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PILOT PROJECT: INTRODUCTION OF ALTERNATIVE INCOME GENERATING ACTIVITIES FOR LIVELIHOOD DIVERSIFICATION FOR FISHING DEPENDENT COMMUNITIES ON THE ISLANDS OF THE THREE RIPARIAN STATES OF LAKE VICTORIA

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INDIAN OCEAN
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GCP/RAF/466/EC SmartFish Project

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Executive summary

The Lake Victoria Fisheries Organization, with support from the Food and Agriculture Organization of the United Nations, under the implementation of a regional strategy for the Eastern and Southern African - Indian Ocean region program, is implementing a pilot project: 'The Introduction of Alternative Income Generating Activities for Livelihood Diversification for Fishing Dependent Communities on the Islands of the Three Riparian States of Lake Victoria'.

A baseline survey on vulnerability/livelihood/poverty in all project target areas/groups was undertaken in June 2013. The purpose was to establish vulnerability indicators and livelihood/dependency/poverty patterns associated with selected self-help groups located on selected islands of Lake Victoria in the riparian countries: Kenya, Tanzania and Uganda. The other objective was to identify potential alternative income generating activities that would reduce dependency on fishing and fish resources.

The selected self-help groups and their respective beaches and islands are: Nyisiaya Women's Group in Ndeda Beach, on Ndeda Island and USIA Youth Group in Mahanga, on Mageta Island (Kenya); Mpola Mpola at Gori, on Jagusi Island and Ddajje Star Group in Ddajje, on Buggala Island (Uganda); REEC/UPENDO in Ihumbo, on Bumbire Island and NEEMA Community Group in Igalula, on Ukerewe Island (Tanzania).

The six self-help groups and respective fishing communities were interviewed by means of focus group discussions and personal interviews on major areas of concern: group status; ownership of assets; access to services; vulnerability; income and expenditure; poverty and gender. The results show that the fisher communities are primarily concerned with, in order of priority: health; declining fish catches; safety on the lake; credit access, and education. The fishers acknowledge their high dependence on fish stating that during times of drought, market fluctuations and weather changes the communities are more vulnerable. They therefore understand the need for diversification of income.

The survey findings show that most self-help groups were formed to augment income, food and access to credit. The majority of the members of the self-help groups have access to land; semi-permanent housing; a few of their own livestock; two meals a day; no means of their own transport; no access to electricity; inadequate access to safe water; low savings; and little or no education. The study shows that food and education are the main expenditure items and there is little money available for diversification into non-fishery income generating activities.

The different alternative income generating activities (IGAs) were proposed to supplement income, diversify sources of income and provide food. The IGAs include: crop farming, identified for food security and supplementary income for group members' households; poultry farming for eggs and meat to generate income; cattle rearing for milk and meat to generate income and supplement diet; fish farming to diversify, generate income and reduce fishing pressure on Lake Victoria.

The next steps are to support the target groups technically and financially so that they can undertake the proposed IGAs to meet their respective goals. In line with the objectives of the project, the following activities will be undertaken:

- Organize and facilitate a one-day validation meeting for at least 20 relevant stakeholders to present the results of the assessment and proposed work plans and interventions at the premises of the Lake Victoria Fisheries Organization;
- Capacity building of micro-project stakeholders and beneficiaries to sustain the initiative (business, marketing, management of micro-enterprises);
- Carry out the livelihood diversification activities according to the work plans and detailed budget agreed;
- Disseminate the preliminary results of the livelihood diversification activities through different media at the national level;
- Organize and facilitate a final meeting at the national level for at least 20 relevant stakeholders to present the results of the poverty reduction activities and the proposed upscale/replication of interventions.

Résumé exécutif

L'organisation des pêcheurs du Lac Victoria, avec le support de l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO), et dans le cadre du programme SmartFish pour la mise en place d'une stratégie régionale pour la région Afrique australe et orientale-océan Indien, a mis sur pied un projet pilote intitulé « Introduction d'activités génératrices de revenus alternatifs pour une diversification des moyens de subsistance des communautés dépendantes de la pêche dans les îles des trois Etats du Lac Victoria ».

En juin 2013, une étude sur la vulnérabilité, les moyens de subsistance et la pauvreté au sein des groupes cibles a été conduite dans toutes les régions. Le premier objectif de cette étude était l'établissement d'indicateurs et de niveaux en termes de vulnérabilité, de pauvreté et de moyens de subsistance des groupes d'entraide. Les groupes sélectionnés sont situés sur des îles dans les pays riverains du lac Victoria (Kenya, Ouganda et Tanzanie). Le deuxième objectif de l'étude était d'identifier de potentielles activités génératrices de revenus alternatifs qui pourraient réduire la dépendance des communautés à la pêche et aux produits de la pêche.

Les groupes d'entraide qui ont été sélectionnés sont : le groupe des femmes de Nyisiaya de la plage de Ndeda sur l'île du même nom, le groupe des jeunes USIA à Mahanga sur l'île Mageta au Kenya, le groupe Mpola Mpola à Gori sur l'île de Jagusi, le groupe Ddajje Star à Ddajee sur l'île de Buggala en Ouganda, le REEC/UPENDO à Ihumbo sur l'île de Bumbire et le groupe NEEMA à Igalula sur l'île d'Ukerewe en Tanzanie.

Les entretiens avec ces six groupes d'entraide et leur communauté de pêcheurs se sont déroulés au travers de groupes de discussions et d'entretiens personnels au sujet des préoccupations principales, à savoir, le statut des groupes, la propriété et l'accès aux services, leur vulnérabilité, leurs revenus et dépenses, la pauvreté et le genre.

Les résultats montrent que les communautés de pêcheurs sont concernées, par ordre de priorité, par : la santé, le déclin des captures de pêche, la sûreté sur le lac, l'accès au crédit et l'éducation. La grande dépendance au poisson est reconnue par les pêcheurs, de sorte que les communautés sont impactées par les sécheresses, les fluctuations du marché et les changements climatiques. De ce fait, les pêcheurs insistent sur le besoin de diversification de leurs revenus.

Les conclusions de l'étude montrent que la plupart des groupes d'entraide ont été créés pour augmenter les revenus, améliorer l'alimentation et favoriser l'accès au crédit. La majorité des membres des groupes d'entraide ont un accès à la terre, des maisons semi-permanentes, un peu de bétail, mangent deux repas par jour, n'ont pas de moyen de transport propre, n'ont pas d'accès à l'électricité, ont un accès inadéquat à l'eau courante, ont peu d'épargne et un faible niveau d'études. L'étude montre que l'alimentation et l'éducation sont les principales dépenses et qu'il reste peu d'argent pour la diversification dans des activités génératrices de revenus non liées à la pêche.

Les différentes activités génératrices de revenus alternatifs ont été proposées pour compléter les revenus existants, diversifier les sources de revenus et fournir de la nourriture. Les activités génératrices de revenus alternatifs incluent : la production agricole pour améliorer la sécurité alimentaire et assurer un complément de revenu pour les membres du ménage, l'élevage de volailles pour les œufs et la viande, l'élevage de bétail pour le lait et la viande et compléter le régime alimentaire, la pisciculture pour diversifier et générer des revenus mais également pour réduire la pression exercée par la pêche sur le lac.

Les prochaines étapes sont de supporter d'un point de vue technique et d'un point de vue financier les groupes-cibles afin de réaliser ces activités génératrices de revenus alternatifs et de leur permettre d'atteindre leurs buts. Parallèlement aux objectifs du projet, les activités suivantes vont être entreprises :

- Organiser et faciliter une réunion de validation dans les locaux de LVFO avec minimum 20 parties prenantes et durant laquelle seront présentés les résultats de l'enquête et une proposition de plan de travail et d'intervention.
- Renforcer les capacités des parties prenantes et des bénéficiaires des micro-projets afin de poursuivre l'initiative (business, marketing et gestion de micro-entreprises).
- Réaliser les activités de diversification des revenus selon le plan de travail et le budget tels qu'approuvés.
- Diffuser les résultats préliminaires des activités de diversification des revenus au travers des médias nationaux.
- Organiser et faciliter une réunion à l'échelle nationale avec minimum 20 parties prenantes durant laquelle seront présentés les résultats des activités de réduction de la pauvreté ainsi qu'une proposition d'accroissement et de réplique des interventions.

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Acronyms and abbreviations

AIG	Alternative Income Generating Activities
BMU	Beach Management Units
CBO	Community Based Organization
CDF	Constituency Development Fund
DFO	District Field Officer
EMEDO	Environmental Management and Economic Development Organization
ESA/IO	Eastern and Southern Africa/Indian Ocean
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
FGD	Focus Group Discussions
HIV/AIDS	Human Immune Virus/Acquired Immune Deficiency Syndrome
IGA	Income Generating Activities
ILO	International Labour Organization
IOC	Indian Ocean Commission
IRFS	Implementation of a Regional Fisheries Strategy
LVFO	Lake Victoria Fisheries Organization
NAADS	National Agricultural Advisory Services
NGO	Non-Governmental Organization
REEC	Riseth Evergreen Environment Conservation
SACCO	Savings and Credit Cooperative Society
SHED	Ssese Health Effort for Development
STD	Sexually Transmitted Diseases

1. Introduction

The Food and Agriculture Organization of the United Nations (FAO), under the implementation of a regional strategy for the Eastern and Southern African-Indian Ocean (ESA-IO) region program (GCP/RAF/466EAC), and the Lake Victoria Fisheries Organization (LVFO), are undertaking a pilot project: *'The introduction of alternative income generating activities for livelihood diversification for fishing dependent communities on the islands of the three riparian states of Lake Victoria'*.

The purpose of the project is to contribute to livelihood diversification of the fishing dependent communities on the islands of Lake Victoria, through the introduction of alternative income generating activities (IGAs).

The expected outcomes include:

- Vulnerability aspects, livelihood dependency and poverty patterns assessed in at least six groups in selected islands;
- Local capacities and skills related to livelihood diversification improved and alternative IGAs introduced to selected groups;
- Lessons learned from pilot phase analysed and compiled for possible future interventions and for contribution to regional initiatives on livelihood diversification and gender initiatives in the fields of fisheries and climate change.

The LVFO undertook various fieldwork activities (see Annex 1, Terms of Reference), which included: a participatory assessment of the community; group needs; identification of empowerment and organizational requirements of the target groups; identification of alternative income generating activities; capacity building requirements for income generating activities; generation of baseline indicators for impact assessments and reporting. This report focuses on the above-mentioned outcomes.

A survey was undertaken by the LVFO team covering six islands (2 in each country) and six self-help groups (one on each island). The entry point to the fisher communities was the Beach Management Units (BMUs). These are grassroots fisheries management institutions that have useful basic information on their respective communities. The BMUs helped validate data from the groups that participated in the survey. The fieldwork itinerary and overall work plan can be found in Annex 2.

This report describes the results of the survey and proposed alternative IGAs, and follow-on activities for a pilot intervention phase of the project. The survey results will be presented to key stakeholders during a one-day validation workshop.

1.1 Methodology

Six islands and six target groups were identified in consultation with Fisheries Departments, local authorities, BMUs and relevant stakeholders. The groups involved in the study were selected on the basis that they are already engaged in alternative IGAs. Secondly, the members reside in the selected island fisher community. These six groups showed an interest in improving their livelihoods and it is easy to monitor their progress, as they are not scattered across various landing sites. The following is the list of the six targeted self-help groups:

- USIA Youth Bunge Group, Mahanga Beach, Mageta Island, Bond District, Kenya;
- Nyisiaya Konyri Kendi Women's Group, Ndeda Island, Bond o District, Kenya;
- NEEMA Community Organization, Igalula Beach, Namasabo Village, Ukerewe Island/District, Tanzania;
- Riseth Evergreen Environment Conservation REEC/UPENDO, Bumbire Island, Muleba District, Tanzania;
- Mpola Mpola Integrated Group, Jagusi Island, Mayuge District, Uganda;
- Ddajje Tukolele Wamu Star Group, Buggala Island, Kalangala District, Uganda.

The methodology used for the survey is outlined below:

1. Collection of secondary data and review of relevant documents (two days);
2. Preparation of checklist and questionnaires;
3. Conduct livelihood assessment survey (primary data collection) in the six selected island communities. Data collection was undertaken over two days on each island with one night actually on the island. Data and information were collected through group interviews with BMU leaders and the community. Focus group discussions (FGD) and personal interviews were carried out with members of the self-help groups. The process was undertaken as follows and is described in more detail in the daily plan in Annex 3:
 - i. Meeting with District Field Officers (DFO) to discuss field visits and the collection of background information;
 - ii. Meeting with BMUs to agree on the day's activity. A guide for BMU discussions can be found in Annex 4;
 - iii. Transect-walk through the community to understand current activities and potential baseline indicators. Information to draw the beach/village map will also be collected;
 - iv. FGDs with BMU and community to collect information on community issues. FGDs with BMU and the community will identify indicators that will help the community understand changes on various issues that affect them (see Annex 5);

- v. FGDs with target groups and enterprising individuals to:
 - learn more about these groups;
 - establish baseline data and indicators on vulnerability and poverty for current and future assessments;
 - understand which past diversification initiatives have worked and/or failed and identify non-fishery income generating ideas that could form the basis of project interventions and to clarify the associated technical and financial support;
 - establish indicators that could be used to understand changes to the group later during the project period;
 - help identify opportunities for livelihood diversification. See FGD self-help group checklist in Annex 6.
 - vi. A map showing the major features at each beach is drawn based on transect walk observations,
 - vii. Recap and validate findings with the BMUs at the end of each day's session.
4. Process, collate and analyse all information collected during the baseline survey;
 5. Prepare and submit an assessment report with work plans for each of the six target groups for approval by the FAO.

A ranking system was used to help understand and grade the key issues better. Groups or individuals were asked to rank, in order of priority, the different factors that affect their livelihood. A simple scoring method was used in data processing to help identify the most important issues. The main issue/choice is given the highest score (5) and the least important issue/choice has the lowest score (1).

1.2 Secondary source review data

Lake Victoria has 1,433 fish landing beaches, of which 535 (37 percent) are on several islands of the lake. The majority of fishers located on the islands reside in fishing villages with populations ranging from 100 to over 5,000 per village. Those who live and work here do so in deplorable conditions, deprived of the most basic necessities. The 2010 Frame Survey of Lake Victoria shows that only 7 percent of the fishing villages have electricity; 11 percent have potable water; 34 percent have communal toilets; 66 percent have primary schools; 38 percent have health clinics; 12 percent have fish landing jetties or pontoons; and 31 percent have all weather roads (LVFO, 2010).

Most of these facilities can be found on the mainland fishing beaches as opposed to the islands. Vulnerability levels are very high among the island fisher communities who are prone to malaria, communicable diseases including HIV/AIDS, and other sexually transmitted diseases (STDs). Other major issues are recurrent fishing and resource based conflicts; isolation due to the remoteness of the islands; and exploitation of fishers by middlemen.

Poverty and food insecurity levels are higher on the islands than on the mainland due to higher dependency on small-scale fisheries as the main, and often only, source of income. The recent decrease in catches due to stock decline, of mainly Tilapia and Nile Perch, makes the situation even worse.

One approach to supporting the island communities is to address the overdependence on fishing and to divert pressure away from fisheries resources through the promotion of alternative IGAs.

Various studies indicate that livelihood issues override fisheries management issues in terms of priority for the fisher communities of the islands of Lake Victoria. The LVFO has supported the establishment of BMUs, which are the entry points to fisher communities, as well as instrumental in the management and development of these communities. The BMUs can play a role in monitoring community programs that benefit beneficiaries and development partners.

