Bukoba Catholic Diocese

Lak	e Victoria	Conservation	and Food	l Security	Program
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Natural Resource Management, Improved Market Oriented Farming System, Financial Services, Housing and Conservation of Cultural Heritage in The Lake Victoria Basin.

Project Proposal and Budget For The Years 2013-2015

First Draft Version December 2011

PROJECT PROPOSAL SUMMARY SHEET

Project Title:	Lake Victoria Conservation and Food Security Program		
Project Period:	Three-years		
Target areas:	All communities around Lake Victoria and Its Catchment		
Total funds requested:	Year-One:	US Dollars:	
	Year-Two:	US Dollars:	
	Year-Three:	US Dollars:	
Proposal submitted to:			
Proposal submitted by:			
Applicant's address:			
Applicant's telephone:			
Applicant's e-mail:			
Applicant's legal status:	Non-Governmental Organization		
Project Leaders' name:			
Date of Submission:			

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1.0 Executive Summary

The Lake Victoria Conservation and Food Security Program is a joint initiative of the Bukoba Catholic Diocese and Development Partners in Kagera Region. Recently the two parties, with a common ambition of combating the accelerating environmental degradation and poverty levels in the region have had several discussions on how to come up with a comprehensive program that will cater for tireless efforts for the same. The program will contribute to a long-term restoration and conservation of natural creation in the area around Lake Victoria, initiated by Bukoba Catholic Diocese, with experience learnt from programs supported by ARC (Alliance of Religions and Conservation.)

The Program will consist of six major components; restoration and conservation of natural creation and cultural heritage, environmental management, agro forestry (agricultural) production, and Habitat and housing. Two sub components that are local business development and financial services will be introduced as cross cutting issues. The local business development sector will work and advance the concepts and methods developed in the Farmer Enterprise Development (FED) approach developed by the stakeholders' commission for Kagera Region in collaboration with Moshi University College of Cooperatives and Business Studies in 2003. The Financial Services sub component will work by adopting VS&LA (Village Saving and Loan Associations a model developed by Care international and Oxfam USA.

The program for Restoration and Conservation of Natural Creation and Cultural Heritage will be implemented jointly through Small Christian Communities (Jumuia ndogondogo) and the LVCFSP's extension structures.

The Environmental Management program will be implemented jointly through Small Christian Communities (Jumuia ndogondogo) and the LVCFSP's extension structures.

Agroforestry (agricultural production) and local business development will be implemented jointly through Small Christian Communities (Jumuia ndogondogo) and the LVCFSP's extension structures.

Community-Based Savings for Empowerment (Co-Save) will be implemented jointly through Small Christian Communities (Jumuia ndogondogo) and the LVCFSP's extension structures.

The Habitat program will be implemented jointly through Small Christian Communities (Jumuia ndogondogo) and the LVCFSP's extension structures.

The Overall objective of our program is;

To contribute to "improved livelihood and Life expectancy for people in the Lake Victoria Basin through sustainable conservation of natural creation.

The program will contribute to the achievement of the above development objective through two immediate objectives;

- Focused Reading and reflection of the world of God for Conservation of natural Creation by end of 2015.
- Assurance for food security, medicine, nutritional status & income for social security at household level by end
 of 2015.

The following seven outputs have been developed to enable the program reach its objectives:

- Increased practice of Bible reading and reflection through Catholic Small Christian Communities
- Increased focus on faith communities to restore and conserve natural creation
- Increased & diversified food supply thro' application of agroforestry technologies.
- Improved nutritional status.
- Increased on farm tree cover for firewood, wood and medicine products thro' application of agroforestry technologies.
- Improved farmers' utilization of agroforestry products.
- Increased access to financial services for social security and insurance

2. Background

2.1 Short summary of our regional strategy

The identity and mandate of the Lake Victoria Conservation and Food Security Program rest with the existence of Small Christian Communities (SCCs). As a result, SCCs and other church organizations (the youth and women) and church institutions especially schools will be the backbone of the regional approach of the Program. However, the SCCs model is considered a means and not an end to development. Due to this we will establish partnerships with all kinds of organizations working for improved livelihoods and sharing the values of faith, humanity, peace, democracy, participation, equity, transparency and social responsibility.

The program shall have a two pronged approach, reaching out to local level organizations. The collaboration with regional and national organizations will in most cases focus on Organizational development (OD)/Capacity Building (CB) aimed at contributing to enhanced effectiveness and efficiency as well as at building the capacity to lobby and advocacy in relevant areas and forums.

The development efforts at local level will involve small-holder farmers and small scale business entrepreneurs organized in common interest groups but originating from the SCCs, primary level cooperatives, farmers' groups and other informal organizations. The approach will be need-based driven, facilitative and holistic and cover aspects of OD, leadership and capacity building of members.

With the emphasis on marketing and business development in the agricultural sector and providing affordable financial services and shelter to low-income members of society, a well-functioning and efficient informal economy becomes increasingly important. In rural areas, most people are involved in a wide variety of activities ranging from farming, processing of crops and marketing of farm produce. Furthermore, today's small-holder farmers are closer to the market place than they used to be and many rural people combine their farming with activities in the service sector, such as bike or car workshops, shoe making and repairs, soda or food shops, etc. In order to make possible small investments they save and take loans in savings- and credit organizations or other micro-finance institutions. This way they become small scale business entrepreneurs with a number of ventures including shelter needs being addressed simultaneously.

2.2 Contextual Analysis

Lake Victoria or Victoria Nyanza is one of the Great Lakes of Africa. With a surface area of 68, 870 square kilometers, it is the continent's largest lake, the largest tropical lake in the world, and the second largest fresh water lake in the world in terms of surface area. Being relatively shallow, Lake Victoria ranks as the seventh largest freshwater lake by volume. It is the source of the longest branch of the Nile River, the White Nile. The lake lies within an elevated plateau in the western part of Africa's Great Rift Valley and is subject to territorial administration by Tanzania, Uganda, and Kenya, who share the lake; 49%, 45% and 6% respectively.

The shores of Lake Victoria and the surrounding area sustain a large number of people who are dependent on its resources for their livelihood. Its ecology and hydrology, its biological diversity and pollution levels, its wetlands and fish resources are common concerns for all three countries.

The Lake Victoria Basin, the lake itself and its catchment area, covers an area the size of Uganda as a country.

The basin also includes most of Rwanda and Burundi as these countries share the largest tributary of the Lake Victoria, the Kagera River, with Tanzania and Uganda. The total population of the basin is about 35 million.

The population of the basin is concentrated in three areas: The Kagera river catchment area, with 40% of the population; Nyanza and Western provinces in Kenya with one third of the total; and the narrow strip of land in Uganda on the northern shore of the lake, an area of high agricultural potential and relatively large towns.

Although Rwanda and Burundi and East Africa do not share the same colonial history, ties between the countries have been strengthened since independence. Rwanda and Burundi have applied to join the East African Community (EAC). The EAC has adopted a protocol on Lake Victoria, and Rwanda, and the EAC signed a Memorandum of Understanding on cooperation in the region in 2004.

Along with other initiatives The East African Community (EAC) and the governments of Sweden, France and Norway and the East African Development Bank (EADB) recently entered into a long term Partnership on the promotion of sustainable development of Lake Victoria Basin.

The Partnership is guided by the Vision and strategies developed by a broad consultative process which involved government administration, civil society, the business community, the academic communities and representatives of regional organisations. The partnership was entered into on the recognition that:

- The Lake Victoria Basin, with its abundance of natural resources, has the potential of becoming a prosperous region.
- A majority of the people in the Basin live in abject poverty.
- Environmental degradation in the Basin is escalating.
- The potential of the Basin cannot be sustainably developed unless problems related to environmental degradation, deepening poverty, and poor health standards are addressed in broad and coordinated manner.

2.2.1 Lake Victoria Region Economic Status

Agriculture, mainly the cultivation of maize, rice, sugar, coffee, tea, cotton and horticultural products, and livestock rearing employ some 75 % of workforce in the region and form the basis of its economic viability. The area was formally rich in natural forests but this resource has been severely over-exploited. Deforestation combined with unsustainable agricultural methods has resulted in widespread, increasingly conspicuous land degradation. In industrial terms, the region has been neglected. Agro industries based on sugar, cotton and tea predominate. The sugar and textile industries are exposed to stiff competition from import businesses and enterprises in other parts of Kenya and Tanzania, and a number of companies have gone out of business as result. Light industry and handicraft enterprises, often operating in the informal sector, are not insignificant contributors to the regions productive wealth.

Fishing in Lake Victoria was traditionally carried on for consumption inside the region. However, since the introduction of the Nile perch some twenty years ago, the region has seen the development of a large-scale, export-based fishing industry-putting an end to traditional small-scale fishing in the process. A common tendency to over-exploit the lake's fishing potential has led to minor conflicts between fisher folk in the region, and between large-scale industrial fishing and small-scale fishing for household consumption.

Women at landing beaches, who act as intermediaries between fishermen and buyers, are especially vulnerable. Fishing and fish-breeding together provide employment for 500,000 people in the region.

Mining, mainly in Tanzania, where gold-mining in the Kahama and Shinyanga districts has become a leading export industry, is another important commercial enterprise. The tourist industry, with the Serengeti National Park in Tanzania and Masai Mara in Kenya as principle attractions, is also a valuable

source of foreign currency. Prospects for the development of a flourishing industry based ecotourism are favorable given the abundant birdlife on and around Lake Victoria and the region's remarkable ecological diversity.

Although the road network in the region is rapidly improving, shipping remains under-developed. Telecommunications are concentrated in the larger urban areas. Hydroelectric power is the region's most important energy source, with the full potential of the Nile and Kagera rivers still largely unexploited. Charcoal is the most common source of energy at household level.

The Lake region has been designated an economic growth zone by the EAC on the basis of proposals and recommendations contained in a study funded by Swedish International Development Cooperation Agency (Sida). The EAC document based on the study is aimed at highlighting the region's economic growth potential and identifies a number of investment opportunities. The report refers to the region's rich resource base and the potential for the establishment of processing industries to serve the agricultural sector and other industries. It also points out that infrastructure is being improved, although not continuously, the education system is being strengthened, the democratisation process is being deepened and awareness of the governments should be to create conditions conducive to stable growth, and enterprise friendly environment characterised by cohesive legislation and active civil society. The vital role of the financial sector is underlined, as is the importance of investment in production and marketing in the private sector.

