><strong>Sub total</strong></td>
<td></td>
<td><strong>1200000</strong></td>
<td><strong>462</strong></td>
<td></td>
<td></td>
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<tr>
<td>4 Fish farming implementation;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(a) Feeding</td>
<td>80kg x 30 days x 7</td>
<td>500</td>
<td>8400000</td>
<td>1615</td>
<td>Funding</td>
</tr>
<tr>
<td>(b) Security</td>
<td>12 months x 1</td>
<td>100000</td>
<td>1200000</td>
<td>462</td>
<td>NFFP &amp; IECDAA</td>
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<tr>
<td>(c) Day to day management</td>
<td>Project Director</td>
<td>Full time - 12 months x 350000</td>
<td>4200000</td>
<td>1615</td>
<td>NFFP &amp; IECDAA</td>
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<tr>
<td>(d) Employers</td>
<td>2</td>
<td>120000x12 months</td>
<td>1440000</td>
<td>554</td>
<td>NFFP &amp; IECDAA</td>
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<td><strong>Sub total</strong></td>
<td></td>
<td><strong>15240000</strong></td>
<td><strong>5862</strong></td>
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<tr>
<td>5 Harvesting, Handling &amp; Mkt.</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing Pick up</td>
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<td>800000</td>
<td>3077</td>
<td>Funding</td>
<td></td>
</tr>
<tr>
<td><strong>Sub total</strong></td>
<td></td>
<td><strong>8000000</strong></td>
<td><strong>3077</strong></td>
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<tr>
<td><strong>Grand Total</strong></td>
<td></td>
<td><strong>32,3726000</strong></td>
<td><strong>12451</strong></td>
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Table 3. Summary of Budget Needing Donor Partners Support

<table>
<thead>
<tr>
<th>Description of activities needing support</th>
<th>Uganda shillings</th>
<th>US. Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>930000</td>
<td>$357.69</td>
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<tr>
<td>Acquisition and stocking of ponds with fish fingerlings</td>
<td>6860000</td>
<td>$2,638.46</td>
</tr>
<tr>
<td>Fencing</td>
<td>1200000</td>
<td>$461.54</td>
</tr>
<tr>
<td>Fish farming implementation</td>
<td>8400000</td>
<td>$3,230.77</td>
</tr>
<tr>
<td>Harvesting, Handling &amp; Mkt</td>
<td>8000000</td>
<td>$3,076.92</td>
</tr>
<tr>
<td><strong>Total Costs to be supported by Donors</strong></td>
<td>25530000</td>
<td>$9,819.23</td>
</tr>
<tr>
<td><strong>Total Costs to be Supported by NFFP &amp; IECDAA</strong></td>
<td>8280000</td>
<td>$3,184.62</td>
</tr>
<tr>
<td><strong>Grand Total Budget Needing Support</strong></td>
<td>33810000</td>
<td><strong>$13,003.85</strong></td>
</tr>
</tbody>
</table>

The Economic feasibility of the project will be as follows:

- Total investment in this project = 33670000 Uganda Shillings.
- Income from fish sales
- African catfish initial stock = 8000fries/pond.
- Nile tilapia initial stock = 5000fries/pond
- African cat fish reproduction rate = 40-60%
- Therefore the initial stock would reproduce on average 50% of 8000= 4000 fries.
- At the end of farming cycle there would be 8000+ 4000= 12000 African catfish fries/pond.
- At the end of the harvest period of 6-8 months each catfish fries is expected to mature to 0.7kg.
- Therefore 12000fries will be expected to produce 12000x 0.7kg = 8400kg/pond.
- Nile tilapia reproduction rate = 60-80%.
- Therefore, the initial stock would reproduce on average 65% of 5000= 3250fries.
- At the end of the farming cycle there would be 3250+ 5000= 3250 Nile tilapia fries.
- At the end of the harvest period of 6-8 months each Nile tilapia is expected to mature to 0.3kg.
- Therefore the 8250 Nile tilapia fries will produce 0.3 x8250 = 2475 kg/pond.
- Therefore total output will be 2475kg + 8400kg = 10875kg/pond.
- 1 kilogram of fresh fish costs on average 2,000 Uganda shillings.
- Therefore 45,303kg will generate an income of 10875 x 2,000 = 21750000 Uganda Shillings/ pond in 6-8 months.
- Therefore the 2 ponds will generate 21750000 x 2 = 43500000 Uganda Shillings.
The rate of return on investment will be = Total Income/Total Investment \times 100 = 4350000/33810000 \times 100 = 129\%.
Net economic profit on investment = 4350000-33810000 = 969000 Uganda Shillings($5700)

WORK PLAN FOR THE NIKIMU FISH FARMING PROJECT (NFFP)