Efforts to improve the livelihoods of island fishing villages are being made by the communities themselves, NGOs and government and development partners, particularly with regard to issues of health, water and sanitation. Few organizations are dealing with the livelihood aspects of food security, income generation and transportation.

RONGEAD is supporting a project on Lake Victoria in Tanzania, focusing on six fisher and farming communities. Of the six communities, two are on Ukerewe Island, the rest are in mainland districts: Mwanza (one) Magu (one) and Musoma (two). The communities fish Nile Perch, Nile Tilapia and Dagaa and grow vegetables, oranges and bananas. This project is expected to benefit 100 households. The purpose is to promote income-generating activities by industrialising the production of fisheries and farmed commodities through the production of environmentally friendly biogas energy around the lake.

1.3 Status of selected beaches

Summarized information on the demographic factors of the selected beaches, fish landing sites and fishing villages is provided below. This information is based on the findings of this survey, which were provided by BMU and community consultations and discussions and BMU records. Table 1. below provides demographic information on the location, population and distances between the mainland and the islands, where the targeted self-help groups are found.

Table 1: Demographic information of the selected beaches

Targeted fish landing beach	Island	Sub county / ward	District	Population of targeted beach / site		Nearest mainland landing beach / site / port	Fisheries staff working at the beach / site		BMU / Contact Person
				M	F		M	F	
Mahanga, Kenya	Mageta	Mahanga	Bondo	4,000	3,000	Usenge - 12km			Daniel Omego
Ndeda, Kenya	Ndeda	Bondo	Bondo	2,000	3,000	Liunda - 7.4 km			Joseph Adongo
Igalula, Tanzania	Ukerewe	Namasabo	Ukerewe	5,000*	*	Mwanza - 45 km		1	Tatus Koloko
Ihumbo, Tanzania	Bumbire	Bumbire	Muleba	1,101*	*	Kamaganza - 14.8 km	2		Mohammed Amir
Ddajje, Uganda	Buggala	Bujjumba	Kalangala	324	183	Kasenya - 40km	1		Byekwaso Yalabi
Gori, Uganda	Jagusi	Jagusi	Mayuge	1,200	2,400	Bwondha - 3km	1		Buyinza Jawali

*Both male and female

Source: IOC/FAO/LVFO Livelihood Survey 2013

Kenya

Ndeda Beach

Ndeda Island is in Kenya, on the northeastern part of Lake Victoria. Ndeda beach is located on Ndeda Island and is 7 nautical miles from Liunda beach on the mainland in Bondo District. Ndeda beach has a population of 5,000 people, of whom 60 percent are male and 40 percent are female. Fishing is the main activity of the Ndeda population, which involves 1,200 fishers, of whom 96 percent are men and 4 percent are women. Monthly catches are estimated at 214 tonnes, of which 99 percent is Nile Perch and 1 percent is Dagaa.

Mahanga Beach

Mahanga Beach is situated on Mageta Island, Kenya. It is 12 nautical miles away from the nearest mainland port of Usenge in Bondo District, Kenya. The island is on the northeastern side of the Lake Victoria. Mahanga beach has a population of 7,000 people, of whom 57 percent are male and 43 percent are female. Fishing is the main economic activity with 4,000 fishers, of whom 2,500 are male and 1,500 are female. The estimated monthly catches are 791.36 tonnes, of which 74 percent is Nile Perch, 25.8% percent is Tilapia and Dagaa is 0.2 percent.

Tanzania

Igalula Beach

Igalula beach is situated in Namasabo village on Ukerewe Island, also a district, in Tanzania. Ukerewe Island is on the eastern side of the lake. Igalula is 12.9 miles away from Nansio town, the island's main port, which is 45 nautical miles away from the city of Mwanza. This beach is unique as it is located on the outskirts of a rural agricultural fishermen's settlement. The beach is surrounded by fishponds that belong to the NEEMA group and those of an individual fish farmer.

The population of Namasabo village is over 5,000 people. Fishing and farming are the major economic activities, and most of the fishers generate income from their citrus farms. There are 160 fishermen at Igalula beach and most are descendants of traditional fishers. The main catch at Igalula is Nile Perch, which is estimated at 6 tonnes per month.

Ihumbo Beach

Ihumbo beach is situated on Bumbire Island, in Muleba District, Tanzania. It is 14.8 nautical miles away from Kamaganza port in Muleba District. The island is in the southwestern part of Lake Victoria. The population of Ihumbo beach is 1,101 people. Fishing is the main economic activity and the number of fishers is 304. The main catch is Nile Perch, with monthly estimates of 738 tonnes.

Uganda

Ddajje

The Ddajje landing site is situated on Buggala Island, the main island of the Sesse Islands in Kalangala District, Uganda. Buggala Island is northwest of Lake Victoria. The Ddajje fish landing site has a population of 507, of whom 64 percent are male and 36 percent are female. The nearest landing site on the mainland is Kasenyi, Wakiso District, which is 40 nautical miles away. Fishing is the main economic activity with 274 male fishers. The monthly catch is estimated at 56 tonnes: Dagaa (89 percent) is the main catch followed by Nile Perch (9 percent), and Tilapia (2 percent).

Gori

Gori fish landing site is situated on Jagusi Island, which is in the northeastern part of Lake Victoria in Uganda. The population of Gori landing site is 3,600 people of whom 67 percent are male and 33 are female. The nearest landing site on the mainland is Bwonda in Mayuge District, which is 3 nautical miles away. Fishing is the main economic activity of Gori community. The monthly catch estimate is 1 tonne; Nile Perch (56 percent) is the main catch followed by Tilapia (33 percent) and Haplochromis (11 percent). There are 100 fishers, of whom 30 are part-time and 70 are full-time.

1.4 Concerns of the island fisher communities of Lake Victoria

This section describes the major concerns of the island fisher communities that were voiced during FGDs.

According to the findings, the main concerns of the island fisher communities are: lack of access to good health care (67 percent); declining fish catches (60 percent); and safety on the lake (37 percent). These are followed by market access and access to credit at 27 percent each. Table 2. provides a summary of the indicators that the communities use to assess those factors that affect their livelihoods and resources.

Access to safe water was not ranked because on some islands the situation has improved, following the installation of boreholes; the protection of springs; treatment of drinking water with WaterGuard by individual households; and the availability of factory-bottled water.

The concerns presented in Table 2. represent the views of the BMUs and the community in general. Many of these issues have already been recognized and efforts have been made to address them, as they have far-reaching consequences, impacting many peoples' lives.

Table 2: Major fishing community concerns, by rank, from the target BMUs and community

Main concerns	Mahanga, Kenya	Ndeda, Kenya	Igalula, Tanzania	Ihumbo, Tanzania	Ddajje, Uganda	Gori, Uganda	Total score	%	Community indicators
Declining fish stocks/catches	1			1	1	3	18	60	Poor catches and increased fishing hours. Longer distances and higher operating costs (fuel)
Illegal fishing and fish trade			5			5	2	7	Increasing illegal practices, gear theft, accidents
Poor market access	4	4	3	5			8	27	Unable to process/sell agricultural products
Lack of access to good health care	2	1		3	3	1	20	67	Lack of facilities, personnel and poor services
Food security	3						3	10	Access to affordable food
Safe water access								0	Access to safe water
Credit access		2	4	4			8	27	Facilities in place and access to credit
Inadequate education	5				4	2	7	23	Lack of teachers and schools are far away
Environmental degradation						4	2	7	Type and mitigation
Safety on the lake		3	2	2			11	37	Gear theft and accidents
Land access / ownership limitations								0	Ownership and access
Costly fishing equipment / inputs		5					1	3	Availability of fishing inputs at reasonable prices
Lack of capital			1				5	17	Access to credit, skills and knowledge of microfinance

Source: IOC/FAO/LVFO Livelihood Survey 2013

There may be certain issues that are less important or non-noticeable to the community as a whole, but which are of great importance to some individual members. Such issues form the foundation of many self-help groups, and in the long-run these groups may benefit the entire community. Poverty, marginalization, social exclusion, and rights to use or ownership of common resources are among the main issues.

1.5 Overview of target beneficiary self-help groups

This section provides an overview of the six selected self-help groups based on information collected during the survey. This information gives an overview of the status of the groups and is background information for the proposed interventions expected to be undertaken by the groups.

Nyisiaya Konyri Kendi Women's Group, Ndeda Beach, Ndeda Island, Bond District, Kenya was established on 10 August 2006. It is made up of 24 members (five male and 19 female) who started the group based on a merry-go-round/table banking system to access funds, especially when fish is not available. The group's core purpose is to support each member to build a house in his/her own home area, mostly on the mainland. It has a two-year funding cycle whereby each person contributes 4,000 Kshs to enable an individual member to receive 96,000 Kshs (US \$1,200) to build a house. Members can also borrow money from the group and return it with interest. Members' shares also earn interest, which is paid out as dividends annually. Members also have to pay fines if their contributions or loan repayments are late. The group also enables members to raise their children's school fees. The group is involved in tree planting and has already planted 400 trees (eucalyptus and pine). They need training in micro-finance, savings and credit and technical support for poultry farming since this is an area in which they lack knowledge, skills and experience.

The USIA Youth Bunge Group, Mahanga Beach, Mageta Island, Bondo District, Kenya started in 2013 and all the necessary paperwork for registration has been submitted to the relevant authorities. It has 14 members (8 male and 6 female). The objective of this community-based organization (CBO) is to raise living standards, eradicate poverty and protect the poorest people of Mageta Island through improved food security and social safety nets. Such safety nets include community groups that help bereaved members with the burial of dead relatives; look after the elderly; and feed the poor. USIA practice farming and plan to increase the production of watermelon. They practice merry-go-round/table banking whereby they meet once a week and contribute between a minimum of one share, which is equal to 100 Kshs (US \$1.25) and a maximum of 1,000Kshs (US \$12.5). Access to credit includes: the merry-go-round system, Kenya Women Finance Trust; Equity Bank; and Pioneer Microfinance. A mechanism to access funds, known as M-PESA, is a conduit to get funds from friends who have personal bank accounts.

The Constituency Development Fund (CDF) also exists, but is very competitive. The group does not have any offices yet due to limited funds, but rents a place for 300 Kshs for three hours whenever they need to meet. They plan to go into dairy farming to supply milk; poultry to supply eggs; to increase savings by increasing the minimum share from 100 Kshs to 200 Kshs; and to increase the production of watermelon.

NEEMA Community Organization, Igalula Beach, Namasabo Village, Bukunda, Ukerewe Island, Ukerewe District, Tanzania, started on 10 April 2006. The group has 20 members, of whom 11 are male and nine are female. The purpose of the group is to move away from bad fishing methods, restore levels of fish in the lake, and in the process, increase and diversify sources of income. Their main activity is fish farming. They also grow tomatoes, sweet potatoes and vegetables. Their plans include poultry breeding; support for the formation of self-help groups; support for HIV/AIDS victims; and environmental conservation.

This self-help group access funds from the Savings and Credit Cooperative Society (SACCO) as they have difficulty accessing money from banks due to a lack of assets for collateral. They received technical support from the Environmental Management and Economic Development Organization (EMEDO). EMEDO also supported the fencing of their fishponds. Membership subscription was initially 1,000 TShs (US \$0.65) per month but now the contribution is in terms of physical labor. The group would like to receive technical and financial support for aquaculture, especially for the production of fingerlings, and fish feed for their own use and for sale to others. They need a solar water pump to combat drought; a pellet-making machine; a store and an office. A private fish farmer, Mr. Kalibala Mpagi, who has 18 fishponds, also benefits from technical advice given to NEEMA.

UPENDO, Ihumbo Beach, Bumbire Island, Muleba District, Tanzania was established in 2005 and registered as **Riseth Evergreen Environmental Conservation (REEC)** group in 2006. However, UPENDO, which means friendship or love, is still commonly used. REEC/UPENDO has 29 members, 14 male and 15 female. The group was started initially to support vulnerable HIV/AIDS victims but when they failed to get support, they decided to plant pine trees instead. So far, they have planted 2,500 trees and expect to generate income that would be used to help victims cope with HIV/AIDS. They plan to diversify into the planting of local trees such as Musizi and Muhumura, as pine trees block out sunlight and the needles carpet the soil and reduce the fertility needed for inter-crop farming. This group grows yams (500 plants), tomatoes (600 plants), pepper (100 plants) and avocados (200 trees) and they have 20 ducks. They carry out a merry-go-round banking system known as *Tupeane*. The group has access to over 25 hectares of land. They need financial support to diversify into planting local trees and to start a SACCO, and they also require technical support to help them rear ducks.

Mpola Mpola Integrated Group, Gori Djagusi Island, Mayuge District, Uganda was established on 20 October 2010 with 19 members. It currently has 33 members, of which seven are male and 26 are female. The group was formed to try and cope with the decline in fish catches. This group is engaged in sweet potato, groundnut and bean farming and is also involved in cattle and bee keeping. Their sources of funds include proceeds from farming, loans from the village bank, member contributions and subscription fees. The women aim to market their products in order to get the best profit. The group would like to invest in transportation and storage for their produce and plan to purchase an ox-plough, to save hiring one at 100,000 per use (US \$40). They also wish to diversify into tailoring and dyeing material (tie dye), but lack the appropriate knowledge and skills.

Ddajje Tukolele Wamu Star Group, Ddajje fish landing site, Buggala Island, Kalangala District, Uganda started in 2002 and has 18 members, 3 male and 15 female. The group aims to increase income, support HIV/AIDS victims and improve food security. The activities they carry out include fishing and processing the sardine-like Dagaa and pig and cattle breeding. The chicken and goats they were rearing died which disrupted the smooth running of the group. The group will only go back to chicken and goat rearing after acquiring the necessary technical knowledge and skills. They have 16 drying racks, of which ten were provided by NAADS and six by Ssesse Health Effort for Development (SHED). Their funds are raised from the merry-go-round system; a membership subscription of 1,000 Uses (US \$0.40) per week; rental of drying racks at 500 Uses (\$0.20) per jerry can of fish. They sell most of their Dagaa products directly to one female member of the group, who then sells it in the Democratic Republic of Congo (DRC). They require technical and financial support for cattle and pig breeding, as well as training in management skills.

2. Survey results from the self-help groups

This section provides the results and findings of the survey, mainly from the FGDs and personal interviews of the six target groups. It contains information on the status of the six groups; their formation and operation; activities undertaken; the trends, shocks, and vulnerabilities they have faced; and the most at risk groups. It also provides information on funding sources and market outlets for their products.

2.1 Current status of the six groups studied

Table 3. provides an overview of the six groups involved in the survey. It provides information on the location of the groups, date of establishment and disaggregated membership.

Table 3: Current status of the six groups studied

Name	Country	Island	District	Established	N° of Members	M	F
Mpola Mpola Integrated Association	Uganda	Jagusi	Mayuge	2010	33	7	26
Ddajje Tukolere Wamu Star Group	Uganda	Kalangala	Kalangala	2002	18	3	15
Uganda Total					51	10	41
USIA Youth Bunge Group	Kenya	Mageta	Bondo	2013	14	8	6
Nyisiaya Konyri Kendi Women's Group	Kenya	Ndeda	Bondo	2006	24	5	19
Kenya Total					38	13	25
Riseth Evergreen Environmental Conservation REEC/UPENDO	Tanzania	Bumbire	Muleba	2005	29	14	15
NEEMA Community Organization	Tanzania	Ukerewe	Ukerewe	2006	20	11	9
Tanzania Total					49	25	24
Grand Total					138	48	90

The total number of group members is 138. Membership is dominated by women (65 percent) who are, for the most part, confined to land-based activities. Men, who are predominately involved in fishing activities, constitute 35 percent of the groups.