The EAC report also draws attention to number of factors inimical to private sector investment. Chief among these is inadequate infrastructure; reference is made to the crucial role of small, passable roads in linking urban and rural areas and primary sector produce and markets. Other growth-inhibiting factors cited are limited financial resources at local government level and non-enterprise-friendly local and regional legislation. Corruption is also a major problem.

2.3 Poverty Analysis, and Human Rights

The Lake Victoria Conservation and Food Security Program looks upon poverty as multidimensional, dynamic and context specific. Lack of material resources is only one aspect of poverty. The freedom of each individual to make his/her own choices and be in command of his/her own life is essential for building a future. To be secure and able to express ones opinion are other important elements. In our opinion all this will be accomplished with improved focus on faith values and reflection of the word of God.

In the Lake Victoria Conservation and Food Security Program we will help create conditions that enable the people to value nature and see in themselves the responsibility to conserve God's creation as means to restore the declining hope for humanity. Local resources are in many cases carelessly utilized and explored. As individuals many poor people will stay in poverty. If acting together, uniting their efforts and pooling their resources, chances of rising out of poverty are enhanced.

The Lake Victoria region is home to approximately one third of the population of East Africa. The region takes in the poorest areas of Kenya and Tanzania, where the percentage of the population living below the poverty line –i.e. on less than a dollar a day – is 61 % and 41 % respectively, compared to the national average for the two countries of 52 % and 36 %. In Uganda, the region contains several districts where the percentage of people living in absolute poverty is far lower than the national average of 39 %. Therefore the lake Victoria Basin is a region marked by negative trends in terms of living conditions, the environment and natural resources.

This is the mission of Lake Victoria Conservation and Food Security Program, to help feed the poor, eliminate poverty and improve the environment. Our intervention also makes a significant contribution to the first United Nations Millennium development goal of eradicating extreme poverty and hunger.

In the Lake Victoria basin, over 80% of the population lives in the rural areas. This is also the population targeted by the Lake Victoria Conservation and Food Security Program. The agroforestry systems and methods are developed to lift a large number of subsistence farmers from conditions of extreme poverty to a better food and nutritional base, and at the same time building their capacity and strengthening market access for their agricultural Produce.

The increased nutritional base and poverty reversal also reduces rural to urban migration, where conditions are even more severe. The development of slums has been accelerated by this migration, and with increased income possibilities most urban centers will be protected from this negative development.

In our planning, monitoring and evaluation studies we will endeavour to include analysis of poverty as related to eroded faith values to measure how our interventions are impacting on poverty in the basin. In this monitoring work we will also be fulfilling our strategic ambition, where we endeavour to continuously improve our systems of measuring results and effects of program activities.

However effective poverty reduction strategies require a multi-sectoral approach as well as deliberate policy interventions at the national levels. Within the Lake Victoria Conservation and Food Security Program, we will work with other stakeholders to advocate and influence policy at the national level as well anchoring our development effort to institutions and organisations with strong pro-poor interventions and policies.

A human rights perspective will permeate the development program, based on the needs, interests and conditions of poor people. The point of departure is the principle of the equal dignity and rights of all people and value for humankind.

3. The problem statement

3.1 Testimonies on environmental degradation and climate change

African farmers face reduced crop yields: December 16, 2011 by faith in food

New research reveals Africa will face significantly lower crop yields in the next ten years as a result of increasing temperatures, threatening the food security of millions.

The new report on climate change and African agriculture, published by the African Climate Policy Centre (ACPC), examined the extent of climate change impacts in Africa and their effects on food security, and found that even small temperature increases were likely to affect yields.

The report was published against the backdrop of the UN Climate Change Conference (COP 17) in Durban, South Africa, where future action to limit temperature increases were discussed from November 28-December 9

Dr Seleshi Bekele, Senior Water and Climate Specialist at the ACPC said: 'Agriculture is the lifeline and mainstay of livelihoods for three out of four Africans, and therefore adaptation to climate change in this critical sector is not an option but a necessity.'

The report's author Professor Doreen Stabinsky said: 'Global temperature rise must be limited urgently to avoid serious impacts on African agricultural production. International offset programmes, which provide a substitute for action in developed countries, are actually further threatening food security in Africa.'

She added: 'African farmers and pastoralists are already seeing changes in the timing of rains, in the severity of rains, in temperatures, and in the progressive drying of their soils.'

Recent research summarised in the report concluded that from 1980-2008, due to rising global temperatures, global maize and wheat yields have already decreased by 3.8 per cent and 5.5 per cent respectively.

'All of these impacts are being felt before we even see a temperature rise of 1°C,' Stabinsky warned.

At the current rate of temperature increase, global average temperatures will have increased 1.5°C by 2050. Studies quoted in the report estimate average production losses by 2050 for African maize at 22 per cent, sorghum 17 per cent, millet 17 per cent, groundnut 18 per cent, and cassava 8 per cent.

'Warming as low as 1.5°C threatens food production in Africa significantly,' added Stabinsky.

The research also shows that warming over 1.5°C will mean severe crop loss, displacement of pastoralists and agricultural production, and dangerous impacts on food security for millions of people.

Opening the Climate Change Conference in Durban, President Jacob Zuma said: 'For most people in the developing world and Africa, climate change is a matter of life and death.'

President Zuma also claimed that climate change will reduce agricultural output by 50 per cent across the African continent. He drew attention to the fact that 'severe drought in Somalia is exacerbating an already volatile region causing displacement of populations and increasing refugee communities in Kenya'.

Faith leaders joined forces this month to urge decision-makers to act in the interest of humanity to reach an agreement on global climate change.

Failure to do so 'will cause human suffering on a terrifying scale', according to Christian Aid's climate exert Mohamed Adow.

The United Nations' Climate Change Conference (Conference of Parties 17) held in Durban, South Africa, from November 29 – December 9 was attended by 10,000 people representing the world's governments, international organisations and civil society.

African faith leaders played a major role in the talks with the All Africa Conference of Churches (AACC), which represents more than 120 million Christians in 39 African countries, having a strong presence at the event.

Cardinal Wilfrid Napier, Roman Catholic Archbishop of Durban, said that the world's political leaders were in danger of failing humanity.

'We express our displeasure with local and international political leadership, which has failed to take decisive steps to make the changes required for the survival of humanity and life on Earth,' he said. 'We as the religious community demand that our political leaders honour previous commitments and move towards ethically responsible positions and policies.'

The Cardinal urged the global spiritual community to do what their political leaders had failed to do and not accept platitudes instead of action on climate change.

Mardi Tindal, leader of the United Church of Canada, the country's largest Protestant denomination, said Jesus's call to love one's neighbour spoke directly to global decisions on the environment.

She said: 'When Jesus was asked what the greatest commandment was he said, "Love the Lord your God with all your heart and with all your soul and with all your strength and with all your mind," and he added, "Love your neighbour as yourself."

'We can't be compassionate followers of Christ without being concerned by the threat of climate change and its impact on our global neighbours,"

UK-based global development agency Christian Aid's climate talks expert Mohamed Adow said that if nothing is done, human suffering on a huge scale would be the consequence.

'We want to leave Durban with a deal which is a strong response to the climate chaos which is hurtling towards us – and which is already having devastating effects on poor people,' he explained.

'Governments need to agree how to respond to the latest climate science, which shows that without deep emissions cuts now, dangerous global warming will occur. It will cause human suffering on a terrifying scale.'

3.2 What does climate change actually mean for Tanzania?

Temperature: The most detailed analysis has been carried out by the OECD using separate modals (MAGICC / SCENGEN). All the projections expect a temperature rise of 2.2° C by 2100, with higher increases (2.6°C) in June, July and August. According to meteorological data, monthly temperatures over the last thirty years are already showing an upward trend (NAPA, 2007)

The 2007 Tanzania's National Adaptation Programme of Action (NAPA) estimates that projected temperature and rainfall changes could decrease the average annual maize yield by 33%. Maize is a staple crop in Tanzania.

Rainfall: The average precipitation is 1,042mm and temperatures range between 17C – 27 C. Although localised rainfall is complex, the country has two distinct regimes: 1) Bi-modal in northern Tanzania, with long rains between March – May (Masika) and short rains between October – December (Vuli); and 2) a single rainfall between November – April in the south of the country.

Some areas of northern Tanzania will get wetter (between 5% - 45% wetter), whilst others, especially in the south will experience severe reductions in rainfall (up to 10%). This change in rainfall would make the central, western and southern part of the country unsustainable for agricultural production (Development and Climate Change in Tanzania: Focus on Mount Kilimanjaro). NAPA (2007) reports that the most recent and common rainfall trend in Tanzania is "a greater variability in cycles."

Biodiversity: NAPA (2007) predicts that changing climatic patterns in Tanzania, such as increased temperatures and changes in rainfall patterns, will have strong impacts on wildlife in the country. Species migratory patterns will likely change, pests and diseases may increase, and strain for resources will become more prominent. Already, 14 species of dry country birds have responded to a drying climate and have expanded their range.

Health: Malaria, which is responsible for the most deaths in Tanzania, is already being observed in places where its prevalence is traditionally very low. The 2007 NAPA reports, "As a result of change in temperature and rainfall regimes, malaria epidemic has been observed to extend to some parts of Tanga, Kilimanjaro and Arusha highlands (non-traditional malaria areas) where the disease was not prevalent. As more areas receive more rains, it will in turn attract more across the country."

Kilimanjaro also has an exceptionally varied ecosystem with a range of fauna, mammals and flora; as of 2005, 22% of Tanzania's vascular plants were in the Kilimanjaro vicinity, and 140 mammalian species reside there along with 179 highland bird species and 88 species of reptiles. All of these species will be at risk due to the changing landscape and distribution pattern which have shifted due to weather patterns, decreased rainfall and population growth.

With a shift to a generally drier climate, and a greater human impact, fire has and will continue to play a huge role in promoting a yet drier overall environment. Over the last 100 years, Kilimanjaro has lost 300 km² of high altitude forest and the upper closed forest was lowered by 900m (Hemp, 2006). Over the last 30 years, Kilimanjaro has lost 10% of its forest cover due to fire (OECD, 2005).