<table>
<thead>
<tr>
<th>DATE</th>
<th>ACTIVITIES</th>
<th>BUDGETS</th>
<th>PERSON RESPONSIBLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-13</td>
<td>Mobilize local community, experts and do awareness of the project</td>
<td>100000</td>
<td>Coordinator</td>
</tr>
<tr>
<td>Apr-13</td>
<td>Planning and designing of other fish ponds</td>
<td>120000</td>
<td>Coordinator</td>
</tr>
<tr>
<td>Apr-13</td>
<td>Purchasing of the materials for constructing the ponds</td>
<td>200000</td>
<td>Coordinator</td>
</tr>
<tr>
<td>May -13</td>
<td>Inspection and certification by Provincial Fisheries experts</td>
<td>100000</td>
<td>Coordinator</td>
</tr>
<tr>
<td>May -13</td>
<td>Monitoring of the pond water quality and final inspections by experts</td>
<td>50000</td>
<td>Coordinator, committee</td>
</tr>
<tr>
<td>May -13</td>
<td>Purchasing of the fish fingerlings (baby fish) and fish feed, transferring fingerlings into ponds, feeding.</td>
<td>250000</td>
<td>Coordinator, committee</td>
</tr>
<tr>
<td>May -13</td>
<td>Transferring of fish into sizes to different ponds</td>
<td>0</td>
<td>Coordinator, committee</td>
</tr>
<tr>
<td>June-Oct-13</td>
<td>Feeding</td>
<td></td>
<td>Coordinator, committee</td>
</tr>
<tr>
<td>November-13</td>
<td>Fish harvesting, , and marketing</td>
<td>50,000</td>
<td>Coordinator, committee</td>
</tr>
<tr>
<td>December-13</td>
<td>Negotiating for possible buyers or markets</td>
<td>0</td>
<td>Coordinator, committee</td>
</tr>
<tr>
<td>Jan-13</td>
<td>Start making sales to different buyers in cities</td>
<td>0</td>
<td>Coordinator, committee</td>
</tr>
<tr>
<td>Feb&amp;Mar-13</td>
<td>Creating a bank account for keeping the income to make the project a sustainable project by starting again and expanding the size of the project.</td>
<td></td>
<td>Coordinator, committee</td>
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<tr>
<td>April-10</td>
<td>Evaluating of the whole project and provide report to the funder</td>
<td>70000</td>
<td>Coordinator, committee</td>
</tr>
</tbody>
</table>
CONCLUSION AND APPEAL

- People need fresh fish protein to remain healthy and productive.
- Fish farming is very viable and economically, physically and biologically feasible with great benefits to the community.
- We appreciate the fact that this is a big project with big initial capital; we are requesting you to support the 3 seed fish ponds to cater for the community.
- We therefore invite you to be part of this great vision aimed at improving the Nutrition, economic standards and health of the people.

YOUR SUPPORT

NFFP& IECDAA has been advancing fish farming and advantages of growing fish demand in communities around the Kamonkoli sub county for the past 24 years. We aim at creating a positive attitude change in the fish farming in the area. Your support of NFFP& IECDAA and our work in Kamonkoli Sub County is crucial to our ability to meet the immediate and long-term needs of most local farmers and their families. You can be sure that your investment will have an impact. We thank you for your consideration of this important request. May God richly bless you as you support this project.
### Table Shows How Pond Fish Farming Contributes To Millennium Development Goals

<table>
<thead>
<tr>
<th>Millennium development goal</th>
<th>How pond fish farming contribute to MDGs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eradicate extreme poverty and hunger</strong></td>
<td>Fish protein (proper nutrition) correlates with reduced health care, it is proved that a lot of money is spent on treating many nutritional diseases including protein deficiencies in Uganda for example kwashiorkor; project will improve food security by constant production and supply of fresh fish in the District and the Surrounding communities. Fish farming in potential sites will provide employment for at least thousands of people in Kamonkoli and Budaka District as a whole, and income to farmers who will get involved in fish farming hence reducing poverty.</td>
</tr>
<tr>
<td><strong>Achieve Universal Primary Education</strong></td>
<td>Fish protein is very important in brain cells development and therefore the mental and brain capacity of children. The poor academic and creativity capacity of the people is closely associated with lack protein in children’s diet, egg protein will enable boys and girls a like, complete a full course of Primary without difficulties.</td>
</tr>
<tr>
<td><strong>Promote gender equality and empower women</strong></td>
<td>Fish farming activities are executed both by men and women, except for pond construction and digging is considered man’s work</td>
</tr>
<tr>
<td><strong>Reduce child mortality</strong></td>
<td>Fish protein fights the most deadly disease (kwashiorkor) Caused by lack or low protein content in children Known to claim number of children in developing nations including Uganda.</td>
</tr>
<tr>
<td><strong>Improve maternal Health</strong></td>
<td>Improved nutrition (through fish protein) can reduce the susceptibility of a woman to diseases which appear during pregnancy. Including women of child-bearing age as &quot;end points&quot; in health assessments of Nutrition will inform Public health strategies as geared health of women, their children and the foetus.</td>
</tr>
<tr>
<td><strong>Combat HIV/AIDS, malaria and other Diseases</strong></td>
<td>Food security and improved nutrition helps in fighting diseases, improved nutrition (through egg protein) can help to boost the immune system of people suffering from HIV/AIDS.</td>
</tr>
</tbody>
</table>
Target: Have halted by 2015 and begun to reverse the incidence of malaria and other Major Diseases (millennium summit)