2.2 Purpose behind forming a group

The most important reason given for forming a group is to increase income (80 percent), followed by a need to access funds (33 percent). Following this comes the need to reduce vulnerability, diversify sources of income and earn a living (30 percent each). Food and investment come in fourth position. The fisher communities consider income as a livelihood strategy towards poverty alleviation and accessing food, health, education and other basic needs.

Table 4. provides information on the formation of the six groups. The reasons given for forming self-help groups are diverse although they are all aimed at improving the standard of living of group members and their households.

Table 4: Purpose behind forming a self-help group

Name	Increase income	Access Funds	Food	Diversify income sources	Earn a living	Vulnerability	Investment (houses, land, etc.)	Restore fish stocks	Ranking
Mpola Mpola	3		2	1	4	5			
Ddajje Star	1		2		4	3			
USIA Youth	2			3	1				
Nyisiaya Konyri	3	1					2		
REEC / UPENDO	2			3		1			
NEEMA Community	1			2				4	
Points	24	10	8	15	9	9	8	2	
Percentage (%)	80	33	27	30	30	30	27	7	

2.3 Activities undertaken by the self-help groups

Table 5. shows the current activities undertaken by the self-help groups. Most groups are involved in crop farming (60 percent), tree planting (37 percent) and merry-go-round /table banking (30 percent).

Table 5: Activities undertaken by the self-help groups

Name	Crop farming	Livestock	Bee keeping	Tree planting	Micro-finance	Trade	Table / Merry-go-round banking	Fish farming	Poultry
Mpola Mpola	1	2	3						
Ddajje Star						1			
USIA Youth	2						1		
Nyisiaya Konyri				1			2		
REEC / UPENDO	1			2					3
NEEMA Community	2			4				1	3
Points	18	8	6	11		5	9	5	6
Percentage (%)	60	27	20	37		17	30	17	20

It should be noted that the most important activities are those where members are undertaking joint activities. In addition to this, each member is encouraged to undertake separate activities.

2.4 Trends, shocks and vulnerabilities, according to groups

Trends may be associated with changes in crop or fish production due to climate change. Poor harvest of crops due to drought or low fish catches due to a decline in fish stocks result in downward trends of food production. These downward trends have a consequential effect on revenue, income and food security.

A shock is sudden incidence that has a devastating effect. In March 2013, a tornado hit Lujjabwa Island, Kalangala District, Uganda and destroyed property, livelihoods and came as a great shock to the affected people. The Government of Uganda declared it a disaster and the Red Cross and other NGOs responded immediately to help the islanders cope.

Vulnerability arises from the inability to cope with adverse situations, such as, in war, conflicts and famine. Women and children are unable to cope with such conditions, as they are less mobile than men. Fishers tend to migrate with fishing seasons, usually leaving their families behind with little support.

With declining fish catches, fisher households have moved to crop production, animal husbandry and other related activities in order to cope. Closure of the EU market has had a negative effect on Lake Victoria fishers' livelihoods and their ability to survive. Many fishers may shift from the highly lucrative Nile Perch market to a lower valued local market, such as that of Dagaa. Environmental degradation due to poor management of natural resources also affects the dependant community's livelihood.

Figure 1. shows the devastation caused by the tornado that hit Lujjabwa Island and destroyed more than 75 percent of the houses and shelters on the island including the fish landing site.

Figure 1: Tornado hits Lake Victoria



Source: New Vision, 18 March 2013 (Web)

Table 6. below provides data and information on trends, shocks and vulnerabilities.

Table 6: Trends, Shocks and Vulnerability

Name	Weather changes (drought, floods, wind, water levels)	Market changes (collapse)	Migration (due to conflict)	Epidemics (HIV, cholera, typhoid, animal diseases,	Poor management of natural resources	Inadequate technical skills	Decline in fish stocks	Transportation	
Mpola	1							2	Ranking
Ddajje				1	3				
USIA		2		1					
Nyisiaya	2			3			1	3	
REEC (UPENDO)				1					
NEEMA	1					2			
Points	14	4		18	3	4	5	7	
Percentage (%)	47	13		60	10	13	17	23	

Health related issues are the main challenges (60 percent) identified by the self-help groups, notably, epidemics such as cholera, typhoid, and diarrhoeal diseases. HIV/AIDS is still a big challenge, particularly with the difficulty in accessing anti-retro viral drugs. Weather changes (47 percent), particularly drought and floods, have an impact on food security and displacement of people. Strong winds on the lake contribute to the loss of fishing inputs, drowning and the destruction of crops on land.

2.5 Most affected members of the community in times of stress

Children suffer alongside their mothers, who are at times helpless to feed them particularly during times of stress when men are known to abandon their families on the islands. This was experienced during the EU-ban on fish exports from Lake Victoria and cross border conflicts. Most self-help groups are dominated by women and the youth groups are dominated by crews to lessen their vulnerability.

Table 7. below provides information on the most affected members of the community in times of stress as perceived by the different groups during the FGDs. Table 7. also shows the gender disaggregation of the vulnerable groups within the communities.

Table 7: The poorest and most affected members of the community in times of stress

Name	Mothers	Children	Crew	Elders	Women	Married women	Business Women	
Mpola Mpola					1			Ranking
Ddajje Star		2				1		
USIA Youth			1					
Nyisiaya Konyri	2		1				2	
REEC / UPENDO		2			1			
NEEMA Community		3		1	2			
Points	4	11	10	5	12	5	4	
Percentage (%)	13	37	33	17	47	17	13	

Women are considered the most vulnerable group because of their traditional roles that restrict them to the least lucrative means of earning a living, such as processing and trading rather than fishing. Women may invest in fishing but very few rarely go into the water to fish. The second most vulnerable group are children (37 percent), followed by the fishing crew (33 percent). When catches are minimal, the crew are forced to either go home, to live off credit, or borrow money from boat owners.

2.6 Access to funding and support for diversification

Most of the funds used to support diversification and group activities come from merry-go-round/table banking (50 percent) and micro-finance institutions (43 percent). Merry-go-round banking is a rotational system, where members contribute an equal amount of funds, agreed upon by the group, on a weekly or monthly basis. These funds are then given to each member of the group in turn for his/her personal use. Merry-go-round banking also has an element of savings to it. Table banking is a system where members contribute funds that are lent to group members for a specific period and returned with interest. Table banking is more geared towards credit.

Services of formal financial institutions, such as banks, are not easily accessible, although, the Equity Bank has agents on some of the islands, such as at Mahanga beach in Kenya. Member contributions (33 percent) play a critical role in funding group activities. Some communities have benefited from the Constituency Development Fund (CDF) provided to Members of Parliament for developing their respective areas. Mahanga beach has submitted a proposal for CDF funds to purchase a water pump. Other sources of funding include subscriptions, fines from members and property rental.

Table 8. shows funding sources as identified by the groups during the FGDs. These include formal and informal sources, such as self-help groups and banks.

Table 8: Access to source of funds and other diversification support

Name	Merry-go-round/ Table banking	Micro-finance (SACCOs, village banks)	Banks	Member contribution/ subscription	Property rental	CBO / NGO / CDF	Proceeds from current IGA	Employment by others	Fines from members	MPESA	Ranking
Mpola Mpola		2		4			1				
Ddajje Star	1			2	3						
USIA Youth	1	2	3			4				4	
Nyisiaya Konyri			2						1	3	
REEC / UPENDO	1							2			
NEEMA Community		1		2		3					
Points	15	13	7	10	3	5	5	4	5	5	
Percentage (%)	50	43	23	33	10	17	17	13	17	17	

2.7 Market outlets/channels for IGA products

The main markets for agricultural produce sold by the groups lie within their communities with direct sales at 97 percent. This is followed by sales to middlemen (57 percent) who are from the mainland. Food produced on the islands can compete fairly well with food brought in from outside, which costs more due to transportation and other associated costs. Some groups, such as the Mpola Mpola group, endeavour to take their produce directly to farmers' markets on the mainland for better prices and to sell larger volumes.

Table 9. shows the main market outlets or channels for products from alternative income generating activities. This information was gathered during the FGDs.

Table 9: Market outlets/channels for IGA products

Market outlets/channels for IGA products				
Name	Direct Sales	Middlemen (Wholesalers/ Retailers)	Agents	Farmers Markets
Mpola	1			2
Ddajje	1	2	3	
USIA	2	1		
Nyisiaya	1	2		
REEC (UPENDO)	1			
NEEMA	1	2		
Points	29	17	3	4
Percentage (%)	97	57	10	13

3. Livelihood baseline indicator data for the six groups

Members of each group were selected and interviewed individually on various assets owned or accessed using the self-help checklist in Annex 6.

Table 10. provides a summary of the findings concerning baseline indicator data for the groups related to access and ownership of natural assets; physical assets; human assets; financial assets; and access to services. Out of the 138 members of all the groups, 72 (52 percent) were interviewed. The information generated in this section is based on the responses of the individuals interviewed. The outcome indicators will be used to measure changes or progress in the livelihoods of the group members.

Table 10: Livelihood baseline indicator data for the six groups

Indicators	Nyisiaya	USIA	UPENDO (REEC)	NEEMA	Mpola Mpola	Ddaje Star
Area of land owned per person	0.1	1.4	0.5	2.9	1.5	0.7
Value of land owned per person	78.1	1,078.30	8	46.4	231	88.9
Kg of fish per person per month	820.90	47	516.9	100.6	107.3	341.9
Value of fish per person per month	51	80.2	236.7	78.8	59.6	193.2
Permanent housing per person per group	0.9	0.1	0.2	0.6	0.3	0.1
Semi-permanent housing per person	0.5	1	0.5	0.5	0.3	0.9
Temporary housing per person per group	0	0	0	0	2.6	3
Average number of boats per person per group	1.1	0.6	0.4	1.9	0.2	0.2
Average number of cattle per person per group	0.2	3.3	0.5	0.6	1	1.4
Average number of goats / sheep per person per group	0.3	2.1	0.2	1.5	4.1	7.1
Average number of chicken/ducks per person per group	0.1	13.5	5.9	10.3	5.1	2.9
Number of meals per day per person per group	2	1.8	2.3	2.4	2.1	3
Average expenditure on food per person per month	10.5	0	64.6	2.2	0.5	3.8
Average income from fishery act. per person per month	842	94.7	113.9	56.4	14.7	39.8
Average income from non-fishery act. per person per month	57.5	97.8	9.4	85.3	42.2	73.7
Average expenditure on fishery act. per month per person	205	8.7	175.2	124.9	23.5	125.2
Average expenditure on non-fishery act per month per person	2.4	148.4	4.8	104.2	28.5	308.8
Average savings per person per month	59.3	11	43	29.4	14.6	24.5
Average outstanding loan amount per person						
% of group with access to safe drinking water	0	70	0	45	45	45

3.1 Natural assets

Natural assets and resources within the vicinity of the fisher communities include land, water, forests and fish.

Land

Land on the islands is either owned or leased from private owners or the government. It is used for building houses or agricultural activities. Land for building can be leased for one year or more, and for agriculture it can be leased per farming season or per year. It is easier to access land on the islands than on the mainland. Most land 'owned' on the islands is leased but according to different arrangements that provide for short- or long-tenure with payment of periodic or annual fees. What matters is whether members of the community can access land for their private or group use.

A group may own or access land jointly, as can be seen with the REEC/UPENDO and NEEMA Community groups in Tanzania. However, in general, most activities are carried out on individually owned land, which a member temporarily donates to the group for a particular use or season; this is done mostly in Kenya and Uganda, while in Tanzania it is usually leased from the Government. If land is leased for a long-time (49 years), it is possible to construct a permanent house but for shorter periods, semi-permanent or temporary houses are built.

Table 10. above shows the value of land in the fisher communities based on the amount that individual group members pay for their plots. It also shows the average land area owned by individual members of the groups. Most members of the groups have plots for construction, farming or other activities.

Land is more expensive in Kenya with a value of US \$767 in Mahanga and Ndeda US \$781 per acre. It is far cheaper in Tanzania, where an acre it is only US \$16. In Uganda, an acre costs between US \$127 in Ddajje and US \$154 in Gori. Demand for land for farming amongst the island fisher communities is on the increase following the decline in fish catches. The average area of land owned by the group members varies from 0.1 acres in Ndeda in Kenya, to 2.9 acres in Igalula, Tanzania, where the majority of fishers are also farmers.

Fish

Almost all the members interviewed handle fish. They are fishers, processors, traders or fish handlers. The volume of fish handled ranges from 470 kg – 8,209 kg per month per group. Estimated earnings range between US \$510 to US \$3,077.8 per group. The main species caught are Dagaa, Nile Perch and Tilapia. Fish is a major commodity as a source of revenue and food, and business revolves around fishing within the fisher communities.

Forests

Table 11. shows the number of trees planted by group members. NEEMA Community in Tanzania has planted 370 trees; Mpola Mpola in Uganda has planted 221 trees including fruit trees; USIA has planted 60 trees; and UPENDO has planted 20 trees. The Ddajje Star group, which is located within a forest, planted 3 trees. Nyisiaya Konyri Kendi Women's Group members have not planted any trees due to their pre-occupation with building houses in their home areas.

Table 11: Natural assets – fish, forests

Beach	Group name	No. of respondents	Fish (Kg) (monthly)	Fish value (USD)	Average fish (Kg) handled by group member	Forest (natural / common)	Number of trees	Other
Ndeda beach	Nyisiaya Konyri	10	8,209	510	820.9			
Mahanga beach	USIA	10	470	802	47	21	60	4
Ihumbo beach	REEC / UPENDO	13	6,720	3,077.80	516.9		20	
Igalula beach	NEEMA Community	11	1,107	866.7	100.6	1	370	2
Gori beach	Mpola Mpola	13	1,395	775	107.3		221	
Ddajje beach	Ddajje Star	15	5,129	2,898.10	341.9		3	

A number of fisher communities plant trees to address environmental degradation. Individual group members are also encouraged to plant trees and some groups have gone further by planting forests. REEC/UPENDO in Tanzania has planted 2,500 pine trees. This group also plans to plant local species for hard wood and timber. Group members see this as a long-term livelihood strategy that will generate funds for them in the coming years.

3.2 Physical assets

Physical assets include: houses; fishing and fish processing equipment; household animals; and transport that includes boats, vehicles, motorcycles, and bicycles. Table 10. shows the baseline indicators for ownership and access to such items.

Housing

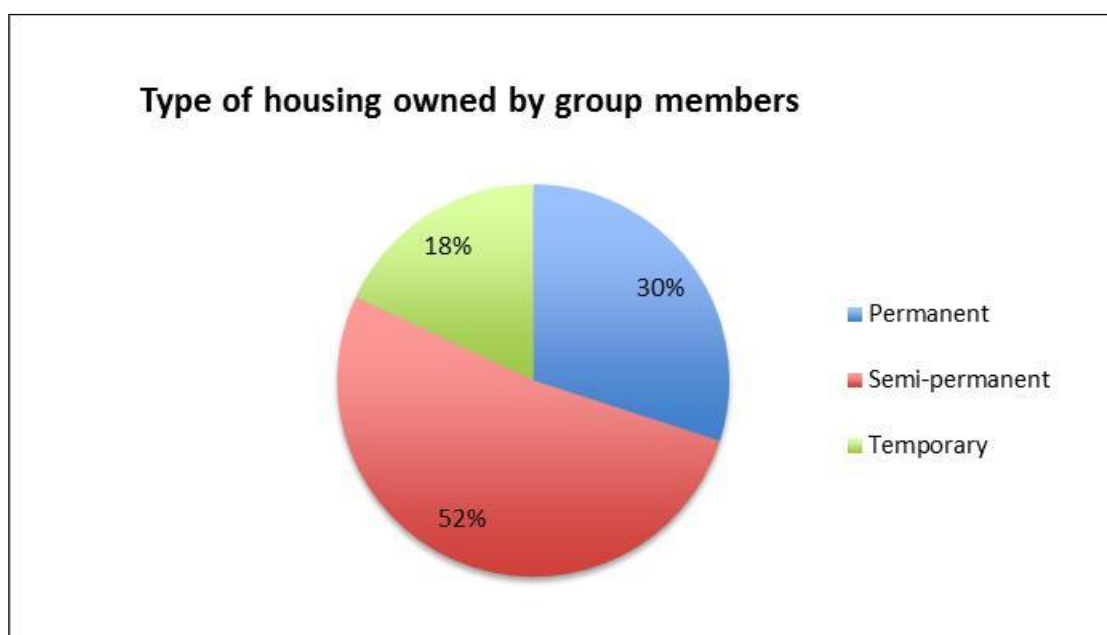
Housing in fishing communities is divided into 3 categories: permanent; semi-permanent; and temporary. Type of housing is usually a measure and indicator of wealth. In the fishing communities surveyed it was observed that a permanent house is made of bricks or cement blocks with a corrugated iron sheet roof or clay tiles. A semi-permanent house has a corrugated iron roof with mud or wooden walls.