3.3 PLANTS USED IN TRADITIONAL MEDICINE BY HAYAS OF THE KAGERA REGION, TANZANIA

Traditional medicinal plants are among natural gifts of creation that the Lord our God gave to us as a gift for sustaining humankind by healing our weaknesses. Kagera region was blessed with many tree species that provide ingredients for medicines. The trees ranged from big trunks to shrubs and they grew in places following the soils and water. These tree species are a very important contribution to the ECONOMIC BOTANY in Kagera region. Most of the medicinal shrubs were such agro forestry friendly that they matched well with other plants and crops in the same fields. Therefore farmers would always find it blessing to sustain both food crops and medicinal shrub and trees. The following is a list of some of the traditional medicinal plants found in Kagera region (research by S. C. CHHABRA AND R. L. A. MAHUNNAH 1994) a blessing worthy working with faith communities to restore and conserve since most of these species have been extinct and there is not clear efforts for conservation of the surviving ones nor for restoration of the extinct ones.

ACANTHACEAE

- 1. Justicia diclipteroides Lindau/TMRU3164/ ikingura/Buyekela/herb/East Africa/a decoction of the aerial parts is drunk by women usually one hour before sexual intercourse to prevent conception.
- 2. Justicia matammensis Oliv./TMRU 3147/kagege/Tukutuku/herb/tropical Africa/an infusion of the dried powdered aerial parts of this plant, together with those of Cassia gracilior (Ghesq.) Steyaert, Antherotoma naudinii Hook.f., Dissotis brazzae Cogn., Indigofera asparago}'des Taub. ssp. Ephemera Gillett, Rhynchosia minima (L.) DC. var. minima and Pentas zanzibarica (Klotzsch) Vatke, is drunk in case of cerebral malaria. This preparation is diuretic and is an abortifacient. Roots: For inflammation of the testicles and together with the leaves for heart complaints (Watt and Breyer-Brandwijk 1962).
- 3. Thunbergia alata Sims/ TMRU 3148/ waukula/Buyekela/herb/native of east and south Africa, widely cultivated and naturalized in tropical regions/a decoction of the aerial parts is drunk by women usually one hour before sexual intercourse to prevent conception. Leaves: For the treatment of backaches, hydrocele, joint pains (Kokwaro 1976) and early rectum ulcers (Haerdi 1964). Plant: For conjunctivitis (Haerdi 1964). The major component of the seed oil has been identified as cis-6 hexadecenoic acid (Spencer et al. 1971). A chemical analysis of the leaves indicated the absence of cyanogenic glycosides and leucoanthocyanins (Gibbs 1974). The aerial parts gave a negative result in antimicrobial tests (Chhabra et al. 1981).

BIGNONIACEAE

4. Markhamia obtusifolia (Baker) Sprague/ TMRU 3149/ ng'ubu/ Isamilo/ Tree or shrub/tropical Africa/the stembark decoction is drunk and the leaves are chewed and swallowed in case of snake bites. The latex or the stembark infusion is applied over scarifications at the site of bites. Roots: Against scrofula, hookworm, snake bites and as an expectorant (Haerdi 1964). Rootbark:

As a galactagogue (Watt and Breyer-Brandwijk 1962). Aerial pans: For stomach troubles (Kokwaro 1976)./The stem juice gave a negative result in antimicrobial tests (Chhabra et al. 1981).

CAESALPINACEAE

5. Cassia gracilior (Ghesq.) Steyaert/ TMRU 3150/mnkuza/Tukutuku/Herb/east and south Africa/ See Justicia matammensis

(Acanthaceae). 6. Cassia kirkii Oliv. var. kirkii/ TMRU 3183/ kashenganzili/ Kahororo/ herb/ east, west and south Africa/leaf infusion or decoction is drunk in case of traumatic pains, especially those associated with accidents.

COMMELINACEAE

7. Cyanotis foecunda Hassk./ TMRU 3151/ katija/ Buyekela/ herb/ east, central and south Africa, Arabia/ the whole plant decoction is drunk by women to prevent conception.

COMPOSITAE

- 8. Aspilia holstii O.Hoffm./ TMR U 3152/ kanyamuza/ Bujuku/shrub or herb/tropical Africa/ decoction of roots and the leaves is drunk and used to bathe for the treatment
- 9. Bidens gracilior (Hoffm.) Sherff./ TMRU 3187/rwongera/ Kahororo/ herb/ tropical Africa/a decoction of the leaves of this plant, together with those of Harungana madagascariensis Poir., is drunk in case of malaria and fevers. A warm infusion of the pounded twigs of this plant, together with those of Dissotis debilis (Sond.) Triana vat. debilis, is drunk against cardiac palpitations.
- 10. Bidens pilosa L./ TMRU 3153/ kakurura/ Tukutuku/herb/a common weed, probably of American origin, widely spread in the tropics/the leaves of this plant are wrapped in a banana leaf, then roasted and the paste thus obtained applied on wounds for fast healing. Roots: For malaria (Kokwaro 1976). Leaves: Against constipation, intestinal worms, stomachaches (Kokwaro 1976), conjunctivitis (Kokwaro 1976; Watt and Breyer-Brandwijk 1962), rheumatic pains, earaches, inflammation, colic (Watt and Breyer-Brandwijk 1962). Flowers: Against diarrhoea (Watt and Breyer-Brandwijk 1962). Plant: Against burns (Haerdi 1964)

and dysentery (Watt and Breyer-Brandwijk 1962). Phytosterin-B (Lin et al. 1967), hydrocarbons and phytosterols (Chen, Lin, and Hong 1975), conjugated polyacetylenes (Bondarenko et al. 1985; N'Dounga et al. 1983; Towers et al. 1984) from the whole

herb and chalcones (Hoffman and Hoelzl 1988) from the leaves have been isolated and identified/ The conjugated polyacetylene showed anthelmintic and protozoacidal activity (N'Dounga et al. 1983), paralyzed irreversibly the cercariae of schistosomal and echinostomal trematodes (Graham, Graham, and Towers 1980; Towers et al. 1984), displayed antimicrobial activity (Bondarenko et al. 1985) and has been found to be phototoxic to fibroblast cells (Arnason et al. 1980; Wat et al. 1979). Phytosterin-B

showed hypoglycemic activity (Lin et al. 1967). The consumption of the leaves has been found to be a promoting factor in the etiology of esophageal cancer (Mirvish, Rose, and Sutherland 1979; Mirvish et al. 1985).

EUPHORBIACEAE

- 1 I. Acalypha stuhlmannii Pax/ TMRU 3155/mwiza/Tukutuku/herb/east and south Africa/ an infusion of the dried powdered aerial parts is mixed with wheat porridge and eaten for the treatment of diarrhoea.
- 12. Phyllanthus amarus Schumach. et Thonn./ TMR U 3156/m'mbondo/Tukutuku/herb/ widespread in the tropics/an infusion of the aerial parts is drunk and the leaves are chewed against persistent coughs. Leaves: For stomachaches (Kokwaro 1976).

GUTTIFERAE

13. Harungana madagascariensis Poir./TMR U 3154/ mujumbo/ Bujuku/ tree or shrub/ tropical Africa, Madagascar, Mascarene Islands/ See Bidens gracilior (Compositae). Leaves: For the treatment of headache (Kokwaro 1976), haemorrhages, diarrhoea, gonorrhoea, sore throats and fevers (Watt and Breyer-Brandwijk 1962). Stembark: Against malaria (Kokwaro 1976) and tapeworms (Watt and Breyer-Brandwijk 1962). Betulinic acid, friedelin, euxanthon, five anthraquinones and an orange dye, harunganin from the stembark (Hegnauer 1966) and 3-sitosterol, quercetin,

disopropyl 4,4'- methylenedicarbanilate and a pigment, madagascarin from the leaves (Buckley et al. 1972) have been isolated and identified by chemical and spectroscopic means. The component acids of the seed oil have been determined and their potential value evaluated (Gunstone et al. 1968).

LABIATAE

14. Leonotis mollissima Giirke/ TMRU 3157/ kitalelante/Kahororo/shrub or herb/East and South Africa/leaf decoction is drunk

in case of stomachaches and convulsions in children, while in the latter case, they are also bathed with the decoction. Roots: Against dizziness, malaria, heart troubles (Haerdi 1964), dysentery and intestinal disorders (Kokwaro 1976); Leaves: Against encephalitis (Haerdi 1964) and snake bites (Watt and Breyer-Brandwijk 1962).

MALVACEAE

15. *Hibiscus palmatus* Forsk./ *TMRU 3158*/ ehelanget/ Buyekela/ herb/ widespread in tropical and south Africa, Arabia, India/decoction of the aerial parts is drunk by women to prevent conception, while that of the leaves to prevent neonatal complaints.

MELASTOMATACEAE

16. Antherotoma naudinii Hook.L/ TMRU 3159/igiri/Tukutuku/herb/tropical Africa, Madagascar/See Justicia matammensis

(Acanthaceae)/ a chemical analysis of the herb indicated the absence of phenols, flavones and anthocyanins (Hegnauer 1969). 17. Dissotis brazzae Cogn./TMR U 3160, 3161, 3162/kanyantoke, kinulilizi, tulo/Buyekela, Tukutuku/ herb/ east and south Africa/ leaf decoction has an anaesthetic effect and is drunk to induce sleep and as an anthelmintic. See Justicia matammensis (Acanthaceae).

18. Dissotis debilis (Sond.) Triana var. debilis/ TMR U 3163/kituntunu/Kahororo/herb/ East and South Africa/decoction of the twigs of this plant, together with those of Syzygium cordatum Hochst., Crotalaria microcarpa Benth., Kotschya africana Endl. And Anthospermum herbaceum L. f. var. herbaceum, is drunk as an antimalarial. See

also Bidens gracilior (Compositae).