Ensure environmental sustainability
Target: Integrate the principles of sustainable development in to the country polices and reverse the loss of environmental recourses

By products will be recycled into poultry and animal feeds (organic farming), this promotes environmental sustainability, as compared to the use of inorganic fertilizers

Develop a global partnership for development

International (FAO) and other organizations represent a potential international funding to support national capacity building for food security and improve fish farming in Uganda. Promoting partnership with many fisheries organization and ministries will benefit the development of fisheries sector in Uganda

ADVANTAGES OF FISH FARMING

**Consumption.** An advantage of fish over other animal products is that chickens, goats and cattle are only consumed on special occasions such as traditional ceremonies, funerals and weddings, whereas fish forms part of the normal diet. This means that if somebody is hungry he/she will not slaughter a chicken, but he/she may go to the pond to catch fish.

**Saving function.** Farming fish can also have a saving function; the moment a farmer needs money he/she can drain the pond or catch part of the fish and sell it.

**Flexible labour demand.** Many farmers do not expand their farms because of the heavy workload in the planting and weeding season. In aquaculture, the construction of the pond demands a lot of work but is not restricted to a particular period. It can be done whenever the farmer has some spare time. Once the construction is finished the management of the pond does not require much time. The labour constraint for expanding agricultural activities does not seriously affect aquaculture.
APPENDIX A- COMMUNITY DIAGNOSIS

The community diagnosis was taken to find out the demand of local fish and how fish farming can be another enterprise to address nutritional, health and the livelihood of the community. This was done in 50 families of Kamonkoli sub-county.

The diagnosis was conducted between March and April, 2011 using interview, survey walk and direct observation.
In the diagnosis it was found out that the community wanted much to use fresh fish in their diet but it was scarce and many community farmers were willing to embrace the activity of fish farming if they saw it practiced profitably in the community and they had information on how the activity is done.
Just like in Uganda Budaka district has high ethnic groups existing at time but the 2002 population and housing censes analytical report for Budaka shows that Bagwere 82.2% which is the native, followed Banyole 8.5% and the least Basamia and Bakenyi 0.1%.

**Population:** 136,220

Note: The figure an above for this district got from 2002 population and housing censes analytical report for Budaka

**Age structure**

0-14 years: 51.8% (male 35,263; female 35,345)
15-64 years: 44.2% (male 27,733; female 32,488)
65 years and over: 4% (male 2810; female 2836)

Population growth rate: 2.94% (2002)
Birth rate: 50.15 births/1,000 population (2002)
Death rate: 6.5 deaths/1,000 population (2002)

**Major economic activities:**

The 2002 population and housing censes analytical report for Budaka shows that 81% working population are distributed in agriculture and fisheries and only 6.3% were office related workers. This can conclude the level of education is generally low in Budaka.

**Households**

There are 26,655 households in Budaka District with 17.6 % in Kamonkoli sub-county; there are 7 sub-counties in the District with IKI-IKI and Kamonkoli sub-counties having the highest % of households.

**Religions:** Roman Catholic 27.6%, Protestant 43.8%, Pentecostals 1.5%, Seventh Day Adventists 0.8, Muslim 24.8%, indigenous beliefs 1.5%

**Languages:** Lugwere mostly used by the Natives English (official national language, taught in grade schools, used in courts of law and by most newspapers and some radio broadcasts), Ganda or Luganda, Swahili,

**Literacy:**

Definition: age 15 and over can read and write
Total population: 60%
Male: 54.5%
Female: 45.5% (2000)

The information from 2002 population and housing censes analytical report for Budaka

**Main source of household livelihood**

According to the 2002 census, the major source of livelihood for the household is subsistence farming with 85.5%, Employment income only made up of 5.3 % and the family support was 5%. This shows that there are high levels of poverty and also that employment opportunities in the district are very