A temporary house is usually thatched with mud walls. Privately owned houses are of much better quality than rented houses irrespective of the type of the house, as they are the responsibility of the owner and a symbol of stability.

Table 10. also shows the type and average number of houses owned by individual members of the groups.

Figure 2. below shows the type of houses on the island fisher communities of Lake Victoria. Most group members have semi-permanent houses (52 percent) and are therefore classified under the middle-income group within their communities.

Figure 2: Type of housing owned by group members



The Nyisiaya group has the highest number of permanent houses, whilst USIA and Ddajje have the biggest number of semi-permanent houses with an average of 1 house per member. Some group members have houses to rent, guest houses, shops or bars. In the fishing villages, houses are built close together in an urban slum-like setting. The exception is Igalula beach where fishers live some distance away from each other in a typical rural (agricultural) setting.

The environment surrounding the beaches and land ownership dictate the type of houses that will be built. Long-term leases encourage people to construct permanent houses. Communities living near forests build wooden houses and thatched roofs are made where grass is plentiful.

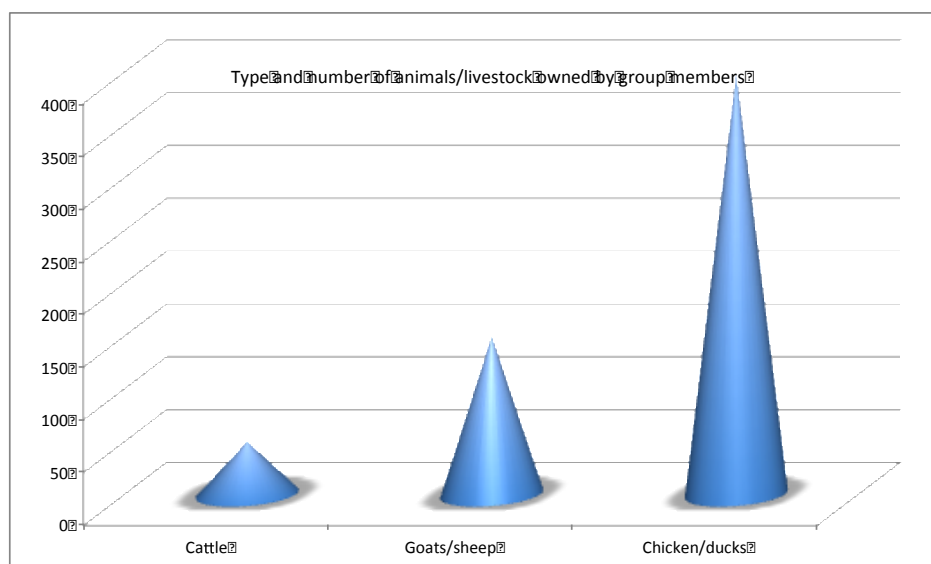
Livestock

Group members expressed an interest in livestock if they were to be given the necessary skills to rear them. However, it was observed that livestock, especially cattle, is not significant in the island fisher communities. Table 10. shows the average number and type of livestock owned per individual per group.

Group members are mainly engaged in, or would like to engage in, poultry keeping, followed by goat and sheep rearing. Cattle is desired but was considered to be very expensive and not easy to feed.

Figure 3. shows the type of livestock group members work with.

Figure 3: Animals or livestock owned by group members



USIA has the highest number of cattle, chicken and ducks. Ddajje has the highest number of goats and sheep; and Nyisiaya has the least of all categories. Ndade beach, where Nyisiaya is located, has little vegetation whilst Ddajje is surrounded by rich vegetation. Livestock keeping is attractive as it is a form of investment and savings particularly where formal banking systems are not in place.

Fishing & Fish Processing Equipment

A boat, an engine and nets are a fisher's main investment assets. Table 10. shows the average number of boats owned by members of the six groups. The total number is 49 and almost half of these are owned by members of the NEEMA group. There are 44 fish processing racks, the majority of which are owned by the Ddajje Star group. During the survey it was observed that Dagaa, a sardine-like fish, was being dried on nets laid on the ground in most communities. Individual artisanal processors have their own kilns and can hire out facilities for a fee or in exchange for firewood.

Transport

Transport is very poor on the islands to the extent that only 2 group members had vehicles and one had a boat for transport. Motorcycles and bicycles numbered only 22. Poor transport facilities, including the lack of public transport, prevents people from accessing services even when they are provided on the island. It is one of the major causes of vulnerability for the island communities; lack of transportation contributes to isolation.

Many fishing boats are used for multi-purpose roles for both fishing and transport around and between the islands and the mainland. The survey mission used private fishing boats to get to Igalula beach in Tanzania and to Mahanga beach in Kenya. At Ndeda beach there is one transport boat that the Mpola Mpola group hire to take their agricultural produce to a weekly market on the mainland.

3.3 Human assets

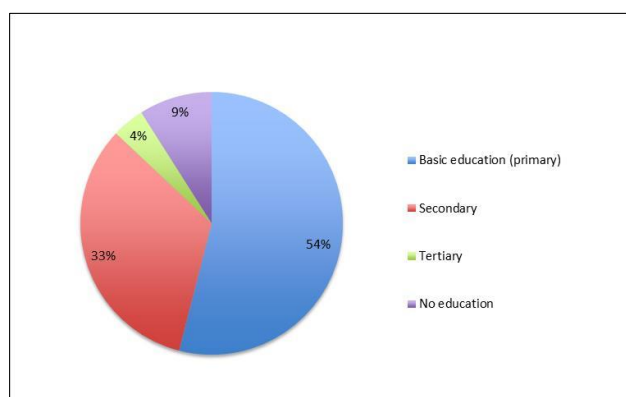
Knowledge, skills, experience and exposure are important in adopting better ways of doing things. Isolation of fishers and members of their households may hinder their development or their desire to improve. Individual group members were asked what type of skill and knowledge they have and their level of education. The level of education may not be the best measure of knowledge and skills but can be associated with it. In East Africa, practical knowledge and skills are usually acquired through apprenticeships normally pursued by children who drop out of school.

Table 12: Human assets - knowledge and skills

	No. of Respondents	Education			Knowledge and Skills			
		Primary	Secondary	Tertiary	(Handcraft, Tailor)	Grafting & budding (fruit) trees	Mechanic	Computers
Nyisiaya	10	5	5		4			1
USIA	10	6	2	1	2			
UPENDO (REEC)	13	12			5			
NEEMA	11	5	6		4		1	1
Mpola	13	2	6	2	6	1	1	1
Ddajje Star	15	9	5		7	4		
Total	72	39	24	3	28	5	2	3
%		54	33	4	39	7	3	4

The number of people with special skills in each group is shown in Table 12. above. In total, 72 (53 percent), of all group members were interviewed. Of these 28 people (39 percent) have skills in tailoring and handicrafts; 5 people (7 percent) have tree grafting and budding skills; two (3 percent) are mechanics and; three (4 percent) have computer knowledge.

Figure 4 : Education level of self-help group members



Of the 72 people interviewed, 54 percent had achieved primary level education, 33 percent secondary, and 4 percent tertiary level. The majority of people were able to read and write, except the 9 percent who had no education.

Knowledge and skills in fishing, fish processing and trading is high, as most group members or their households engage in fishery activities. Knowledge and skills in farming was common as most come from farming backgrounds. In general, knowledge of fish farming is lacking although some groups, such as the Mpola Mpola group, were interested in cage farming. Knowledge and skills in forestry and agro-forestry is inadequate, as observed with the pine trees of REEC/UPENDO. The Ddajje Star group lost many chickens due to a lack of technical knowledge and skills in poultry farming and would like technical support to improve. Other knowledge and skills identified amongst the groups include: tailoring; making handicrafts; mechanical expertise; computer skills; and grafting and budding of fruit trees.

Food security and nutrition

Fish is the main source of food and nutrition amongst the fisher households and it is eaten almost daily. Table 10. shows the average number of meals taken per day. This number ranges from 1.8 to 3 meals per day – with the least number of meals taken by Nyisiaya members and the most by Ddajje members.

Apart from fish, other types of food are eaten including carbohydrates (starch), protein, vegetables and fruits. Carbohydrates include rice, ugali (pounded maize), potatoes, cassava and bananas (matoke). Proteins, which include fish, also include meat, beans, groundnuts and peas. Vitamins and other nutrients are taken from vegetables and fruits.

Fish is generally eaten every day, and Dagaa most often. However, during the survey, it was observed that respondents did not mention Dagaa among the types of fish they eat, as they consider it to be a vegetable.

Food is considered scarce when there is shortage of carbohydrates, especially during times of drought, poor catches and windy weather. During windy periods fishing and transport to and from the islands are affected. Meat is rarely eaten, perhaps once a month, but the majority only eats it once a year or on feast days. Some households include leafy or green vegetables in their diet while others include fruits with their meals. The availability of food depends heavily on fishing to generate the main source of animal protein and money to buy other foodstuffs. Group members that have diversified to farming are faced with the issue of storage for their dried products. Food is wasted during harvest time due to a lack of appropriate processing and storage facilities and nearby markets. As a result, during times of scarcity and stress, meal quantities are reduced.

There were very few signs of malnutrition in children during the transect walk of the fishing villages.

3.4 Financial assets

This section looks at the financial aspects of the groups. It includes income, expenditure, savings and credit.

Income

Income from all the groups' members is generated from fishing and non-fishing activities. Fishing activities include catching fish, preservation, processing, transportation and trading. Non-fishing activities include crop farming, livestock rearing, restaurants, trade and businesses. Fish farming is considered to be a non-fishing activity.

Table 10. provides information on the monthly average income generated by individual members of each group. The highest monthly average income from fisheries was US \$842, generated by the Nyisiaya group. This was followed by US \$113 earned by REEC/UPENDO; and the least was US \$14.7, earned by Mpola Mpola. Members of Nyasiaya are deeply involved in fish trading, whereas most members of Mpola Mpola are housewives of fishers, dependent on their husbands.

Income from non-fishing activities varied from a high of US \$97.8, earned by USIA, followed by US \$85 earned by NEEMA. The least was US \$9.4, earned by a member of the REEC/UPENDO group. Some of the USIA members are children of traditional fishing families of the island and have easy access to land for agriculture. NEEMA group members are also farmers and earn income from citrus farming, whereas and REEC/UPENDO members have invested in trees, which take longer to mature.

Expenditure

Table 10. also provides information on the monthly average expenditure of fishing and non-fishing activities.

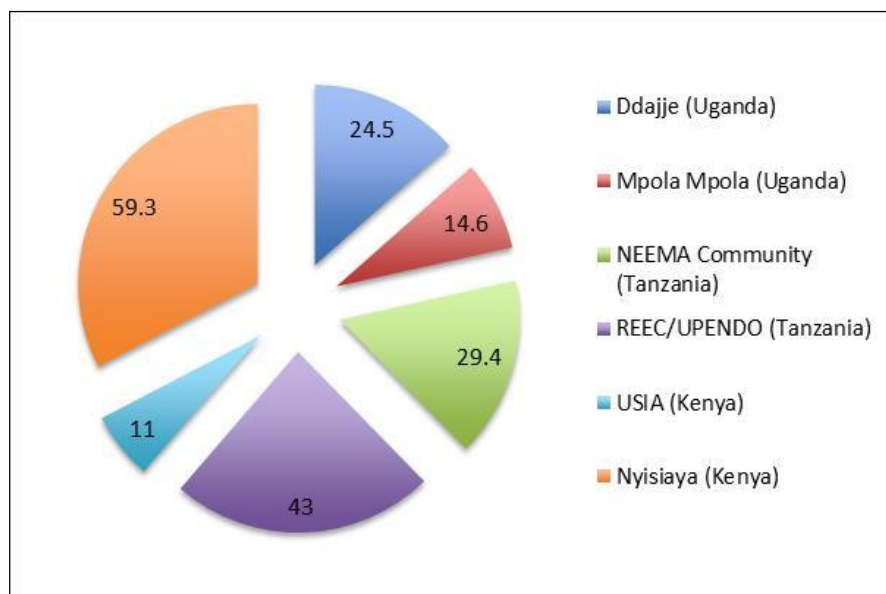
Nyisiaya individual members' monthly expenditure on fishing activities is highest as US \$205, and is followed by REEC/UPENDO at US \$175.2. The least expenditure comes from USIA at US\$ 7. Spending is mainly on the repairing and purchase of fishing inputs, such as nets, boat and engine maintenance, fuel and fish transport. Other related costs include fishing licences, fish transport, firewood for processing fish and market fees. Nyisiaya members have a number of boats and their livelihoods heavily depend on fisheries. USIA spends less on fishing because boat owners hire younger members as crew so expenditure is limited on fishing inputs.

Ddajje Star members' monthly expenditure on non-fishing activities is the highest at US \$308.80, followed by USIA at US \$148.40. The least is Nyisiaya with as little as US \$2.40. Ddajje Star members invested heavily in poultry and therefore had to meet the associated costs. Nyisiaya had the least expenditure because their main focus is on fishing activities.

Savings

Fishers are known for having a poor savings culture - much of their money is spent on pastime activities. Figure 5. below shows the average monthly savings of individual members of each group.

Figure 5: Monthly savings by members of the six target groups



Nyisiaya has the highest savings per member with US \$59.3, followed by REEC/UPENDO with US \$43 per member per month.

The self-help groups in Uganda have low savings with Mpola Mpola at US \$14.6 per person per month, and Ddajje Star with US \$24.5 per person per month. Non-monetary methods commonly used to save include keeping animals and property.

The groups encourage members to save by mandatory agreement, such as depositing money weekly or monthly or through buying shares offered by the group.

Below is an extract from Table 10. showing the average monthly income, expenditure and savings per person, per month for the six groups.

	Average expenditure on fisheries act. per month per person (US\$)	Average expenditure on non-fishery act per month per person (US\$)	Average savings per person per month (US\$)
Nyisiaya Konyri	205	2.4	59.3
USIA	8.7	148.4	11
REEC/UPENDO	175.2	4.8	43
NEEMA Community	124.9	104.2	29.4
Mpola Mpola	23.5	28.5	14.6
Ddajje Star	125.2	308.8	24.5

Credit

The level of borrowing is still low among group members. REEC/UPEND had the highest number of borrowers at eight members, followed by USIA and Ddajje Star with 2 members each, Nyasiaya with one member. NEEMA and Mpola Mpola had none. The reasons for the low level of credit include the lack of collateral and poor access to micro-finance institutions. Some members interviewed expected the project to give them money or loans, others were hesitant to reveal their levels of debt.