MYRTACEAE

19. *Psidium guajava L./ TMRU 3184/* mushana/ Kahororo/tree or shrub/native of tropical America, now widely cultivated and

naturalized in other tropical and subtropical countries/twig decoction is drunk in case of malaria and fevers, and when mixed with honey for the treatment of diarrhoea, especially in children. Leaves: For the treatment of sprains, diarrhoea, intestinal haemorrhages, coughs and pulmonary disorders (Watt and Breyer-Brandwijk 1962). stembark: Against diarrhoea (Nadkarni 1976) and externally for anal prolapse in children (Chopra, Nayar, and Chopra 1956)/ Flavonoids, leucocyanidin and tannins from the roots (Sasaki et al. 1966; Trivedi and Misra 1984), fruits (Misra and Seshadri 1968) and heartwood (Mishra and Misra 1981) have been isolated and their structures elucidated. The essential oil of the fruits and leaves has been studied by gas liquid chromatography and mass spectrometry (Askar, El Nemr, and Bassiouny 1986; Idstein, Bauer, and Schreier 1985; Idstein and Schreier 1985; MacLeod and Gonzalez de Troconis 1982; Oliveros-Belardo et al. 1986; Shiota 1978; Smith and Siwatibau 1975; Stevens, Brekke, and Stern 1972; Wilson and Shaw 1978; Zheng et al. 1987; Hegnauer 1969). Terpenes (Bhati 1967; Osman, El-Garby, and Sheta 1974; Soliman and Farid 1952), tannins (Okuda et al. 1982, 1987; Okuda, Hatano, and Yazaki 1984) and saponins and sapogenins (Varshney and Shamsuddin 1964) from the leaves; vitamins (Campos 1943; Hartzler 1945; Miller and Robbins 1934; Padula and Rodriguez-Amaya 1986), flavonoids (Seshadri and Vasishta 1964) and organic acids and sugars (Wilson, Shaw, and Campbell 1982) from the fruits; tannins (Petard 1952; Primo 1945), polyphenols (Seshadri and Vasishta 1963, 1965) from the stembark; lipids and proteins (Habib 1986) from the seeds and polyphenolic compounds (Mair, Pandiyan, and Venkatasubramanian 1987) from the flowers have been isolated and characterized/ Oral administration of the leaf extract has been shown to inhibit hyperglycemia (Maruyama et al. 1985). Alcoholic and aqueous extracts of the leaves showed an antibacterial activity (Chhabra, Uiso, and Mshiu 1983; E1- Khaden and Mohammed 1958).

20. Syzygium cordatum Hochst. ex Krauss/ TMRU 3165, 3166/mkosho, mnuma/Kahororo, Tukutuku/tree/a decoction of the pounded twigs of this plant, together with those of Desmodium adscendens (Sw.) DC. var. robustum Schubert, Tephrosia linearis (Willd.) Pers. and Parinari curatellifolia (Planch. ex) Benth., is drunk against cardiac palpitations. See also Dissotis debilis (Melastomataceae). Leaves: For stomach disorders, diarrhoea and together with the

stembark and roots as a galactagogue (Watt and Breyer-Brandwijk 1962). Roots: For indigestion (Kokwaro 1976). Plant: Against tuberculosis and as an emetic (Watt and Breyer-Brandwijk 1962)/Friedelin, epifriedelinol, ~/-sitosterol, arjunolic acid, gallic acid and ellagic acid from the wood and stembark and leucodelphinidin and leucocyanidin

from the stembark and leaves have been isolated and characterized (Candy, McGarry, and Pegel 1968; Hegnauer 1969).

PAPILIONACEAE

- 21. Crotalaria microcarpa Benth./TMR U 3167/ kiroctuman/ Kahororo/ herb/ widespread in the drier parts of tropical Africa/see Dissotis debilis var. debilis (Melastomataceae).
- 22. Desmodium adscendens (Sw.) DC. var. robustum Schubert/TMR U 3168/kirandira/ Tukutuku/ herb/tropical Africa/see Syzygium cordatum (Myrtaceae).
- 23. Indigofera asparagoi'des Taub. ssp. Ephemera Gillett/ TMRU 3169/kayojwa/Tukutuku/ herb/ east and south Africa/see Justicia matammensis (Acanthaceae).
- 24. *Kotschya africana* Endl./ *TMRU 3170*/ kyangwe/ Kahororo/ shrub/ east, central and south Africa/twig decoction is drunk against headaches and stomachaches. See also *Dissotis debilis* var. *debilis* (Melastomataceae). Roots: For skin diseases (Kokwaro 1976).
- 25. Rhynchosia minima (L.) DC. var. minima/ TMRU 3171/mnkambi/Tukutuku/herb/ tropical Africa (scarce on the central plateau), Asia and tropical America/root decoction is drunk against gonorrhoea. See also Justicia matammensis (Acanthaceae)/ C-Glycosylflavones (Besson et al. 1977), hydroquinone diacetate (Krishnamurty, Krishnaswami, and Rangaswamy 1975), proanthocyanidins (Rangaswamy, Krishnamurty, and Rawat 1974), proteins and amino acids (Prakash and Misra 1988) from the seeds, and orientin, isoorientin, vitexin, isovitexin, C-glycosides and O-glycosides of
- 2-prenylated flavonoids, apigenin and maringenin from the leaves (Adinarayana, Ramachandraiah, and Rao 1985) have been isolated and characterized/An alcoholic extract of the plant showed antimicrobial activity against *Staphylococcus aureus*, *Neisseria gonorrhoeae* and *Shigella boydii* (Chhabra, Uiso, and Mshiu 1983).
- 26. Tephrosia linearis (Willd.) Pers./ TMRU 3172/kamilikamo/Tukutuku/herb/east and south Africa/See Syzygium cordatum (Myrtaceae).

PEDALIACEAE

27. Sesamum angustifolium (Oliv.) Engl./ TMR U 3173/ruzinga/Buyekela/herb/east, west and south Africa/ a decoction of the aerial parts is drunk by women to prevent conception/ Leaves: For eye troubles and diarrhoea (Kokwaro 1976). Roots: As an emetic (Kokwaro 1976). Plant: Against diarrhoea, burns and wounds (Watt and Breyer- Brandwijk 1962)/Iridoid glycosides, sesamolin and monomethoxysesamin have been isolated from the herb and characterized by chemical and spectroscopic methods (Hegnauer 1969).

ROSACEAE

28. Parinari curatellifolia (Planch. ex) Benth./ TMR U 3174/mnazi/Tukutuku/tree/east, central and south Africa/the rootbark decoction is drunk to prevent an abortion. See also Syzygium cordaturn (Myrtaceae)/ Stembark: Against malaria, as a blood tonic and cardiac stimulant (Watt and Breyer-Brandwijk 1962)/ the seed oil has been chemically analyzed and the following principal fatty acids obtained: a-elaeostearinic acid, oleic acid and linolic acid (Hegnauer 1973).

RUBIACEAE

29. Anthospermum herbaceum L. f. var. herbaceum/ TMRU 3175/ enganyoil/ Kahororo/ herb/east and south Africa, Arabia/ See Dissotis debilis var. debilis Triana (Melastomataceae).

30. Pentas zanzibarica (Klotzsch) Vatke/TMRU 3176/kashenda/Tukutuku/herb/east and central Africa/ See Justicia matammensis (Acanthaceae)/ Roots: Against gonorrhea and syphilis (Kokwaro 1976). Plant: Against headaches, fevers and rheumatic pains (Watt and Breyer-Brandwijk 1962).

SCROPHULARIACEAE

31. Buchnera hispida Buch.-Ham./ TMR U 3177/ olorokilele/Tukutuku/herb/tropical Africa, Madagascar, India/ the whole plant is cooked with bonny beef without salt, then the soup mixed with stiff porridge and eaten as an anti malarial.

4. Introduction

4.1 The Program

The Lake Victoria Conservation and Food Security Program (LVCFSP) is an initiative of Bukoba Catholic Diocese. The Program will consist of six major components; restoration and conservation of natural creation and cultural heritage, environmental management, agro forestry (agricultural) production, and Habitat and housing. Two sub components that are local business development and financial services will be introduced as cross cutting issues. The local business development sub component consists of a very successful agricultural production and marketing model known as the Farmer Enterprise Development (FED). The Local business development, financial services and habitat components are expected to build on farmer groups and organisations mobilised by Lake Victoria Conservation and Food Security Program.

The vision of Lake Victoria Conservation and Food Security Program is "A world free from poverty and injustice".

The Lake Victoria Conservation and Food Security Program has a three-pronged development objective namely:

- To contribute to the improvement of living conditions of people belonging to organisations supported by Lake Victoria Conservation and Food Security Program
- To promote faith values as the means to restoring and sustaining hope for humankind.
- To contribute to the development of a peaceful and just society.
- To contribute to sustainable development in the program area of concentration.

Lake Victoria Conservation and Food Security Program shall work with small Christian communities and other church organisations with the aim of improving living standards of the economically disadvantaged, particularly women and the youth. The impact of this program's support in the region will be exemplified by the growth and development of a sustainable natural environment.

Other methods that will be used by Lake Victoria Conservation and Food Security Program include Participatory Rural Appraisal (PRA), critical mass approach, farmer-to-farmer extension linkage and demonstration plots as well as mass media methods, including radio programs.

4 Vision, mission, objectives and strategic ambitions

Our Vision

A sustainable environment offering good living conditions and naturally harmonized environment for all

Our Mission

To make faith and the Word of God, engines for restoration of nature and poverty eradication.

Our Target Group

The primary target group of Lake Victoria Conservation and Food Security Program' development work is women, men and young people who most often farmers are living in households that cultivate land holdings equivalent to two hectares or less. The women, men and young people of these households are potential members of Small Christian Communities, informal groups and other democratic associations and cooperatives working towards common objectives. The extremely poor often lack opportunities and organization and Lake Victoria Conservation and Food Security Program will support mobilization and the development of member – based catholic faith organizations.

OUR STRATEGIC AMBITIONS 2013 – 2015

- 1. **To move into 5 Catholic Parishes and reach out for at least 1/3** of Catholic farming households within project area of operation.
- 2. To mainstream Lake Victoria Conservation and Food Security Program' environmental plan, into all planning and interventions, including tree planting and agroforestry.
- **3. To strengthen contacts and collaboration between** Small Christian Communities, civil society organizations, farmers' organizations, cooperative associations, research institutions, government institutions and regional net works in order to increase local ownership among farmers and support the establishment of an efficient and sustainable structure of farmers organizations.
- **4. To expand training programs** on environment and agro forestry for Small Christian Communities, farmer's organizations, educational institutions and to establish a "Lake Victoria Conservation and Food Security Program Academy" for advanced training in restoration and conservation of nature.

- 5. To establish a demand driven advisory service requested by farmers through their own organizations, and to scale down and gradually phase out of all program areas by 2025 where sustainable levels of restoration, conservation and food security will have been reached.
- 6. To investigate and initiate a program for carbon sequestration based on our forestry development and conservation model, and initiate climate change adaptation interventions based on identified needs and in collaboration with national and international research institutions.
- 7. To develop a comprehensive program for documentation of stories and tales on cultural heritage in the project area of operation.
- 8. To increase efforts to develop improved energy sources among smallholder households.
- 9. To develop a program for establishment of botanical gardens in all Catholic parishes.
- 10. To map and survey and establish a database for all church forests and establish gradual replacement of exotic tree species with indigenous species in areas where exotic species aren't environmentally friendly.
- 11. To develop a position paper on working with the youth and to expand activities aimed at motivating, training and involving the youth in environmental issues.

12. Water harvesting

13. Fish farming

Capacity building

The field organization will be strong linking professional staff in agriculture, forestry, livestock, natural resource management, financial services and community development and the management team will consist of an efficient and highly qualified mix of Professionals. Lake Victoria Conservation and Food Security Program will offer to the staff a good environment for personal capacity development and exposure to new knowledge through national and international training programs.

For long term sustainable environmental and agricultural development there is a need to work more closely with, and strengthen, the capacity of other stake holders. With time and increased capacity on

their part, partnership relationships should be established at local, national and even regional levels (EAC.)

Lake Victoria Conservation and Food Security Program has no interest. Partnership relationship should be established at local, national and improved livelihoods for farmers. The sustainability of this depends on the increased capacity of the farmers themselves and of organizations in civil society that work towards these goals, as well as on government policy and capacity.

At the field level Lake Victoria Conservation and Food Security Program will operate extensive cooperation with a large number of civil society and community-based organizations. Each can benefit from the other, with most gain going to the target groups. Lake Victoria Conservation and Food Security Program is determined to offer these organization trainings in its special fields of competence.

Lake Victoria Conservation and Food Security Program further will support the creation of farmers' associations at local level. These may be specific crop producers' groups, development committees, village savings and loan associations, bee keeping or silk producer groups, associations or cooperatives for added value and for the marketing of products. Such groups will be trained and their linkages to the market, formal credit instructions and other related organizations at higher levels supported. This empowerment of farmers will be the basis of the phasing out of Lake Victoria Conservation and Food Security Program' presence in any area.

Synergy effects: Lake Victoria Conservation and Food Security Program will work at lower and medium level with households, groups and organizations.

Partnership

Through collaboration between Lake Victoria Conservation and Food Security Program and potential stake holders, agreements will be made to assist farmers' unions and cooperative organizations. The intention is to help establish and strengthen linkages between these and organizations at the grass roots level. On this basis, partnership agreements may be established with appropriate organizations.

Lake Victoria Conservation and Food Security Program' definition of partnership is:

- -A mutually beneficial and long term relationship between
- -Lake Victoria Conservation and Food Security Program and a member-based organization which results in local communities taking more control over their own development for improved and sustainable delivery of services.

Ownership

Lake Victoria Conservation and Food Security Program strives towards the sustainability of its interventions, i.e. that farmers and local communities are able to continue to implement agroforestry methods for improved livelihoods and a sustainable environment even when Lake Victoria Conservation and Food Security Program has phased out of the project area. The basis for this is knowledge, organization and ownership, i.e. that people view such knowledge and methods as their own and regard their organizations as their own responsibility.

Continuous efforts to reach the vision "A sustainable environment offering good living conditions and naturally harmonized environment for all" wholly depend on the establishment of such ownership. As Lake Victoria Conservation and Food Security Program will clarify and implement its advisory service strategy there is a need to focus more attention and effort on the task of establishing such ownership. This includes operations at "higher" levels with regional organizations in cooperation with other stake holders.

Government Collaboration

While the primary development partners are Catholic farmers' organizations, Lake Victoria Conservation and Food Security Program also shall work in collaboration with local government institutions. Government is ultimately responsible for national development and the fulfillment of people's human, political, economic and cultural rights.

Normally agreements with local government will be established concerning Lake Victoria Conservation and Food Security Program' work and various roles.

Through this the organization also gains influence on government policies in its priority areas. Furthermore training on agroforestry will also be offered to local government managers and staff as well as on other relevant issues. Lake Victoria Conservation and Food Security Program also will act as a go between, connecting government with farmers, their organizations and research institutions.

In the field Lake Victoria Conservation and Food Security Program activities will link up with government extension services and thus expand the service provided by government to farmers. As government extension services are often weak, the organization is able to strengthen these with expertise and good examples. Currently there is pressure, both from below and above, on local government to show results in poverty reduction and the fulfillment of the Millennium Development Goals. This momentum can be used to our advantage in order to advocate more efficient government action.

Priority areas 2013 – 2015

Poverty reduction through sustainable production and economic growth

Lake Victoria Conservation and Food Security Program will promote and develop methods for sustainable agroforestry and agricultural production, and promote and support faith community-based management of natural resources. The planting of suitable trees is fundamental in this work. Lake Victoria Conservation and Food Security Program will further strengthen the marketing capacity of smallholder farmers and their organizations.

Agricultural development provides means for the women and men who Lake Victoria Conservation and Food Security Program will work with to escape poverty on a mass scale. Such economic development must go hand in hand with working towards a sustainable natural environment.

Agroforestry is a proven method for mitigation of environmental degradation, ending soil erosion, improving water absorption, enhancing soil fertility and increasing and diversifying agricultural production. Through this method, Lake Victoria Conservation and Food Security Program will contribute greatly to the betterment of small holder farming household livelihoods.

The nutritional status of smallholder farmer families is generally low, in particular among women, children and the elderly. People encounter food shortages during parts of the year, there is a lack of protein intake and food distribution within the families is often skewed.

One emphasis in Lake Victoria Conservation and Food Security Program' work is thus the production of nutritious foodstuffs, such as the promotion of horticultural produce.

People in Africa are using the Village Savings & Loans Association system (VS&LA). The members of each group save money as shares and savings are invested in a loan fund from which they can borrow repaying with a service charge or interest added. There is also normally contribution to a social fund that acts as insurance for unexpected events.

Human rights are universal and apply to all without distinction. Lack of equality creates more poverty and injustice since it means that women's knowledge, skills and abilities are not fully utilized. In order to improve the prospects of achieving sustainable and equitable economic and social development of benefit to all people in society, women need greater access to power and resources.

However changes in production methods, workloads, investment plans etc, may alter the gender balance both positively and negatively. Careful analysis of the gender effects of activities will be carried out and inputs with this aim will be strengthened.

Young people

Lake Victoria Conservation and Food Security Program will further develop and expand its work with young Christian clubs and organisations, inside and outside of school, in order to support the growth of an environmentally aware generation which will work on developing and spreading awareness for faith values as a means for restoration and conservation of natural creation.

Young people are often marginalized and rarely have access to productive resources such as land. In the Lake Victoria Region 55-60 per cent of the population is below 19 years of age. Lake Victoria Conservation and Food Security Program will motivate youths to become involved and participate in program activities by ensuring that they benefit from interventions. Young people will be encouraged to form youth groups and clubs involved in agriculture for income generation and environmental protection. The program will facilitate the development of visions and strategic plans for these groups.

The program will establish intensive collaboration with schools, preparing the pupils for self reliance after completing their studies since the pupils are believed to be future farmers and conservers of nature. The knowledge and skills of Agroforestry (learning by doing) acquired by the pupils will help members of their respective households to benefit through their application. The program will be involved in approximately 100 schools in the program area of operation. In almost all program area villages, collaboration with primary and secondary schools is an important part of extension work. Establishment of school tree nurseries and subsequent tree planting is to facilitate, and some of the schools also establish fruit gardens and botanical gardens. The advisers will often participate in the environmental education of the students as well.

The Concept of Agroforestry

Agroforesty has been defined as: "a collective name for land-use systems and practices in which woody perennials are deliberately integrated with crops and/or animals on the same land management unit. The integration can be either in a spatial mixture or in a temporal sequence. There are both ecological and economic interactions between the woody and non-woody components in agroforestry"

The major strength of agroforestry is that it can be used in many diverse agricultural situations, from home gardens to large commercial farms, with equal success. This has made it popular not only with

smallholders in developing countries but also with larger—scale farmers in developed countries. However, it is the aim of improving the lives and livelihoods of the farmers and consumers in the poorer countries of the world that drives agroforestry research and development. They farm and live in marginal or depleted environments that have benefited little, or not at all, from the Green Revolution technologies introduced in the 1960s and 1970s.

The most important of all benefits which agroforestry can help to ensure is food security. In areas prone to drought, trees can provide fruit and other foods that prevent wide scale malnutrition and famine. And even in good years, products from the trees and crops in these farming systems are essential for ensuring a balanced, nutritious diet. Small scale farmers practicing agroforestry are therefore assured of good food supply, fewer periods of shortage and improved quality of produce. With improve food and nutrition security, farm families affected by HIV/AIDS can make a better living.

Agroforestry:

- Increase income and shelter, where increased production and productivity results in sales of tree products and crops, employment opportunities and improved rural housing.
- Results in better and sustainable energy sources through increased supply of fuel wood that is cheaper and of better quality, and that conserves animal waste for fertilizer purposes.
- Provides home grown medicinal products; which are particularly important in Kagera where medicinal trees are a source of medication for 80% of the population.
- Stabilizes soils, captures nitrogen from the air, helps recycle nutrients within the system, and improves soil fertility.
- Provides vegetative cover that can alter micro-climatic conditions around them for crops or even for the farm as a whole.
- Collects and stores carbon in biomass and in soils, thus keeping it out of the atmosphere, where carbon dioxide and methane are components of the greenhouse gases that contribute to global warming.
- ❖ Is crucial for maintaining healthy water sheds, of growing importance in the 21st century, when it is predicted that water will become the world's primary natural resource concern.
- Decreases the need for forest encroachment, and thus helps preserve the forests' biodiversity, while providing niches for a range of organisms.

Throughout the tropics, natural woodlands and forests are threatened by ever-increasing population pressure on land. Trees integrated into the landscape in dynamic agroforestry systems help to protect them.

6. Planning Monitoring and Evaluation

Planning, Monitoring and Evaluation shall be used as a tool to enable all stakeholders within the program to see whether the program is doing what it has been designed to do. And if it is not doing what it is supposed to do M&E should be able to track down the problem or bottleneck and give recommendations to rectify the situation. In that sense M&E shall also be used as a learning instrument that will provide all stakeholders involved with an insight into the whole process of designing, planning and implementing the program.

The basis for the Monitoring and Evaluation (M&E) system is an intensive logical framework planning process that will be undertaken during program planning. The established objectively verifiable indicators of achievement will form the basis for the Program's M&E system.

Initially all program activities shall be preceded by baseline surveys, in order to establish benchmarks, against which impact monitoring and future evaluations can be made.