3.5 Access to basic services

Access to basic services is determined by the number of users and the usage rate. The major services included are electricity and water and their access, which is still a challenge for some communities.

Table 13. below shows group members' access to electricity and other sources of power mainly for lighting and cooking, as well as access to safe drinking water.

Two members from REEC/UPENDO and one member from NEEMA had access to electricity from the national grid (4 percent). Other sources of power included a generator (4 percent), used by one member from Nyisiaya and two members from Ddajje Star. Four households used solar power (6 percent) two from Nyisiaya, one from USIA and one from NEEMA. The majority of people use paraffin for light and cooking.

Basic water and electricity services are inadequate and people still suffer from diarrhea and waterborne diseases. Paraffin is a major source of power for 68 percent of group members' households.

Table 13: Group members' access to services

Group	No. of Respondents	Access to services						
		Electricity (National grid)	Generator	Solar	Paraffin lamps	Water (lake)	Lake water treated by individual + WaterGuard	Borehole / Protected spring
Nyisiaya Konyri	10	5	5		4			1
USIA	10	6	2	1	2			
REEC / UPENDO	13	12			5			
NEEMA Community	11	5	6		4		1	1
Mpola Mpola	13	2	6	2	6	1	1	1
Ddajje Star	15	9	5		7	4		
Total	72	39	24	3	28	5	2	3
%		54	33	4	39	7	3	4

Access to safe water is still a challenge. Only 46 percent of the members, mainly from Mpola Mpola and Ddajje Star in Uganda have access to clean borehole water established by the local government. About 40 percent use untreated water from the lake and individual efforts to treat household water stands at 10 percent, mainly by USIA, Kenya.

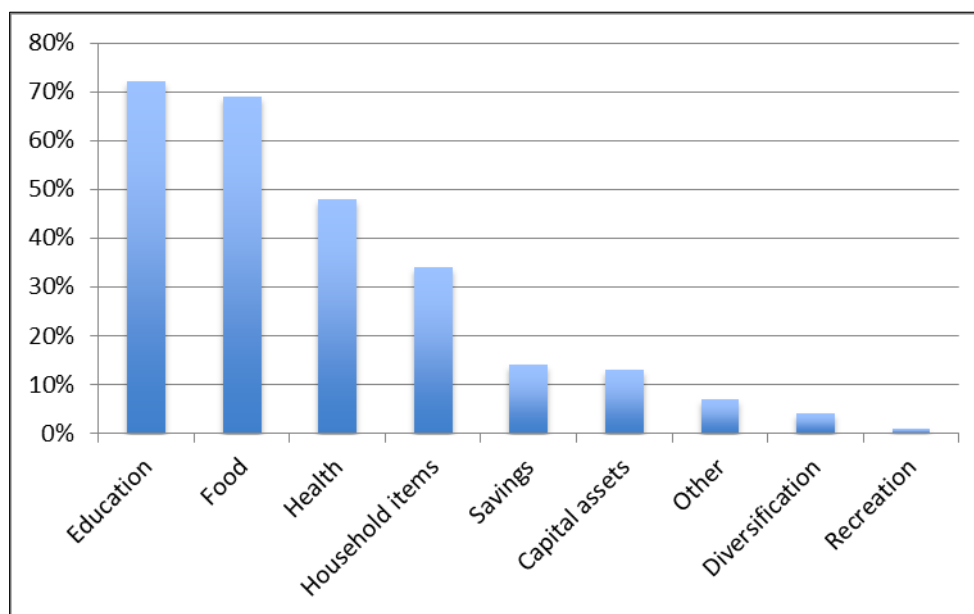
4. Expenditure and proposed interventions

4.1 Expenditure on household activities

Group members interviewed ranked the major expenditures of their respective incomes. The highest expenditure is on education (72 percent), followed by food (69 percent) as shown in Figure 6. below. The study also shows that the groups have meagre funds to diversify into other income generating activities. As a result of time limitations, little information on household expenditure was collected in this survey.

After education and food, expenditures were: health (48 percent); household items (34 percent); savings (14 percent); capital assets (13 percent); other (7 percent) diversification (4 percent); and recreation (1 percent). Nyisiaya and REEC/UPENDO groups consider food to be their highest expenditure as it is brought from the mainland as a result of poor farming land. REEC/UPENDO was also formed to assist group members to cope with HIV/AIDS, which requires substantial meals for the victims.

Figure 6: Main expenses by group members



Education was considered to be the highest expenditure for USIA, NEEMA, Ddajje and Mpola Mpola. Where education is not first, it is second. Some islands have access to good schools such as Mahanga, where USIA is found and Kalangala where Ddajje Star is located. Health is a major expenditure for Ddajje Star, Mpola Mpola and REEC/UPENDO.

4.2 Proposed alternative livelihood/diversification interventions for the groups

This section provides data on proposed on alternative livelihood interventions.

Table 14. shows the various options group members would like to engage in as alternative income generating activities.

Table 14: Type of non-fishing activities group members would like to engage in

Group	Crop farming for food and trade	Cattle rearing for milk and meat	Goats, sheep, pig farming for income, savings	Poultry for meat, eggs	Aquaculture	SACCOs	Horticulture	Micro-financing organisation	Transport - boat and engine	Ranking
Mpola Mpola	1		2	3	5				4	
Ddajje Star		2	3	1						
USIA Youth		1		2						
Nyisiaya Konyri				1				2		
REEC / UPENDO						1				
NEEMA Community					1					
Points	5	9	7	17	6	5		4	2	
Percentage %	17	30	23	57	20	17		13	7	

Poultry farming

The most popular activity is poultry. It was the first choice of two groups, Ddajje Star and Nyisiaya. It was the second choice of USIA and the third choice of Mpola Mpola. Rearing chicken for eggs and meat is considered rewarding. It is easy to plan harvests to correspond with high demand and has a wide and growing market in the Lake region. The major concern is that an epidemic could wipe out an entire flock if not properly handled, as experienced by the Ddajje Star group.

Cattle rearing

USIA chose cattle rearing for milk and meat as their first choice, and they found it suitable for some members who have access to land. Ddajje Star listed it as their second choice as the group has access to rich vegetation (grass, shrubs and forest) and veterinary services.

Aquaculture

NEEMA chose to continue with aquaculture through the production of fingerlings and fish pellets for their own use and for sale to other farmers. Mpola Mpola group members chose cage fish farming as a fifth choice as they are concerned with the drastic decline of fish catches in their fishing grounds.

Crop farming

Mpola Mpola members chose crop farming as their first choice. Their major concern is food security and earning an income to supplement what comes from fishing.

Their main concern is the transportation of food products to lucrative markets, storage for dried food products and drought. They plan to buy their own transport, an irrigation pump and an ox-plough.

Small animals

Small animals, such as goats, sheep and pigs, are used as investments and as a means to save money; this is a common strategy among women. Mpola Mpola and Ddajje Star listed rearing small animals as their second and third choices respectively.

Savings and Credit Cooperative Society

REEC/UPENDO chose to establish a saving and credit cooperative society (SACCO), but continued with tree planting and poultry rearing, for which they require technical and financial support.

4.3. Prevailing constraints

The major constraints identified by the groups that may hinder the proposed alternative income generating activities include:

- Lack of access to funds or credit (67 percent);
- Lack of transport for their produce (50 percent);
- Lack of managerial and technical skills (47 percent);
- Bad weather and seasonal changes (40 percent);
- High labour costs (37 percent).

Table 15: Constraints that may affect diversification to alternative IGA

Name	Funds / credit access	Managerial / technical skills	Labour costs	Transportation	Seasonal / weather changes	Pond Management	Land	Decline of fish stocks
Mpola Mpola		4	2	1	5		3	
Ddajje Star		1		2	3			4
USIA Youth	1	3	2	4	5			
Nyisiaya Konyri	1	2			3			
REEC / UPENDO	1			2				
NEEMA Community	1		3		2			
Points	20	14	11	15	12		3	2
Percentage (%)	67	47	37	50	40		10	7

USIA, Nyisiaya, REEC/UPENDO and NEEMA all identified access to credit as the first major issue of concern. Ddajje Star considered managerial and technical skills the most important, whilst Mpola Mpola considered transport of produce as crucial. Those seeking to explore better markets have to hire transport boats like the Mpola Mpola group does. Seasonal changes were identified by all the groups, except REEC/UPENDO. The need for solar water pumps to irrigate farmland was highlighted by the Mpola Mpola, USIA and REEC/UPENDO groups. REEC/UPENDO considered this important for watering young trees.

5. Group work plans and budgets.

The table below shows the activities identified by the groups for their proposed interventions; their food security level; their level of livelihood dependence on fisheries; the level of integration with other IGAs; and their vulnerability level.

Table 16: Groups proposed interventions, livelihood dependence, level of integration and vulnerability

Name	No. of members	Activity identified	Food security level	Livelihood dependency from fisheries	level of livelihood integration (any other IGA)	Vulnerability level
Nyisiaya Konyri	24	Poultry keeping & fruit tree planting	Medium	High	Low	High
USIA Youth	14	Cattle rearing and watermelon farming	Medium	High	Very Low	High
REEC / UPENDO	29	Tree planting and poultry keeping (ducks)	Medium	High	Medium	High
NEEMA Community	20	Aquaculture and poultry	Medium	High	Medium	High
Mpola Mpola	33	Crop farming	Low	High	Low	High
Ddajje Star	18	Poultry and pig breeding	Medium	High	Low	High
Total	138					

Table 17. below shows the groups' activities and budgets, and provides information on how much each group spends on each activity and the project annual income that will be generated by the group from each activity. Information on the performance of the activities will be collected through periodic monitoring and evaluation that will be undertaken by the LVFO together with the national fisheries offices.

Table 17: Group activities and budgets

Pilot project: The introduction of alternative income generating activities for livelihood diversification for fishing dependent communities on the islands of the three riparian states of Lake Victoria									
Activity 1.4: Detailed Budget for expenditure under Activity 2.2 for the Six Target Groups									
Work plans and budgets 2013/2014									
KENYA									
Nsi Siaya Konyri Kendi Womens Group:									
1	Activity 1	Description	Timeframe	Location	People involved	Benefit	Budget per activity	Budget US \$	Remarks
1.1	Fruit tree planting	Purchase of fruit trees (mango, orange, avocado); Training of group members; Purchase of materials and planting.	July - December 2013	Ndeda Island	Group members	Income diversification; Increased income; Improved diet; Improved environmental conservation.	KShs	USD	The beach environment has no trees or fruit. The project is expected to start yielding fruit within 2 years.
1.1.1	Lease of land for tree planting	Ten acres leased					80,000	1,000	Long-term lease: more than 10 years.
1.1.2	Purchase of fruit trees	Number of fruit tree seedlings purchased and planted				Agro-forestry initiated.	40,000	500	Approximately 400 trees will be planted.
1.1.3	Purchase of agricultural inputs	Fertiliser, organic manure, pesticides etc.					24,000	300	
1.1.4	Training of group members	Number of members trained					40,000	500	
						Sub-total	184,000	2,300	
						Expected income from agro-forestry: Fruit tree farming will yield approx. US \$ 700 and which will come mainly from intercroops like legumes for the first three years, as the trees will take more than two years to bear fruit.			
						Expected Revenue	240,000	3,000	4,000 kg*Kshs 60per kg (beans)
						Cost	184,000	2,300	
						Income/Profit	56,000	700	Profit will be re-invested in fruit trees
	Activity 2								
1.2	Poultry keeping	Start-up support for poultry farming	July - December (2 years)	Ndeda Island	Group members	Income diversification; Increased income; Increased food security; Improved diet.	KShs	USD	The group's major source of income is merry-go-round/table banking and member subscriptions.
1.2.1	Construction of a poultry house	Construction of chicken house (<i>in-kind contribution from members</i>)					80,000	1,000	
1.2.2	Training in poultry farming	Members trained in poultry breeding					40,000	500	Husbandry staff from the district and a succesful poultry farmer will carry out the training
1.2.3	Purchase of chicks	240, one day old chicks					24,000	300	
1.2.4	Purchase of feed	No. of kg					20,000	250	
1.2.5	Purchase of drugs, etc.	Vaccinations, treatment, etc.					12,000	150	
						Sub-total	176,000	2,200	
						Grand Total		4,500	Exchange rate USD1 = Kshs 80
						Expected income from poultry farming is US \$500 and will be re-invested in poultry			
						Expected Revenue	216,000	2,700	Kshs 900 *240 chicken
						Cost	176,000	2,200	
						Income/Profit	40,000	500	Funds will be re-invested in poultry

Usia Youth Bunge Group:									
2	Activity 1	Description	Timeframe	Location	People involved	Benefit	Budget per activity	Budget US \$	Remarks
2.1	Watermelon plantation	Production of watermelon for trade	July - December	Mageta, Kenya	Group members	Income diversification; Increased income; Reduced fishing pressure.	KShs	USD	The group have had one and very successful harvest and are preparing for the second. They have a good market and most is sold off the island.
2.1.1	Rental of land	6 acres of land leased					48,000	600	Long-term lease
2.1.2	Purchase of seeds	Seeds					60,000	750	Seeds are bought in packets from agriculture shops. The amount depends on the area cleared and available funds.
2.1.3	Purchase of agricultural inputs	Pesticides, etc.					17,000	213	
2.1.3	Weeding & spraying						9,000	113	Group members are boat crew and may need to occasionally hire labourers
2.1.5	Harvesting						10,500	131	Depending on the harvest, they may need help carrying them as they are heavy.
						Subtotal	144,500	1,806	
						Expected annual income from water melon farming is \$ 1194 and will be invested in water melon production and cows.			
						Expected Revenue	240,000	3,000	1,500 melons* Kshs 160.
						Cost	144,500	1,806	
						Income/Profit	95,500	1,194	Funds will be re-invested in water melon and cattle.
	Activity 2								
2.2	Livestock farming		July - December	Mageta, Kenya	Group members	Income diversification; Increased income; Increased food production and food security; Reduced fishing pressure.	KShs	USD	The group would like to do dairy farming for milk and meat. They will trade within and outside their community.
2.2.1	Purchase of dairy cattle	Four cows					120,000	1,500	
2.2.2	Land for grazing	Four acres of land leased					32,000	400	Long-term lease
2.2.3	Irrigation pumps	Two solar-powered irrigation pumps					63,500	794	To be used for cow dips and growing recommended grass.
2.2.4	Veterinary services and drugs	Drugs, vaccinations, etc.					16,000	200	
2.2.5	Training in livestock keeping	Group members trained in cattle breeding					40,000	500	
						Subtotal	271,500	2,694	Income will be re-invested in more cows.
						Grand Total		4,500	Exchange rate USD1 =Kshs 80
						Expected annual income from Dairy farming is \$ 679 and will increase production as number of cows increase			
						Expected Revenue	325,800	4,073	
						Cost	271,500	3,394	
						Income/Profit	54,300	679	Profit will be re-invested