Participatory Monitoring and evaluation will be been given emphasis by making it a major sub component of all Participatory Rural Appraisal (PRA) exercises in target villages and farmers' organisations. Within a PRA exercise, a committee for monitoring and evaluation will always be established. To ensure that our M&E system reflects the aspirations of the people and the data collected is relevant and usable by the target group, feed back to the community will be given after every major field survey.

Policies and Strategies

The National development objectives are thoroughly examined in the *Tanzania Development Vision 2025*. The economy will have been transformed from a low productivity agricultural economy to a semi-industrialized one led by modernized and highly productive agricultural activities, which are effectively integrated with supportive industrial and service activities in the rural and urban areas. The vision and long-term development philosophy is summarized in five principal areas: High quality livelihood; Peace stability and unity; Good governance; A well-educated and learning society; and a strong and competitive economy.

A high quality livelihood for all Tanzanians will be attained through strategies, which ensure the realisation of: food self-sufficiency and food security, Universal primary education, the eradication of illiteracy and the attainment of a level of tertiary education and training that is commensurate with a critical mass of high quality human resources required to effectively respond and master the development challenges at all levels.

Other goals in this ambitious vision include: Gender equality and the empowerment of women in all socio-economic and political relations and cultures; Access to quality primary health care for all; Access to quality reproductive health services for all individuals of appropriate ages; Reduction in infant and maternal mortality rates by three-quarters of current levels; Universal access to safe water; Life expectancy comparable to the level attained by typical middle-income countries; and Absence of abject poverty.

For the attainment of peace and stability, deliberate efforts must be made to empower the people and catalyse their democratic and popular participation. It is also envisaged that fast growth will be pursued while effectively reversing current adverse trends in the loss and degradation of environmental resources (such as forests, fisheries, fresh water, climate, soils, biodiversity) and in the accumulation of hazardous substances.

Our Working Methodology

Our strategy for working with community will be the adoption of participatory tools from the Kit by NGO-IDEAS. The tools for well being PWR and Goals setting SAGE and PAG will be adopted for Resource mapping and Goal setting for restoration and conservation.

Participatory Well-being Ranking (To e used for resource mapping PRM)

Concept

Participatory Well-being Ranking (PWR) is a tool designed to involve the community in *classifying* the households into different categories of well-being, i.e. quality of life, according to, health, education, social, political and other status. Various groups of resource persons or key informants from the village (women / men; young / elderly; different social groups) are asked to classify the households independently. The classification, and the criteria for this classification, are then documented and discussed with the community. Well-being Ranking is basically designed to utilise the existing knowledge, information and experiences of the community to assess their situation and status of well-being. This helps to make the community to be aware of potentials and obstacles for its well-being. It visualises who are the neediest households, and it motivates the community to find solutions to overcome poverty. In project implementation, it is used to identify the social mobility from one poverty category to another. In combination with SAGE, it helps in identifying the project outcomes and impacts on the households in each category. This is to make sure that the poorer or marginalised households benefit from the project at least as much as those who are better-off.

To put it in simple terms, it is a tool facilitated by the NGO with the rural or urban community to classify community members' households into at least four categories, e.g.:

classify community members' households into at least four categories, e.g.:

Variety of terms to classify well-being or poverty

Extreme poverty Very poor quality of life ("Very poor")

Severe poverty Poor quality of life ("Poor")

Poverty in subsistence Acceptable quality of life ("Local middle class")

Simple affluence Good quality of life ("Local rich")

Poverty and well-being are not to be understood in economic terms only! The terminology used for well-being should match with the people's and the project's terminology. It is sometimes helpful if at least two categories are below the poverty line, and two categories are above the poverty line.

There are alternative ways to conducting Participatory Well-being Ranking. One is to start with the ranking as it is described here. Another one is to start by identifying categories: The categories from extreme poverty to simple affluence are introduced, and then they are attributed to the households on the basis of the determined criteria. This option is described below, too. Thirdly, in the disability and inclusion sector, Participatory Quality of Life Ranking (PQR) is used. It originates from Wellbeing Ranking and focuses not only on the economic situation but on various aspect of well-being.

Purpose

The expected results of Well-being Ranking assessments are that the NGO and the group have

- identified the neediest households within one village or one area,
- established a well-being profile and
- increased their awareness of the main factors influencing well-being and quality of life in a village or area.

These results shall contribute to:

- creating awareness and sense of supporting, respecting, including the poor,
- building the ground for community based planning and to set adequate goals for poverty reduction,
- identifying the extent to which different social groups are benefiting from the project (not only in regard to economic, but also personal, social, cultural, or political change),
- ensuring that NGO services reach the designated target groups,
- overcoming the most critical causes of poor quality of life and exclusion,
- referring the Millennium Development Goals as well as the national goals for poverty reduction to the local agenda, not only for groups but also for individual members and their families.

1.1.2 Process of using Well-being Ranking

Pre-conditions:

• The NGO should be familiar with the area and have good relations to the stakeholders.

The chosen households should be an entity, a community.

- The community needs an orientation on the purpose of the NGO's intervention, specifically about the purpose of Well-being Ranking.
- The NGO needs basic information on the households (village survey or social mapping) and has to draft a household list, containing at least the names of the household heads.
- The NGO staff needs knowledge and skills in facilitation and application of PRA tools; they especially need to be trained in Well-being Ranking.
- If Well-being Ranking is implemented before starting a major project with the community:

Even if the result of Well-being Ranking suggests not starting a major activity, at least a small project activity should result after this exercise. Funds have to be allocated for this.

Step - 1

NGO staff members who are not familiar with the village to be assessed should read earlier village survey documents and additionally take a walk through the village ("transect walk") to become familiar with the village. Village authorities should generally be informed.

Step – 2

Note down the names of the household heads (which are known from the village authorities' list, the village survey or the social mapping) on cards (one card per household). Find out whether your household list has to be updated.

Step - 3

Select key informants representing all sectors of the community; form at least 3 small groups (e.g. 3 persons) of key informants, representing different socio-economic sectors of the village, thereof at least one group composed of women, and if possible at least one group composed of youths.

Step-4

Ask the key informant groups to rank (sort) the households (= the cards) in accordance with their well-being status by comparing the households with each other. A line develops, but often 5–8 clusters emerge. Put together these clusters into four categories (e.g. extreme poverty, severe poverty, poverty in subsistence, simple affluence). Facilitate this sorting; it should not be done publicly.

Step - 5

As soon as the key informant group has sorted all the households, ask the key informants for their criteria of classifying "well-being". Document the answers on a flipchart using the local language and/or pictures and attribute the household numbers according to their well-being criteria.

Step-6

Repeat this exercise with each key informant group.

Step - 7

Document the results and compare them with the help of the stakeholders and your team. If the key informant groups have categorised the households approximately in the same categories, select the more frequent attribution. If the attribution deviates over more than two categories, analyse and clarify the reasons in depth later.

Step-8

Document and analyse the criteria for well-being; identify the critical factors, the solidarity practices, and discuss the consequences.

Step - 9

Validate the results by discussing and cross checking them with other members of the community.

Step - 10

For NGO-monitoring: These categories will then be used for SAGE and for poverty disaggregation. The community needs not to be involved in step 10.

Another option for conducting Well-being Ranking: starting by identifying categories

Many NGO-IDEAs partners prefer to start with the identification of the well-being categories as seen by the community; afterwards they attribute a category to each household. Instead steps 4 and 5 described above, the procedure is as follows:

Step – 4

Together with the community members (in a meeting with group members, or with the key informants), identify the main categories (recommended: two above and two below the poverty line) how community members can be classified according to their well-being. Identify the main determinants for well-being (or: well-being classification criteria) and describe the characteristics for each category as demonstrated in the example (p. 11).

Step - 5

Each key informant group sits separately and sorts out the cards into different piles, corresponding to the categories of well-being (very poor, poor, local middle class, local rich, etc). While doing this sorting, the community's criteria on well-being can be discussed and complemented.

Advantage: The procedure can build on the NGO's experiences and save time.

Disadvantage: The procedure is less explorative, not so much open for new aspects. Site specific features may be missed.

2 Goal setting for individuals' well-being with SAGE

Concept

SAGE (Situational Analysis & Goal Establishment) is used to identify the individuals' goals and to appraise changes at the individual and household levels. This tool works with the concept that people create their own vision of their future living conditions. The purpose is to make individuals aware of their own goals or objectives. This will then guide their actions and help them in monitoring to what extent each group member or each household has developed towards these objectives.

The terms "vision", "objective" or "goal" can be used interchangeably.

A "vision" gives a wider picture of the future, "objectives" or "goals" refer to more specific aspects.

These are all formulated as a description of the future situation.

SAGE is a tool for assessing change; it is based on the goals set for the individual group members and/or for their households / families. The situational analysis of the individual members includes personal, social, cultural, economic & political aspects and it ideally starts with the Wellbeing Ranking. With repeated situational analyses, the individuals can establish to what extent they have reached each of these goals; this helps to monitor the improvement of the quality of life of each individual and her/his family or household.

Note

SAGE needs to be adapted to your context so that people understand it. NGO-IDEAs suggests you use as core terms "goals for individuals", or "goals for group members" instead of "SAGE goals".

Purpose

The expected results from SAGE are that the NGO and the group members have:

- Identified the long term goals of the individual group members to improve their lives with reference to their personal, social, cultural, health, political and economic goals
- Identified the changes achieved by the individual members, their households and their group periodically,
- An understanding of the influence of the group activities, of the project and others on each individual and her/his family or household, since the inception of the group or the start of the project.

These results shall contribute to:

- Ensuring that all members including the poorest and most disadvantaged group members have set their goals,
- Tracing, the changes in the group members' lives, based on the vision of the group and the goals of the individuals, and what contributed to these changes,
- Guiding the group and NGO in deciding the kind of support to be given to the individuals and their households,
- Planning the future course of action together with the individuals, their households and/ or their group.

This is how SAGE is introduced:

Step 1:

Inform the group of the purpose of the tool, its application and usefulness. Decide jointly on its application.

Step 2:

Develop together a vision for each of the individuals or families of the group, e.g.: "Describe what should your life be like after 5 years!"

Step 3:

Convert important aspects of the vision into goals which create awareness on the way forward and which can serve for assessing individual member's progress towards their personal, social, cultural, health, economic, and political goals.

Monitoring and reflection with SAGE:

Hints for use

Each of the steps implies a number of activities which need to be described in more detail:

Step 1: "Inform the group of the purpose of the tool, its application and usefulness. Decide jointly on its application."