TANZANIA									
NEEMA Community Organisation:									
3	Activity 1	Description	Timeframe	Location	People involved	Benefit	Budget per activity	Budget US \$	Remarks
3.1	Fish feed making project	Production of pellets	July - December	Namasabo Ukerwe	Group members	Increased fish production; Increased income from sale of animal feed; Increased food security.	TShs	USD	The group is interested in the production of floating pellets for their fish farm and to sell to other fish farmers.
3.1.1	Purchase of fish feed making machine	Pellet making machine					4,000,000	2,581	Raw materials include dagaa, maize and other items that are available in Tanzania.
3.1.2	Training in the preparation of fish feed	Members trained in fish feed pellet production (<i>one week</i>)					300,000	194	Integrated training
3.1.3	Production of fish feed pellets	Purchase of raw materials (<i>using membership funds</i>)	July - December						Members to contribute in-kind raw materials and cash
						Subtotal	4,300,000	2,774	
						Expected annual income from fish feed (pellets) is US \$1871 and this will be re-invested in pellet production and trading.			
						Expected Revenue	7,200,000	4,645	<i>TShs 300*24,000 kg of feed (pellets)</i>
						Cost	4,300,000	2,774	
						Income/Profit	2,900,000	1,871	<i>Funds will be re-invested in fish feed / pellet production</i>
Activity 2									
3.2	Poultry breeding project						TShs	USD	The group aims to integrate fish farming with the fertilisation of fish farms through poultry.
3.2.1	Building for poultry	Construction of a chicken coup (<i>in-kind contribution from group members</i>)				Increased fish productivity; diversified and increased income; increased food security.	1,550,000	1,000	
3.2.2	Purchase of young chicks	330, one day old chicks					505,300	326	
3.2.3	Purchase of agricultural inputs	Feed, vaccinations, medication, etc.					310,000	200	
3.2.4	Training in poultry farming	Group members trained in poultry breeding					310,000	200	Integrated training
						Sub total	2,675,300	1,726	
						Grand Total	6,975,300	4,500	<i>Exchange rate USD1 =Tshs 1550</i>
						Expected income from poultry is US \$1,177 and will be re-invested in poultry, which will help to fertilise the ponds through integrated fish farming.			
						Expected Revenue	4,500,000	2,903	<i>300 chicken*15,000</i>
						Cost	2,675,300	1,726	
						Income/Profit	1,824,700	1,177	<i>Profit will be re-invested in poultry.</i>

Riseth Evergreen Environmental Conservation (REEC/UPENDO):									
4	Activity 1	Description	Timeframe	Location	People involved	Benefit	Budget per activity	Budget US \$	Remarks
4.1	Tree Planting	Planting of local tree species	One year from July 2013	Igalula Beach, Bumbire Island, Muleba District, Tanzania	Members of REEC/UPENDO	Income diversification; Increased income; Increased food production and food security; Environmental protection.	TShs	USD	The group plants pine trees but has lost a number of trees due to infestations and unsuitable seedlings.
4.1.1	Purchase of tree seedlings	Local tree seedlings (1,000 seedlings)					1,550,000	1,000	REEC/UPENDO plans to diversify with local trees for mahogany and agro-forestry production. 1,000 local mahogany seedlings at 1,500 TShs each will be purchased.
4.1.2	Purchase of water pumping equipment	Solar-powered water pump and accessories					1,240,000	800	The group has over 25 acres for local tree planting
4.1.3	Agricultural equipment	Hoes, machetes, wheel barrows, etc. for clearing and weeding					775,000	500	
4.1.4	Purchase of agricultural inputs	Purchase of pesticides, fertilisers, etc.					661,200	427	
4.1.5	Protective clothing	Overalls, gumboots, protective head gear, gloves, etc.					424,000	274	
4.1.6	Tree planting training	Professional fees and training					775,000	500	
						Sub-total	3,875,200	2,500	
						Expected income from agro-forestry inter-crops of beans/peas is US \$3,951 as the trees take more than a year to mature. Meanwhile legumes and other inter-crops will provide income for 2 seasons each year for at least 3 years. US \$2,000 will be used to establish a SACCO; US \$1,000 for tree seedlings and inter-crop farming and US \$951 for drugs for HIV/AIDS patients.			
						Expected Revenue (legumes and inter-crops)	10,000,000	6,452	Inter-crop beans/peas 500 kg per acre * Tshs 1,000 per kg *10 acres*2 seasons
						Cost	3,875,200	2,500	
						Income/Profit	6,124,800	3,951	Profit will be used to form a SACCO and to re-invest in tree growing and agro-forestry activities and to support the HIV/AIDS program.
Activity 2									
4.2	Poultry and dairy farming	Training of members	One year from July 2013	Igalula Beach, Bumbire Island, Muleba District, Tanzania	Members of REEC/UPENDO	Increased income; Income diversification; Increased food security; Improved diet and access to medication.	TShs	USD	Income generated by REEC/UPENDO is used to support HIV and AIDS victims and affected member families such as, drugs, food, and treatment.
4.2.1	Training in poultry and dairy farming	Members trained in duck breeding (including visits to successful farmers)					1,550,000	1,000	The group is already breeding ducks but with difficulty due to a lack of technical knowledge and skills.
4.2.2	Purchase ducks	Purchase 250 ducklings, feed and drugs					1,550,000	1,000	The group requires technical skills and knowledge to engage in duck breeding to augment income and change diet.
						Sub-Total	3,100,000	2,000	
						Grand Total	6,975,200	4,500	Exchange rate USD1 = Tshs 1550
						Expected income from duck (poultry) farming is US \$1,226 per annum and will increase with increased production. US \$1,000 will be re-invested in ducklings and US \$226 will be used to purchase drugs for HIV/AIDS patients.			
						Expected Revenue	5,000,000	3,226	250 ducks * TShs 20,000
						Cost	3,100,000	2,000	
						Income/Profit	1,900,000	1,226	US \$1,000 will be re-invested in ducks and US \$226 for HIV/AIDS drugs.

UGANDA									
Mpola Mpola Intergrated Association									
5	Activity 1	Description	Timeframe	Location	People involved	Benefit	Budget per activity	Budget US \$	Remarks
5.1	Crop farming	Plantation of rice, maize, potatoes, ginger, etc	July - December	Gori Jagusi island	Group members	Increased acreage and productivity efficiency; Increased Food production and food security; Increased earnings.	UShs	USD	The group started farming for family food and to increase and diversify household income with the involvement of wives/women.
5.1.1	Lease of land	Increased number of acres leased (15)					1,500,000	595	One acre of land is leased at 100,000 UShs per season, there are two major seasons.
5.1.2	Clearing and weeding land for cultivation	Increased number of acres cleared					2,240,000	889	Members will weed but clearing requires extra labour.
5.1.3	Purchase of seeds for planting	Upland rice, maize, potatoes, ginger etc					800,000	317	
5.1.4	Purchase of agricultural inputs	Purchase fertilisers, organic manure, etc.					300,000	119	
5.1.5	Purchase of ox-ploughs	2 ox-ploughs					600,000	238	An ox-plough with a pair of bulls can clear 1 acre in 4 days; with a hand-hoe it will take one month to clear one acre.
5.1.6	Purchase of oxen	2 pairs of oxen					1,000,000	397	An ox-plough with a pair of bulls cost 100,000 UShs per acre. The ox-ploughs will be rented out.
5.1.7	Purchase of solar powered irrigation pump	2 irrigation pumps					2,000,000	794	Solar powered irrigation pumps are required mainly during the dry season and extensive drought periods.
5.1.8	Training in use of ox-ploughs, solar powered irrigation pump and other agricultural inputs	2 weeks					2,899,500	1,151	Training in the use of agricultural equipment and inputs is needed because fisher communities rarely engage in regular farming activities.
						Subtotal	11,339,500	4,500	
						Grand Total	11,339,500	4,500	Exchange rate USD1 =Ushs 2520
						Expected total income is US\$3310 from crop farming and 2 ox-plough rental annually and will be distributed as follow: US\$ 2000 re-invest in group farming, US\$ 1000 distributed to members for household food production and security and US\$ 310 for ox-ploughs maintainance. The ox-ploughs will be also be rented out to other farmers as well as to members to raise funds. (with preferential rates agreed for the members).			
						Expected revenue from crops	17,280,000	6,857	Price 600 UShs per kg *1,200kg *12 acres *2 seasons (based on maize)
						Expected Revenue from ox-plough rental	2,400,000	952	6 acres in a month *100,000 UShs per acre * 2 ox-ploughs * 2 seasons
						Total revenue	19,680,000	7,810	
						Cost	11,339,500	4,500	
						Income/Profit	5,940,500	3,310	US \$1,500 will be re-invested in group farming activities; US \$1,000 will be distributed to individual members for household food production and security and US \$310 for ox-plough maintainance.

Dajje Tukolere Wamu Star Group:									
6	Activity 1	Description	Timeframe	Location	People involved	Benefit	Budget per activity	Budget US \$	Remarks
6.1	Poultry farming	Poultry keeping, education and sensitisation.	July - December	Kalangala Island, Uganda	Chairperson, veterinary doctor and group members.	Improved technical knowledge and skills; Increased earnings; Diversification of income.	UShs	USD	Group members lost over 500 chickens due to an epidemic and lack of knowledge and skills.
6.1.1	Seminar in poultry breeding	2 weeks (including visit to poultry farmers)					1,260,000	500	
6.1.2	Construction of a poultry house	Construction costs (Members will provide in-kind contributions)					4,000,000	1,587	
6.1.3	Purchase of chicks	500 one day old chicks					1,400,000	556	Day old chicks cost 2,800 UShs.
6.1.4	Purchase of feed	Appropriate feed (Kg)					1,000,000	397	
6.1.5	Purchase of drugs, etc.	Medication and vaccines					500,000	198	
						Subtotal	8,160,000	3,238	
						Expected income from raising chickens is US \$730 per annum and this will be re-invested to increase the number of chickens to 1,000.			
						Expected Revenue	10,000,000	3,968	500 chicken*2,000 Ushs (US \$7.9)
						Cost	8,160,000	3,238	
						Income/Profit	1,840,000	730	Expected annual income from 500 chickens.
	Activity 2								
6.2	Pig farming	Start-up capital for pig farm	July - December	Kalangala Island, Uganda	Chairperson, veterinary doctor and group members	Improved technical knowledge and skills; Increased earnings; Diversification of income.	UShs	USD	
6.2.1	Construction of pig sty	Construction of pig sty					1,000,000	397	Pigs are reared either in the open or in rudimentary enclosures and/or tied on a rope to reduce loitering.
6.2.2	Purchase of 50 piglets						1,000,000	397	One piglet costs 20,000 USsh = 50 pigs
6.2.3	Drugs, vaccines etc.	Ensure animals are properly treated using approved drugs and vaccinations.					441,000	175	
6.2.4	Training in pig breeding	Members trained in breeding pigs.					739,400	293	
						Subtotal	3,180,400	1,262	
						Grand Total	11,340,400	4,500	Exchange rate USD1 = 2,520 UShs
						Expected income from pig breeding is US \$3,500 per annum and this will be reinvested to increase the number of pigs to 100.			
						Expected Revenue	12,000,000	4,762	50 pigs *50kg *4,800 UShs (US \$1.9)
						Cost	3,180,400	1,262	
						Income/Profit	8,819,600	3,500	

4	Livestock - Dairy cows, pigs	November				December				January			
		Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4
	Group Activity 4												
	Acquisition of land, building materials												
	Construction of animal shelter												
	Training of members												
	Purchase of farm animals (dairy cows or piglets) feed, vet. services.												
	Farming activities												
	Monitoring and evaluation by respective DFO and LVFO												

Aquaculture - Fish Feeds Production	November				December				January			
	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4	Week 1	Week 2	Week 3	Week 4
Group Activity 5												
Acquisition of building materials												
Construction of building for fish feed production												
Purchase of fish feed production equipment												
Installation of equipment												
Training of members												
Fish feed production activities												
Monitoring and evaluation by respective DFO and LVFO												

Note: Each Group will follow the relevant above planned activities as specified below

	Group	Specific Activities								
		Tree planting		Poultry breeding		Food production (crops)		Livestock farming		Aquaculture
	Main Activity	Fruit Trees	Hardwood trees	Chicken	Ducks	Maize, potatoes, rice, ginger, etc.	Watermelon	Dairy cattle	Pig breeding	Fish feed production
1	Nsi Siaya Konyri Kendi Womens Group									
2	Usia Youth Bunge group									
3	NEEMA Community Organisation									
4	Riseth Evergreen Enviromental Conservation (UPENDO)									
5	Mpola Mpola Intergrated Association									
6	Dajje Star Group									

The budgets submitted were adjusted for support according to the funds available. The total budget for all six target groups is US \$27,000. All groups need training in managerial and technical skills. These could be conducted either at a central location with group leaders or in their own districts in order to benefit almost all the members and making use of local expertise.

Table 5.2. Group summary, proposed interventions and next steps

Group selected	Location	Reason for implementation	Proposed Intervention	Next Steps
Nyisiaya Konyri Kendi Women's Group	Ndeda Beach, Ndeda Island, Bondo District, Kenya	Self-motivation to improve their livelihoods Poverty alleviation	Poultry breeding, fruit tree planting	Training and implementation
USIA Youth Bunge Group	Mahanga Beach, Mageta Island, Bondo District, Kenya	Self-motivation to improve their livelihoods Income diversification	Watermelon production and poultry breeding	Training and implementation
Riseth Evergreen Environmental Conservation (REEC/UPENDO)	Ihumbo Beach, Bumberi Island, Muleba District, Tanzania	Self-motivation to improve their livelihoods Environmental conservation and HIV/AIDS coping strategies	Tree planting & poultry keeping (ducks)	Training and implementation
NEEMA Community Organization	Igalula Beach, Namasabo, Ukerewe District, Tanzania	Self-motivation to improve their livelihoods Diversification to aquaculture	Aquaculture and poultry	Training and implementation
Mpola Mpola Integrated Association	Gori Beach, Jagusi Island, Mayuge District, Uganda	Self-motivation to improve their livelihoods Food security	Crop farming	Training and implementation
Ddajje Tukulere Wamu Star Group	Ddajje Beach, Buggala Island, Kalangala District Uganda	Self-motivation to improve their livelihoods Need for technical and management skills	Poultry, farming and pig breeding	Training and implementation

6. Conclusions and recommendations

6.1 Conclusions

The introduction of alternative livelihoods, especially for non-fishing activities, to the island fisher communities will stabilize income, increase food security and nutrition, increase their ability to cope with shocks and reduce their vulnerability.

The indicators identified during this survey are important livelihood assessment tools that will be used to monitor and evaluate the improvement in the conditions of the island fisher communities.

The strategies used by the island fisher communities to cope with their vulnerability, such as HIV/AIDS, poor housing or untreated water need to be documented in order to be of use to other disadvantaged groups or communities.

Income is a major strategy that is used to address many issues such as education, food and health. Cash revenue is generated daily from fishing and related activities, and the need for formal, dependable saving and credit schemes is paramount in building a saving and investment culture within the island fisher communities.

Food insecurity is prominent during periods of stress. It is a time when fishers migrate elsewhere, most of them leaving their families helpless. Alternative livelihood diversification should focus on food production, preservation and processing to ensure food availability and security.

The decline of fisheries resources, and changing weather conditions on the Lake indicate a need for the fisher households to engage in alternative sources of livelihood to lessen their overdependence on fishing. The fish farm at Namasabo on Ukerewe Island is an exemplary model that shows that fishers can be successful fish farmers if properly guided with knowledge and skills.

6.2 Recommendations

- The areas where baseline indicators were not identified or specified should be addressed and data collected during the monitoring mission;
- Using the findings of the pilot intervention, FAO and LVFO should develop a 3 -5 year project to cover all the island fisher communities of Lake Victoria;
- The six target groups should be supported and become learning centers for other communities within their respective islands;
- The target groups should be trained in technical and managerial skills for the establishment of SACCOs to enable them to move on from informal lending facilities such as merry-go-round and table banking systems;

- Island fisher communities should be mobilized through the respective Beach Management Units to engage in fish farming;
- Communities should be involved in environmental conservation by planting trees and taught how to use wetlands wisely;
- Communities should be supported to harness nature by using solar and wind driven technologies and biogas to generate power (electricity) for household and industrial use;
- In the absence of safe water, communities should be trained to treat household water with approved chemical products;
- The outcome of the pilot intervention should be used to promote IGAs in other self-help groups within the islands.