Information has to be given considering the local context and ability of the group members to understand. Therefore, facilitators need to explain the tool with simple words and methods, assuring that all group members understood and see the benefits of the tool. This is key to the acceptance and successful application of the tool by the group.

The following Step 2 and 3 are closely interrelated:

How can the groups develop a vision, or the goals? If people never had an opportunity to influence their lives, or to plan for their future, they may not have clear ideas on how their situation could improve, and find it difficult to formulate such ideas clearly. As experience shows, setting goals is easier when people discuss with others what they want to achieve together.

Consequently, individual visions (step 2) and goals (step 3) may be worked out by each individual or jointly with the whole group. Common aspects are then chosen for monitoring individual progress.

Step 2: "Develop a vision for each of the individuals or families of the group."

If it is the first time we ask a group to set goals for themselves, this may sound too abstract. We need to ask questions that are easier to deal with. Experience shows that we have to start with a wider perspective on people's lives – a "vision" – and that the question has to be put in simpler terms, e.g.: After 5 years, what should have changed in the members' lives or in the lives of their families?

Describe what your life should be like after 5 years!

The time frame for such a vision may be longer or shorter, but in this context five years could be appropriate. Group members will share ideas. We need to encourage them to come up with ideas, make sure that many members participate. Some groups tend to tell stories of what they have achieved and thus lose focus. We need to gently but quickly lead them back to our question.

There are different dynamics for developing the vision:

- Group members take a couple of minutes for dreaming individually, and then they share their dreams.
- Small groups can be asked to draw a picture of their future lives; the contents of the drawing can then be discussed in the group. The vision gives a comprehensive picture of the future. Some specific aspects, "objectives" or "goals", will then be selected in the next step.

Step 3: "Convert important aspects of the vision into goals."

After having developed a vision that gives a comprehensive picture of the future, some specific aspects, "objectives" or "goals", will be selected, serving the assessment of the individual members' progress towards their personal, social, cultural, health, economic and political goals.

The goals should be based on the local situation and needs of the group members in the focused areas of interventions. They should be more concrete, and achievable by group members. They are not limited to the NGO project's goals. After setting the goals, the group will prioritise and confirm the goals which shall be monitored in future.

Four options for application:

Groups can prioritise their goals basically in four different ways:

- 1. They arrive at their own, group-specific set of individual goals through a facilitated process.
- 2. An umbrella body of groups (a federation, association etc.) discusses common individual goals. Representatives of all groups take part in this. They decide on the goals and all the groups apply the same goals.
- 3. The NGO may propose individual goals for all the groups, expecting them all to measure against the same goals. This is not recommended by NGO-IDEAs because it might cause less ownership of the goals, but it is easier for the NGO staff and makes comparison between groups easier.
- 4. A combination of 1, 2 and 3: The NGO or federation sets a small number of goals which are *common* for all the groups, e.g. referring to goals and/or indicators from the project plans.

Additionally, the NGO or federation facilitates a process in which each group decides on some more goals which are *group-specific*. At the end, there will be a set of goals which is common for all the groups, and some goals which are specific for each group.

Experience shows that groups start with aspects regarding group operation:

- I attend regularly
- I respect the rules of the group
- I save regularly

It may then be necessary to orient the group members to reflect on *how their own life or that of their family should be in future*. Important aspects of this vision are highlighted; a goal to describe the situation in the future:

1. Knowledge, attitude, skills

- 1.1 I am sending my school aged girls and boys to school regularly.
- 1.2 In my family, violence is avoided, also in the domestic area.

2. Economic aspects

- 2.1 My household has sufficient income to provide healthy food for all members.
- 2.2 I am regularly repaying my loan: principal and interest.

3. Social and cultural aspects

- 3.1 I am conscious of my rights as a woman.
- 3.2 I treat my daughters and sons equally.

4. Political aspects

- 4.1 I am regularly participating in the community activities.
- 4.2 I exercise my voting rights.

It is important to keep in mind how to achieve these goals, considering the capacity of the group to do so. These goals should then flow into the Community Action Plan (see chapter 1.6, p. 30).

Most probably, not all the goals can be taken up into the group's planning. Similarly, not all of these goals can be monitored regularly. **Priorities have to be set!**

Note

Discuss and decide with the group which of these goals shall be prioritised for planning and monitoring.

3 Goal setting for group performance with PAG

Concept

PAG (Performance Assessment by Groups) is used to identify goals to be reached by the group and to assess its performance with regard to these goals. *PAG establishes changes in the performance of groups*, in contrast to SAGE, which establishes changes in the situation of families and individuals. In PAG, the group members agree on the goals to be reached by the group; regularly, they can measure to what extent they achieve the group's goals, and what contributed to this change. However, PAG is not applicable where the project has no interventions at group or community level.

PAG ideally builds on the analysis made in the Well-being Ranking. The goals can be identified with the help of a question like "What are goals which cannot be achieved individually but only as a group?" They can cover different areas of intended change such as attitudes and behaviour; social, cultural, economic and political aspects; and sustainability. Like in SAGE, the group will prioritise preferably up to 15 PAG goals and confirm for future monitoring.

Note

PAG needs to be adapted to your context so that people understand it. NGO-IDEAs suggest you use as core term "group goals" instead of "PAG goals".

Purpose

The expected **results of PAG** are that the NGO and the group members have:

- Identified the goals of each group to improve its performance with reference to personal, social, cultural, political and economic aspects and their indicators for sustainability;
- Identified the changes achieved by the group as a whole;
- Understood the influence of the group activities, of the project and of others on the group performance since the inception of the group or the start of the project.

These results shall contribute to:

- Increasing the group's responsibility and ownership in setting and monitoring their own goals and thereby increasing their empowerment and the positive project effects;
- Tracing the changes in the group's performance, and what contributed to these changes, based on the goals established for the group by its members;
- Identifying the areas to be improved, and how to achieve the improvement;
- Planning the future course of action together with the group;
- Guiding the NGO in deciding the kind of support to be given to the group.

This is how PAG is introduced:

Step 1

Inform the group of the purpose of the tool, its application and usefulness. Decide jointly on its application.

Step 2

Develop a vision together with the group, e.g. "As a group, where do you want to go, where do you want to be in three or five years?"

Step 3

Convert important aspects of the vision into goals which create awareness on the way forward and which can serve for assessing the group's progress towards their social, cultural, economic, and political goals.

Hints for use

Each of the steps implies a number of activities which need to be described in more detail:

Step 1: "Inform the group of the purpose of the tool, its application and usefulness. Decide jointly on its application."

Information has to be given considering the local context and ability of the group members to understand. Therefore, facilitators need to explain the tool with simple words and methods, assuring that all group members understood and see the benefits of the tool. This is key to the acceptance and successful application of the tool by the group.

The following Step 2 and 3 are closely interrelated:

How can the group develop a vision, or the goals? If people never had an opportunity to influence their lives, or to plan for their future, they may not have clear ideas on how their situation could improve, and find it difficult to formulate such ideas clearly. As experience shows, setting goals is easier when people discuss with others what they want to achieve together. Consequently, visions (step 2) and goals (step 3) may be worked out jointly for a whole group.

Note

Some partners have made good experiences by organising just one brainstorming for SAGE and PAG together to identify the entire vision of the group and all its goals. The distinction of goals referring to individuals (for SAGE) and goals referring to the group (for PAG) can easily be made afterwards. Field workers should have experienced goal setting before, e.g. in the facilitators' training.

Step 2: "Develop a vision together with the group."

If it is the first time we ask a group to set goals for themselves, this may sound too abstract. We need to ask questions that are easier to deal with. Experience shows that we have to start with a wider perspective on group achievements – a "vision" – and that the question has to be put in simpler terms, e.g.:

• As a group, where do you want to go, where do you want to be in three or five years?

The time frame for such a vision may be longer or shorter, but in this context five years could be appropriate.

Group members will share ideas. We need to encourage them to come up with ideas, make sure that many members participate. Some groups tend to tell stories of what they have achieved and thus lose focus. We need to gently but quickly lead them back to our question.

There are different dynamics for developing the vision:

- Group members take a couple of minutes for dreaming individually, and then they share their dreams.
- Small groups can be asked to draw a picture of their future lives; the contents of the drawing can then be discussed in the group.

The vision gives a comprehensive picture of the future. Some specific aspects, "objectives" or "goals", will then be selected in the next step.

Step 3: "Convert important aspects of the vision into goals for assessing the group's progress."

After having developed a vision that gives a comprehensive picture of the future, some specific aspects, "objectives" or "goals", will be formulated, serving the assessment of the groups' progress.

Like in SAGE, there are four options for application:

Groups can prioritise their goals basically in four different ways:

- 1. They arrive at their own, group-specific set of goals through a facilitated process.
- 2. An umbrella body of groups (a federation, association etc.) discusses goals. Representatives of all groups take part in this. They decide on the goals and all the groups apply the same goals.
- 3. The NGO may propose goals for all the groups, expecting them all to measure against the same goals. This is not recommended by NGO-IDEAs because it might cause less ownership of the goals, but it is easier for the NGO staff and makes comparison between groups easier.
- 4. A combination of 1, 2 and 3: The NGO or federation sets a small number of goals for all groups it works with, e.g. referring to goals and/or indicators from the project plans. Additionally, the NGO or federation facilitates a process in which each group decides on some more goals which are group-specific.

At the end, there will be a set of goals which is common to all the groups, and some goals which are specific for each group.

Brainstorming on goals

If we ask groups to say what goals they want to set, we will probably demand too much from its members. We need to ask questions that are easier to deal with. Experience shows that the following questions can work well:

- What are goals which cannot be achieved individually but only as a group?
- Where can the group contribute to achieve the SAGE goals?

Group members will share ideas. We need to encourage them to come up with ideas, make sure that many members participate. Some groups tend to tell stories of what they have achieved. We need to gently but quickly lead them back to our question.

Experience shows that groups usually start with aspects of group operation:

- Group meets regularly
- Go drop-outs from group
- Members save regularly
- Records and account are kept properly

Many of these are on the activity or output level of the results chain. They are important, but we need to include higher levels, the benefits for its members and the community, as well: So wherever we feel that the group might develop relevant goals, we can ask:

1. What benefits does a strong group bring for its members?

We can get answers like:

- Members enjoy certain benefits.
- The group supports its members in crisis.
- Members visit each other when a relative passes away.
- They give financial support in illness and after death.
- The group is able to solve conflicts.
- The group intervenes in domestic conflict.
- The group helps to overcome stigma, it gives self-confidence and trust.