7. References

FAO and ILO 2009: The Livelihood Assessment Tool-kit: Analysing and responding to the impact of disasters on the livelihoods of people, (First Edition); April 2009

Kebe Moustapha and Muir J. The Sustainable livelihoods approach: New directions in West and Central African small-scale fisheries. In achieving poverty reduction through responsible fisheries. Lessons learned from West and Central Africa. FAO Technical Paper 513. ISSN2070-7010.

LVFO 2010: Frame Survey Report 2010

RONGEAD 2011: RONGEAD Sustainable and Energy and Economic Development around Lake Victoria Tanzania. Tanzania Project, Lake Victoria, June 2011.

Annex 1. Terms of Reference

Terms of Reference

Implementing modalities

The project management will be ensured by an ad-hoc Local Consultant of LVFO recruited as Project Manager who will be fully responsible for the day-to-day management of all the activities under this Agreement.

The LVFO Social Economic National Working Group in each country will nominate a national focal point tasked to assist the project manager in the implementation of the activities with close supervision from the LVFO Secretariat. 11

All decisions related to project activities and budget allocations will be taken in close consultation with the FAO Responsible Officer.

All tools and equipment that will be procured by the project for the training and income generating activities introduction will respect strictly the technical specifications agreed with FAO.

Transparent procurement of all training materials and equipment will be ensured by the Finance Office of LVFO.

Definition of outputs

The outputs of this Agreement are:

The activities under the LoA will contribute to the following: SmartFish Result 5, Output 5M3.2 Support livelihoods diversification and resilience in selected fishing communities; Activity 5M3.2.1 Selected projects supported country project) on diversification initiatives and improved resilience in fishing communities,

1. Vulnerability aspects and livelihood/ dependency/poverty patterns assessed in at least six groups in selected islands;
2. Local capacities and skills related to livelihood diversification improved and alternative income generating activities introduced in selected groups;
3. Lesson learned from pilot phase analyzed and compiled for future upscale and for contribution to regional initiatives on livelihood diversification/ gender in fisheries and climate change.

Description of activities/services

The Service Provider will provide all required services in order to undertake the following activities under each of the outputs listed on the main body of this agreement.

Output 1: Vulnerability aspects and livelihood/ dependency/poverty patterns assessed in at least six groups in selected islands

Activities:

1.1 Conduct vulnerability/livelihood/poverty assessment/baseline survey in all project target areas/groups using the methodology and tools agreed with FAO

Indicators:

- Methodology, selection criteria and assessment tools agreed with FAO by month 1;
- List of islands and target groups pre-identified /shortlisted to be assessed submitted by month 1;
- Final travel mission plan agreed with FAO by end of month 1;
- At least six beneficiary groups identified and mobilized in selected islands by end of month 2.
- Livelihood /specific income generation activities identified for at least six groups in a participatory manner by end of month 2

Description of activities/services

- All logistical preparations and local arrangements;
- All transport related costs using adequate vehicle and means of transport;
- Time and per diem for the team;
- Allowances for community mobilizers;
- Refreshment provided during participatory meetings.

1.2 Collate and analyze of all information and data collected during the baseline survey/assessment using the data collation and analysis templates provided by FAO and submit a detailed budget and work-plan prepared in full consultation and participation of the beneficiary groups

Indicators:

- Final assessment report with implementation work plan for each of the six livelihood diversification alternative/income generation activities to be carried out (within the agreed budget) on the selected six groups submitted and agreed with FAO by second half of month 3

Services/inputs: Project Manager (15 days)

1.3 Organize and facilitate a one-day validation meeting for at least 20 relevant stakeholders to present the result of the assessment and the proposed work plans/interventions within the premises of LVFO

Indicators:

- Validation meeting organized and held for 20 people (at least two representatives from each beneficiary group) by end of month 3.

Description of activities/services

- Meeting organization and logistic preparation related costs;
- All transport related costs for all participants;
- Refreshment costs;
- Time and per diem for the team and participants.

1.4 Submit a mid-term progress report, narrative and financial, detailing all the activities conducted and providing preliminary recommendations from the first set of activities (1.1, 1.2, 1.3) as well the validated interventions work plans, including detailed budget for expenditure under activity 2.2.

Indicators:

- Final progress report submitted and agreed with FAO by first half of month 4, including detailed budget for expenditures under the activity 2.2.

Description of activities/services

- Project manager and LVFO supervisor/focal point time

Output 2. Local capacities and skills related to livelihood diversification improved and alternative income generating activities (IGA) introduced in selected groups

Activities:

2.1 Capacity building of micro project stakeholders and beneficiaries to sustain the initiative (business, marketing, management of micro-enterprises)

Indicators:

- At least 30 people (selected within the groups) trained in Business/ SME management and basic marketing by end of month 6;

Description of activities/services

- Training organization and logistic preparation related costs;
- All transport related costs for the team and trainees;
- Refreshment costs;
- Time and per diem for the team and participants

2.2 Carry out the livelihood diversification activities according to the work plans and detailed budget agreed

Indicators:

- At least 6 groups supported and empowered by end of the project;
- At least 60 beneficiary/ households supported through selected income generating activities;
- At least 3 technical training delivered by end of month 7;
- Input /start up kits distributed according to the agreed plan and budget by end of month 7.

Description of activities/services

- Training organization and logistic preparation related costs;
- All transport related costs for all participants;
- Refreshment costs;
- Time and per diem for the team
- Input procurement and installation/distribution costs
- All direct cost related to this activity.

Output 3. Lesson learned from pilot phase analyzed and compiled for future upscale and for contribution to regional initiatives on livelihood diversification/ gender in fisheries and climate change.

Activities:

3.1 Disseminate the preliminary results of the livelihood diversification activities via different media at national level;

Indicators:

- Thematic posters designed and produced by end of month 8;
- At least two public occasions where the posters and fliers will be distributed
- At least 3 radio talk aired by end month 8;
- At least 1 TV features aired by end month 8.

Description of activities/services

- Cost of design and production of fliers and posters;
- Media facilitation allowances;
- Air-time costs to radio and TV.

Modalities

- The format will be simple targeting low literacy groups.
- The final content of the radio and TV talks will be agreed in advance and will follow the FAO and SmartFish visibility guidelines.
- LVFO will have to ensure maximum visibility of both FAO and the donor during TV and radio sessions.
- LVFO will put efforts to ensure media coverage of the awareness events and will provide copies of the media records to FAO.

3.2 Organize and facilitate a one final day national meeting for at least 20 relevant stakeholders to present the result of the reduction activities and the proposed upscale/replication of the interventions

Indicators:

- Final validation meeting organized and held for 20 people by end of month 9.

Description of activities/services

- Meeting organization and logistic preparation related costs;
- All transport related costs for all participants;
- Refreshment costs;
- Time and per diem for the team and participants.

Monitoring and Progress Reporting

The second payment will be done on receipt and approval of the first Progress report. The last payment will be done at the termination of the contract after receiving and approval of the final report.

The Service Provider shall submit to the designated Responsible Officer a progress report as well as final reports, narrative and financial, as indicated below:

a). A progress report, comprising detailing all the activities conducted and providing preliminary recommendations from the first set of activities (1.1, 1.2 and 1.3) as well the work plan for each of the diversification activities to be carried out on selected three hot spots within 3 months after the signature of the contract. The work plan should contain a detailed budget for all expenditures pertaining to the activity 2.2 for approval.

An itemized statement of expenditures during the first 3 months should be submitted together with the progress report. Supporting documentation and bank statements will be kept by the service provider and will be made available to the SmartFish Budget Holder and Chief Technical Advisor or mandated staff from FAO upon their request;

b) A final report within 30 days following the completion of the Services composed as follows:

i. Narrative report, describing all activities carried out, lessons learned for upgrade and upscale in the other countries of the region, discussion of problems encountered and recommendation for upscale of the pilot diversification initiatives as well replication in other countries. The report will also include in Annex all the technical reports, all training attendance lists and list of inputs produced under this Agreement,

ii. Financial report ("Final Report"). The Final Report must be sufficiently detailed to allow certification of deliverables and of expenditures. The financial report shall be signed and certified as to its correctness by a duly designated representative of the Service Provider (e.g. executive officer, chief financial officer, chief accountant or similar).

Reporting shall be in English to Ms Clotilde Bodiguel, FAO-CTA of IRFS/ SmartFish, as outlined in Section 6e and 9 of the main body of this Agreement, e-mail: clotilde.bodiguel@fao.org and to John Ryder Lead technical Officer FIPI, Fisheries and Aquaculture Department, Viale Terme di Caracalla, I-00153 Rome, Italy, e-mail: John.Ryder@fao.org.

Samson Abura will be the focal point for interaction with FAO with regard to the timely implementation of the present Letter of Agreement.

Annex 2. General work plan

Pilot project: The introduction of alternative income generating activities for livelihood diversification for fishing dependent communities on the islands of the three riparian states of Lake Victoria				
Mission calendar and travel mission plan 2012/2013				
Date	Location/site name	Activity	Person in charge of team	Remarks
Dec. - Jan. 2012	LVFO Jinja Secretariat with Fisheries Departments of Kenya, Tanzania and Uganda	Pre-Identification/shortlist of islands and target groups assessments	Project Coordinator, Project Manager and Fisheries Departments	<p>Pre-identification of islands and target groups was done through LVFO consultation with the Fisheries Departments of Kenya, Tanzania and Uganda. The following islands were pre-identified:</p> <p>Kenya : Mageta island, Bondo District Ndeda island, Bondo District</p> <p>Tanzania: Namasabo village, Ukerewe District Bumbire island, Muleba District</p> <p>Uganda: Jagusi island, Mayuge District Mazinga island, Kalangala District</p> <p>Target groups were also pre-identified by the partner States. Islands and groups may be subject to change according to criteria</p>
Feb. - March 2013	Jinja	Preparation of documents; methodology, selection criteria and assessment tools	Project Manager Project Coordinator	Draft documents prepared and submitted to FAO Fisheries Officer and FAO SmartFish Technical Supervisor
17 April 2013	Jinja	Submission of final documents	Project Manager Project Coordinator and FAO	Documents on methodology, selection criteria and assessment tools submitted for approval by FAO (for use by FAO)
18 - 21 April 2013	Jinja	Preparatory activities for travel and livelihood survey	Project Manager Project Coordinator FAO Tech. Supervisor	<p>Prepare travel itinerary Prepare explanatory and briefing notes for stakeholders</p> <p>Write to Fisheries Departments with copies to relevant District Fisheries Officers to participate in the conducting the livelihoods survey and attach program of activities Follow-up emails and phone calls</p>

Field activities				
26 May 2013	Jinja, Uganda	Mission Team travel to Jinja, Uganda	<p>Davide Signa, FAO Sam Abura, PC and C.T. Kirema-Mukasa (PM)</p> <p>Project focal point from Uganda (FP) to join mission at Jinja</p>	<p>Core mission team comprised of: Mr. Davide Signa FAO Fisheries Officer & FAO SmartFish Project – External Technical Supervisor. Mr. Sam Abura – LVFO Senior Information and Database Officer; Project Coordinator (PC). Caroline T. Kirema-Mukasa – Project Manager (PM).</p> <p>Other members to join mission while core team is in their respective country: Relevant focal point (FP) from Fisheries Department of Kenya, Tanzania or Uganda Relevant District Fisheries Officer (DFO) Local Fisheries Staff (LFS)</p>
27 May 2013	LVFO, Jinja	<p>Mission briefing meeting to review activity plan and checklist</p> <p>Travel to Mayuge Courtesy call to District Officials. Discuss following day's program with DFO</p>	<p>Briefings done by LVFO Executive Secretary, FAO, PC and PM</p> <p>PM and DFO</p>	<p>Activity plan, checklist and Travel itinerary reviewed and discussed.</p> <p>Project focal point from Uganda to join the team</p> <p>Discuss purpose of mission and concerns of the fisher communities</p>
28 May 2013	Jagusi island, Mayuge District	Conduct vulnerability/ livelihood/ poverty assessment/ baseline survey in target areas/groups in Djagusi, Mayuge District, Uganda	DFO, PM, PC, FAO, FP, LFS	<p>DFO to introduce mission to BMU Leaders</p> <p>PM to present tentative daily schedule for PRA; to be discussed and agreed upon Survey is conducted as agreed with full involvement of the mission Recap of day's activity</p>
29 May 2013		<p>Travel to Kalangala District</p> <p>Courtesy call to District Officials Discuss following day's program with District Fisheries Officer</p>	PM and DFO	<p>DFO to introduce the mission / self-introduction of members</p> <p>Discuss purpose of mission and concerns of the fisher communities</p>
30 May 2013	Buggala Island, Kalangala District	Conduct vulnerability/ livelihood/ poverty assessment/ baseline survey in target areas/groups in Kalangala, Uganda	DFO, PM, PC, FAO, FP, LFS	<p>DFO to introduce mission to BMU Leaders</p> <p>PM to present tentative daily schedule for PRA; to be discussed and agreed upon Survey is conducted as agreed with full involvement of the mission Recap of day's activity</p>

31 May 2013		Travel from Kalangala to Entebbe		Recap of activities in Uganda
3 June 2013	Muleba District, Tanzania	Travel to Muleba through Bukoba, Tanzania Courtesy call to District Officials, Discuss following day's program with District Fisheries Officer	PM and DFO	Project focal point from Tanzania to join the team DFO to introduce the mission / self-introduction of members PM lead discussion with District Officials on purpose of the Mission and on concerns of the fisher communities
4 June 2013	Muleba District, Tanzania	Conduct vulnerability/ livelihood/ poverty assessment/ baseline survey in target areas/groups on Bumbire island, Muleba District, Tanzania	DFO, PM, PC, FAO, FP, LFS	DFO to introduce mission to BMU Leaders PM to present tentative daily schedule for PRA; to be discussed and agreed Survey is conducted as agreed with full involvement of the mission Recap of day's activity
5 June 2013	Mwanza	Travel to Mwanza, Tanzania	PM, PC, FAO, FP	Overnight stop in Mwanza, Tanzania
5 June 2013	Ukerewe	Travel to Ukerewe islands Courtesy call to District Officials Discuss following day's program with District Fisheries Officer	PM and DFO	DFO to introduce the mission / self-introduction of members Discuss purpose of mission and concerns of the fisher communities
6 June 2013	Ukerewe	Conduct vulnerability/ livelihood/ poverty assessment/ baseline survey in target areas/groups in Namasabo fishing village, Ukerewe, Tanzania	DFO, PM, PC, FAO, FP, LFS	DFO to introduce mission to BMU Leaders PM to present tentative daily schedule for PRA; to be discussed and agreed upon Survey is conducted as agreed with full involvement of the mission Recap of day's activity
7 June 2013	Kisumu	Travel from Ukerewe to Kisumu, Kenya through the Serari/Isebania border	PM, PC, FAO,	Overnight stop in Kisumu, Kenya
8 June 2013	Bondo	Travel to Bondo, Kenya Courtesy call to District Officials Discuss following day's program with District Fisheries Officer	DFO, PM, PC, FAO, FP,	Focal Person for Kenya joins the Mission. DFO to introduce the mission / self-introduction of members Discuss purpose of mission and concerns of the fisher communities

10 June 2013		Conduct vulnerability/ livelihood/ poverty assessment/ baseline survey in target areas/groups on Mageta island, Bondo District, Kenya.	DFO, PM, PC, FAO, FP, LFS	DFO to introduce mission to BMU Leaders PM to present tentative daily schedule for PRA; to be discussed and agreed upon Survey is conducted as agreed with full involvement of the mission Recap of the day's activity
11 June 2013		Travel to Ndeda Island, Bondo Conduct vulnerability/ livelihood/ poverty assessment/ baseline survey in target areas/groups in Ndeda island, Bondo District, Kenya.	DFO and PM DFO, PM, PC, FAO, FP, LFS	DFO to introduce mission to BMU Leaders PM to present tentative daily schedule for PRA; to be discussed and agreed upon Survey is conducted as agreed with full involvement of the mission Recap of day's activity
12 June 2013	LVFO, Jinja, Uganda	Travel back to Jinja	PM, PC, FAO FAO Technical Supervisor	Recap of all activities and agree on follow-up activities End of survey field activities
13 – 27 June 2013	LVFO, Jinja, Uganda	Collate and analyse all information and data collected during the baseline survey using the data collation and analysis templates provided by FAO; Submit detailed budget and workplan prepared with full consultation and participation of target beneficiary groups	PM, PC and FAO Technical Supervisor	In collaboration with focal points DFOs, LFS and beneficiary groups
1 - 12 July 2013	LVFO, Jinja, Uganda	Preparation and submission of final report with work plans and budgets for each of the livelihood diversification alternative income generation activities to be carried out by the selected six groups	PM, PC and FAO Technical Supervisor	Final report with work plans and budgets for each of the livelihood diversification alternative income generation activities submitted to FAO

13 – 27 July 2013	LVFO Jinja, Uganda	Preparation for one-day validation meeting for 20 people with 2 representatives from each of the beneficiary groups	PM, PC, FP, DFOs ,	Invited participants Arrange logistics Meeting venue and materials organized
30 July 2013	LVFO Jinja, Uganda	Hold one-day validation meeting at the LVFO offices to present results of assessment and propose work plans / interventions	PM, PC, FAO, FP	Validation meeting to be organised and held for 20 people; participants to include 2 people from each beneficiary group Meeting report prepared and submitted to FAO
16 August 2013	LVFO Jinja, Uganda	Submit a mid-term progress report, (narrative and financial) detailing all activities and providing preliminary recommendations from the first set of activities (1.1, 1.2, 1.3). The report should also include validated interventions and work plans including a detailed budget for Activity 2.2	PM, PC, FAO	Final progress report submitted and agreed with FAO together with a detailed budget for Activity 2.2

Annex 3. Field visits: daily program

Tentative daily schedule for participatory rural appraisal in fisher communities				
Time	Activity	Team involved	Roles of each person	Remarks
9.00 – 9.30	Introductory meeting with BMU Leaders and Elders:	Mission Team:		The Mission Team will agree on their roles with the fisheries staff before the introductory meeting
	Agreement on daily schedule, time and location of the meeting and selection criteria for informants.	Mr. Davide Signa, FAO Fisheries Officer, FAO SmartFish Project, External Technical Supervisor	Davide will provide technical guidance with regard to the livelihoods surveys	The DFO (in collaboration with the mission team) will facilitate the meeting
		Mr. Sam Abura, LVFO Senior Information and Database Officer; Project Coordinator (PC)	Sam will guide data collection	
		Caroline T. Kirema-Mukasa, Project Manager (PM)	Carol will coordinate the entire process of conducting the livelihood baseline survey	
		Relevant focalpoint (FP) from Fisheries Department of Kenya, Tanzania or Uganda	The focal point will be the mission's secretary, taking notes of the meetings and discussions	
		Relevant District Fisheries Officer (DFO)	The DFO will introduce the mission team and facilitate the meeting with the BMUs and also assist with FGDs	
		Local Fisheries Staff (LFS)	The Local Fisheries Staff will carry out the transect - walk with the mission and assist in identifying key informants for the survey, and collect the BMUs and fisheries records	
			All mission members are expected to take notes	
9.30 – 11.30	Discussion with BMU Leaders and Elders on status of the community, review BMU records and collect secondary data	Mission team with BMU Committee Members and Elders (max. 15 persons)	DFO to facilitate discussions with BMU Leaders and Elders PC and PM to work with LFS to get the relevant BMU records and fisheries data BMU to provide a list of self-help groups, enterprising individuals and a list of alternative income generating activities that the fisheries dependent households are engaged in	BMU data on households, fisheries and socio-economic parameters will be collected
11.30 – 12.30	Walk around the village, observe, conduct informal interviews and take notes	Mission team and BMU Leader	The mission team will be assisted by the BMU Leader and LFS to walk, discuss with people and identify key informants/respondents for the FGDs	Summarise the findings of the activity by the FP, PM, the LFS
12.30 – 14.00	Lunch break	All		
14.00 – 17.00	FGD with target group	A facilitator will conduct the meeting and other members of the team take the notes	The FP will facilitate the meeting assisted by the DFO Other mission members will interact through seeking clarification and/or provide guidance and will also take notes	Each self-help group will be interviewed separately
17.00 – 18.00	Recap meeting with BMU/key stakeholders	A facilitator will conduct the meeting and other members of the team take the notes	The FP, assisted by the PM, will recap on the outcome of the assessment	Recap with BMU Leaders, Elders, and active participants from the FDGs on findings
18	Departure			

Annex 4. Guide for assessments

- 1) Take the GPS coordinates of the site visited.
- 2) Go to the BMU Office and if the leaders are absent look for Elders/Opinion leaders.
- 3) Introduce yourself and inform them of where you are coming from. Say something nice/positive about their landing site.
- 4) Allow them to introduce themselves and then introduce your entire team and the reason why you are visiting them. (*Note: A fisher's time is limited and some suffer from research fatigue*).
- 5) Request their time and agree the day's program with them.
- 6) Hold a discussion with the BMU Leaders using the checklist. Request their records and record any secondary data. (*You may ask the BMU Secretary/Information Officer to assist you in copying the required information.*) This will help you to discuss pertinent issues with the BMU, such as, vulnerability issues, community welfare programs, law enforcement, political support/interventions/interference and migration dynamics.
- 7) Go around with the BMU Leader(s), noting social amenities, fish handling facilities, housing and observe the general appearance of the fish landing beach/site, the people, (especially women, children, youth and the elderly).
- 8) Ask BMU Leaders to organise people in groups as per the program and carry out the focus group discussions. Take notes of the discussions and if possible record audio-visually.
- 9) Conduct a special session with members of the self-help groups and interview enterprising individuals to get more information on their business operations. If possible, record the discussions.
- 10) *Remember not to promise anything, apart from mentioning that a report of the outcomes will be provided to the government and shared with them through the normal information channels.*
- 11) Thank the BMU Leaders and the community for hosting you, wish them success in their endeavours and bid them farewell.

Annex 5. BMU/Community discussion checklist

Beach Name: ----- **Geo. Ref. No.** -----

For use during consultation with BMUs and collection of secondary data from BMU and Fisheries records.

A. General

1.	Name of interviewer	Respondent's name	Interview venue	Date

B. Demographic information

2.	Demographic information	Landing beach name	Sub-county	District	Province / region	Country	Population	
	Targeted fish landing beach/site						Male	Female
	Nearest mainland fish landing beach/site/port							
		Distance						
2.1	Fisheries co-management							
	Fisheries staff working at the beach (number)						Male	Female
	BMU Chairperson	Name					Male	Female
	No. of BMU Committee Members						Male	Female

List the NGOs/CBOs and the services they provide

2.2	NGOs / CBOs	Service provided	Name of NGO/CBO	Name	Name	Remarks
		Micro-finance				
		HIV/AIDS				
		Functional literacy				
	Other (list)					

C. Fisheries

3.	Fish Production	Total (tonnes)	Value	Remarks
		(Last year -20		
	Nile Perch			
	Tilapia			
	Dagaa			
	Haplochromis			
	Bagrus			
	Other fish types (list):			

3.1	Fishing capacity	Total	Men	Women	Remarks
			(and ownership)		
	No. of fishers				
	No. of fishing boats				
	No. of engines				
	No. of nets				

3.2	Local fish processing	Total	Men	Women	Remarks
			(and ownership)		
	No. of fish processors				
	No. of kilns				
	No. of drying racks				

3.3	Fish marketing	Total	Men	Women	Remarks
	No. of fish traders				
	No. of factory agents				
	Factory names (list)				
	Markets (list)				

General BMU Group Discussion meeting checklist

4. What are the major concerns of the fishing community?							
	Major community concerns (by rank)	1	2	3	4	5	Related indicators
4.1	Declining fish stock/catches						Changes in fish catches
4.2	Illegal fishing and fish trade						Changes in fish size and amount caught etc.
4.3	Poverty						Income & property
4.4	Market access						Markets & volume
4.5	Health						Facilities & access
4.6	Food security						Access
4.7	Safe water access						Access
4.8	Credit access						Facilities & access
4.9	Education						Facilities
4.10	Environmental degradation						Type & mitigation
4.11	Safety on the Lake						Accident & measures
4.12	Land access/ownership						Size, access & ownership
4.13	Others (list)						

1. What are the main non-fishing income generating activities that fisher households are engaged in (list)?

	List of non-income generating activities engaged in by fisher households	Describe the challenges and success stories
1		
2		
3		
4		
5		

2. Which non-fishing income generating activities have been tried but were not successful and why (list)?

	List of previous non-income generating activities engaged in by fisher households	Describe the reasons for the failure
1		
2		
3		
4		
5		

3. What self-help groups do you have at this landing beach that are engaged in income generating or humanitarian activities (list)?

	List of self-help Groups	Activities
1		
2		
3		
4		
5		

4. What do fisher households do to cope with seasonal changes of low catches?

Food security and nutrition

1. How often do people eat fish per week? (Why not every day?)
2. At what time of the year is food scarce in your community?

Month (tick)	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.

3. What coping strategies do the fisher communities use to deal with food scarcity?
4. What do the fisher communities do when food is plenty?

Vulnerability

1. What are the major causes of poverty or stress in the community (List in order of priority)?

	Causes of poverty/stress	Ranking	Remarks
1			
2			
3			
4			
5			
6			
7			
8			

2. What efforts have the BMU/fisher community made to address the causes of poverty/vulnerability?
3. Who are the poorest and most affected members of the fisher communities in times of stress (market closure, civil strife, conflict, etc.)?

4. What self-help (initiatives) groups exist in the community?

Group names	Brief description and achievements

Annex 6. Self-help group checklist for FGDs

1.	Establishment of groups and individual enterprises	Name of the group or enterprise:				
	Start date					
	Members	Total	Male	Female		
1.2	Purpose of forming the self-help group or individual enterprise (rank)	1	2	3	4	5
	Increase income					
	Diversify sources of income (risk management)					
	Earn a living					
	Create jobs					
	Food					
	Other (list)					
Indicators:						
<ul style="list-style-type: none"> The most important reasons for forming the groups or enterprises indicate the needs to be addressed in terms of income, employment, livelihood diversification, food security and social inclusion. 						

1.3	Activities engaged in by group/enterprise (list and rank)	1	2	3	4	5	Reasons
Indicators:							
<ul style="list-style-type: none"> The most popular activities undertaken by the groups or enterprises indicate the areas that are more appealing in terms of investment; they may require additional financial and technical support for production, processing and marketing. The number of activities undertaken shows the livelihoods options currently being pursued by fisher households to improve income generation and diversify livelihoods. 							

1.4	Source of funding for alternative livelihoods (list and rank)	1	2	3	4	5

Indicators:

- Identifying and ranking the source of funds shows the sources of funds currently available to the fisher community for livelihood diversification.

1.5	Market outlets /channels for IGA products (rank)	1	2	3	4	5	Remarks
	Direct sales						
	Middlemen (wholesale and retail traders)						
	Agents						
	Supermarkets						

Indicators:

- The most important channels used to sell the product are identified. Failure to reach the market is a major disincentive to a producer and might lead to closure of the business.

1.6	Documentation				
	Any external technical or financial assistance for this business				
	Written agreement on the formation of the group				<i>Politely request to look at paperwork</i>
	Registration of the group/business (when, where?)				<i>Politely request to look at paperwork</i>
	Record keeping of business transactions (revenue and expenditure)				<i>Politely request to look at the records</i>

Baseline data on vulnerability indicators and group status

2.	Indicator		Means of measuring status			
			Unit			Quantitative
	Natural assets	Land				Size (acres) of land; location - within or outside the landing beach; owned by group members
		Fish				Kg handled by group per year
		Forest				Type and amount of products handled per year
		Other				
2.1	Physical assets	Housing				Type and number of houses owned or rented by group members
		Livestock				Type and number of animals owned by group members
		Fishing or fish processing equipment				Type and amount of equipment owned by group
		Own transport				Type and number of vehicles/vessels owned by group
		Other				
2.2	Human	Knowledge				Difference between revenue and profit
		Skills				Record keeping business documents
		Health status of individual households				Major illnesses that have affected group members in past 6 and expenditure on health care
		Food quantity e.g. meals per day				Type and number of major meals per day per group member
		Food quality e.g. what does an average meal consist of?				Main starch, protein and vegetables consumed in a week by group members
2.3	Financial assets	Cash income from fishery activities				Documents from last 6 months

2.	Indicator		Means of measuring status			
			Unit			Quantitative
		Cash income from non-fishing activities				Documents from last 6 months
		Expenditure on fishery activities				Documents from last 6 months
		Expenditure on non-fishery activities				Documents from last 6 months
		Access to credit				Yes/no and type and/or amount
		Other income				Yes/no and amount
		Savings				Yes/no and amount
2.4	Access to basic services	Electricity				Yes/no/cost/bills
		Water				Yes/no/cost/bills

How do you (the group) cope with seasonal changes and shocks such as unexpected costs and natural disasters?

Diversification and pilot intervention support and ideas

3.	Major constraints at the moment	1	2	3	4	Remarks
	Funds (credit access)					
	Managerial skills					
	Market access					
	Labour costs					
	Transportation					
	Seasonal changes (drought, floods, changes in weather forecast, planting and market seasons,)					
	Others (list)					
<p>Indicators:</p> <ul style="list-style-type: none"> • These issues help to identify diversification ideas or intervention support for enterprise development and growth. 						

4. Aspirations for the future of the group or individual enterprise		
4.1	Where would you like your group or enterprise to be in 2 years time?	
4.2	What would help you achieve this?	
4.3	What would make it difficult for you to achieve this?	

5.	Major expenditure of income generated from the business (rank)	1	2	3	4	5	Remarks
	Food						
	Health						
	Household items						
	Retained earnings (put back into business)						
	Education						
	Savings/bank deposits						
	Investment in capital assets (land, building, fishing inputs, vehicles)						
	Diversified into other businesses (list)						

6.	Support for alternative income generating activities	List	Remarks
6.1	What kind of support would you need to expand your alternative income generation activities?		
6.2	What kind of non-fisheries activities would you like to engage in to improve your income base?		
6.3	Please, could you develop a plan/proposal (including work plan, justification and budget) for the income generating activity you are engaged in?		

SmartFish is a regional fisheries project managed by the Indian Ocean Commission, funded by the European Union and co-implemented by the Food and Agriculture Organization of the United Nations. SmartFish, which operates in twenty countries throughout the Indian Ocean Region, Southern and Eastern Africa, focuses on fisheries governance, management, monitoring control and surveillance, trade, and food security.

This report presents the initial findings of the first phase of the pilot project: *Introduction of alternative income generating activities for livelihood diversification for fishing dependent communities on the islands of the three riparian states of Lake Victoria*. As part of this first phase, a baseline survey was undertaken to assess vulnerability, livelihood and poverty levels of target groups of island fishers. Potential alternative income generating activities were also identified aimed at reducing dependency on fishing and fish resources.

The project intends to introduce alternative livelihoods to island fisher communities in order to stabilize income, increase food security and nutrition, increase the ability to cope with shocks and reduce vulnerability in the long term.

The results of the vulnerability survey, potential alternative income generating activities and follow up activities for a pilot intervention phase have all been included in this report.



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