If aspects our projects focus on are not mentioned, we can ask for these directly, through questions like:

- 2. What social benefits should members get?
- 3. What benefits should members get regarding their health?
- 4. What benefits should members get in economic terms?

Often, these points come up through a discussion what the group has done and achieved. Group members remember what happened, evaluate the process and results, and say what was good and what they were not happy with. This is an important process of reflection and creating awareness. It needs good facilitation skills!

Groups tend to look at benefits for the group and its members. But very often, these groups have a meaning for the wider community. They bring about change also for others. That could be a group goal. So let us ask:

5. What **benefits** does a strong group bring **for the community**?

As with the benefit to members, people tend to reflect on what happened, what change they did bring about. Often, impressive stories are being told. We need to bring this back to goals:

• What does the group want to achieve for the community?

Examples are:

- Assistance in domestic conflicts even for non-members.
- Raising awareness on issues like school attendance or health for the general community.
- Convincing government to bring infrastructure or services.
- Linking groups or the community to specific service providers (agricultural extension, health services, community development programs, loans, etc.)

Again, if certain aspects are not mentioned, we could ask for these issues the project aims at, like in the following examples.

- What benefits should the community get in social / cultural aspects?
- What **benefits** should the community get **in health**?
- What benefits should the community get in economic terms?

• What benefits should the community get in terms of infrastructure and political involvement?

Up to now, the steps consisted of brainstorming and reflection. But the group has to decide on the goals to be pursued. The number of goals should be manageable, so the points rose need to be formulated as goals / objectives and the group needs to set priorities.

It is important to keep in mind how to achieve these goals, considering the capacity of the group to do so. That should be discussed with the group, and accordingly the goals have to be prioritised and decided on. These goals should then flow into the Community Action Plan (see chapter 1.6, p. 30). The goals are then grouped and prioritised with the help of a facilitator.

The result may be like this:

Table 5: Example of goals for the group in PAG

1. Knowledge, attitude, skills

- 1.1 Group self-confidence is satisfactory.
- 1.2 Group is able to solve conflicts without external support.

2. Economic aspects

- 2.1 Relations to local economy are satisfactory.
- 2.2 New income generating activities are explored.

3. Social and cultural aspects

- 3.1 Group is conscious about own rights as an association.
- 3.2 Group is active against domestic violence.

4. Political aspects

- 4.1 Group motivates its members to be active in the community.
- 4.2 Group is represented in local government meetings.

5. Indicators for sustainability

- 5.1 All group records are kept properly.
- 5.2 Group capital has increased.

Which scoring method is easier and most suitable for the group may be decided during the goal setting workshop.

Implementation

Program Management and Organization

Collaboration will be cultivated within all program stakeholders as a prerequisite to successful implementation.

The development of trust and cooperation will be crucial for successful program implementation.

An efficient organization structure will be established for program management. Human resources will be made available by recruiting staff with relevant knowledge and skills to carry out professional tasks at different levels.

To begin with the program will be overseen by the Director who will be responsible for overall organisational management and calling for relevant forums for decision making on all matters.

The second in command will be the program Manager who will be responsible for Planning Monitoring and Evaluation. This officer will be the overall controller for the technical and professional implementation of the program

The program components will be coordinated in units/departments according to necessity, resource availability and intervention levels.

Most field work will be coordinated by the Program Coordinator who will be responsible for establishing mechanism for working with government extensionists and other professionals available in the program areas of operation (In the respective parishes.)

15. Budget and Funding

The budget for the entire three year program is provided on the next page.

ТНЕМЕ	COST ITEM DISCRIPTION	Number	COST PER UNIT (TZS)	TOTAL COST(TZS)				
Procurement of equipment and facilities				YEAR 1	YEAR 2	YEAR 3	TOTAL (TZS)	TOTAL (USD)
idemties	Vehicles	1	60,000,000	60,000,000	0	0	60,000,000	36,364
İ	Motor cycles	5	7,000,000	21,000,000	14,000,000	0	35,000,000	23,333
	Office equipment	1	-	16,000,000	10,000,000	5,000,000	31,000,000	20,667
		12						
	Office rent	months	300,000	3,600,000	4,800,000	6,000,000	14,400,000	9,600
SUB TOTAL 1				100,600,000	28,800,000	11,000,000	140,400,000	89,964
Program	Stationery			10,000,000	15,000,000	10,000,000	35,000,000	23,333
Expenditure on	Fuels for Vehicles			15,000,000	15,000,000	20,000,000	50,000,000	33,333
project	Field visit costs			10,000,000	15,000,000	10,000,000	35,000,000	23,333
componets 1. Agriculture	Seed							
Agriculture	procurement			5,000,000	5,000,000	5,000,000	15,000,000	10,000
	Other			5,000,000	5,000,000	5,000,000	15,000,000	10,000
	Administration							
	costs			4,500,000	5,500,000	5,000,000	15,000,000	10,000
2.	Stationery			8,000,000	12,000,000	15,000,000	35,000,000	23,333
Environmental Mnagement	Fuels for Vehicles			15,000,000	10,000,000	8,000,000	33,000,000	22,000
winagement	Field visit costs			10,000,000	15,000,000	12,000,000	37,000,000	24,667
İ	Seed							
	procurement			30,000,000	15,000,000	10,000,000	55,000,000	36,667
	Other			10,000,000	10,000,000	10,000,000	30,000,000	20,000
	Administration costs			7,300,000	6,200,000	5,500,000	19,000,000	12,667
3. Farmer	Stationery			8,000,000	12,000,000	15,000,000	35,000,000	23,333
Enterprise	Fuels for Vehicles			10,000	10,000,000	8,000,000	18,010,000	12,007
Development	Field visit costs			10,000,000	15,000,000	12,000,000	37,000,000	24,667
	Other			10,000,000	10,000,000	10,000,000	30,000,000	20,000
	Administration							
	costs			5,800,000	6,200,000	55,000	12,055,000	8,037
4. Habitat	Stationery			8,000,000	12,000,000	15,000,000	35,000,000	23,333
	Fuels for Vehicles			10,000,000	10,000,000	8,000,000	28,000,000	18,667
	Field visit costs			10,000,000	15,000,000	12,000,000	37,000,000	24,667
	Other			10,000,000	10,000,000	10,000,000	30,000,000	20,000
	Administration							
	costs			5,800,000	6,200,000	550,000	12,550,000	8,367
5. Community	Stationery			8,000,000	12,000,000	15,000,000	35,000,000	23,333
Saving and	Fuels for Vehicles			15,000,000	10,000,000	8,000,000	33,000,000	22,000
Loan	Field visit costs			10,000,000	15,000,000	12,000,000	37,000,000	24,667
	Other			10,000,000	10,000,000	10,000,000	30,000,000	20,000
	Administration							
	costs			7,300,000	6,200,000	5,500,000	19,000,000	12,667
6. Conservation	Stationery			8,000,000	12,000,000	15,000,000	35,000,000	23,333
of Cultural	Fuels for Vehicles			10,000,000	10,000,000	8,000,000	28,000,000	18,667
Heritage	Field visit costs			10,000,000	15,000,000	12,000,000	37,000,000	24,667
	Other			10,000,000	10,000,000	10,000,000	30,000,000	20,000
	Administration			5,800,000	6,200,000	55,000	12,055,000	8,037

costs							
SUB TOTAL 2			301,510,000	341,500,000	301,660,000	944,670,000	629,780
GRAND TOTAL			402,110,000	370,300,000	312,660,000	1,085,070,000	719,744

NOTE:

Exchange rate : USD 1= TZS 1650

TIMELINES

S/N MONTH		MAJOR ACTIVITY	RESPONSIBLE	ESTIMATE		
		PERSON(S)		BUDGET (TZS)		
1 st year						
	January-March 2013	Procurement of office	Project	160,000,000		
		equipment and operational	Management			
		facilities	team & Support			
		Office set up	staff			
		Recruitment of staff	Consultants			
		Baseline survey				
		Program introduction				
		1 st quarter report				
	April- June 2013	Community sensitization	Project	80,000,000		
		Group formation	Management			
		Seed procurement and	team & Support			
		distribution	staff			
		Field operations				
		Monitoring and evaluation				
		Semi-annual report				
	July – September 2013	Community sensitization	Project	80,000,000		
		Group formation	Management			
		Seed procurement and	team & Support			
		distribution	staff			
		Field operations				
		Monitoring and evaluation				
		3 rd quarter report				
	October- December	Community sensitization	Project	82,110,000		
	2013	Group formation	Management			
		Seed distribution	team & Support			
		Field operations	staff			
		Monitoring and evaluation				
		Annual report				

	2 nd year		
January-March 2013	Procurement of office	Project	90,000,000
	equipment and operational	Management	
	facilities	team & Support	
	Recruitment of staff	staff	
	Community sensitization		
	Group formation		
	Seed distribution		
	1 st quarter report	-	
April- June 2013	Community sensitization	Project	60,000,000
	Group formation	Management	
	Seed procurement and	team & Support	
	distribution	staff	
	Field operations		
	Monitoring and evaluation		
	Semi-annual report		
July – September 2013	Community sensitization	Project	150,000,000
	Group formation	Management	
	Seed distribution	team & Support	
	Field operations	staff	
	Progressive survey		
	Monitoring and evaluation		
	3 rd quarter report		
October- December	Community sensitization	Project	70,300,000
2013	Group formation	Management	
	Seed distribution	team & Support	
	Field operations	staff	
	Monitoring and evaluation		
	Annual report		

	3 rd year		
January-March 2015	Community sensitization Group formation Seed procurement and distribution Field operations Monitoring and evaluation Semi-annual report	Project Management team & Support staff	40,000,000
April- June 2015	Community sensitization Group formation Seed procurement and distribution Field operations Monitoring and evaluation Semi-annual report	Project Management team & Support staff	40,000,000
July – September 2015	Community sensitization Group formation Seed procurement and distribution Field operations Monitoring and evaluation 3 rd quarter report	Project Management team & Support staff	52,660,000
October- December 2015	Community sensitization Group formation Seed distribution Field operations Progressive survey Strategic planning for phase 2 End of phase evaluation process Monitoring and evaluation End of phase report	Project Management team & Support staff Consultants	180,000,000