FAO/GLOBAL ENVIRONMENT FACILITY
PROJECT DOCUMENT

Countries:	Burundi, Rwanda, Uganda, United Republic of Tanzania
Project Title:	Transboundary Agro-ecosystem Management Programme for the Kagera River Basin (Kagera TAMP)
GEFSEC Project ID:	2139
FAO Project ID:	595634
FAO Project Symbol:	GCP/RAF/424/GFF
GEF Implementing Agency:	Food and Agriculture Organisation of the United Nations (FAO)
Other Executing Partners:	Ministry of Agriculture and Animal Resources (MINAGRI) in Rwanda; Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) in Uganda; Division of the Environment, Vice President's Office (DOE/VPO) in the United Republic of Tanzania, and Ministry of Agriculture and Livestock (MINAGRIE) in Burundi.
GEF Focal Area:	Land Degradation
GEF-4 Strategic Programs:	LD SP-1, Supporting Sustainable Agriculture and Rangeland Management LD SP-3, Investing in New and Innovative Approaches Sustainable Land Management
Parent Programme/ Umbrella Project:	TerrAfrica/SIP for SLM in Sub-Saharan Africa
Duration:	4.5 years
Estimated Starting Date:	September 2009
Estimated Completion:	February 2014

PROJECT FINANCING PLAN

Financing Plan:	**(USD)**
PDF A	25,000
PDF B	700,000
FAO (in cash and kind)	200,000
Governments (in kind)	205,000
UNEP	10,000
Sub-Total	**1,140,000**
FULL PROJECT	
GEF grant (including IA fee)	**7,000,000**
PROJECT CO-FINANCING	
FAO (in kind)	**351,000**
Government of Burundi	**6,260,000**
- Districts	860,000
- Govt/Partner programmes	5,400,000
Government of Rwanda	**6,293,760**
- Districts	768,000
- Govt/Partner programmes	5,525,760
Government of Tanzania (U.R.)	**2,463,050**
- Districts	418,650
- Govt/Partner programmes	2,044,400
Government of Uganda	**3,707,800**
- Districts	260,800
- Govt/Partner programmes	3,447,000
Partner Programmes and donors	**5,433,600**
Sub-Total Co-financing	**24,509,210**
Total Project Cost	**32,012,910**

Associated Financing (See Annex 1 Table 3 for listings of relevant projects)

Project Signatory Page

The Project is agreed by:

On behalf of the Government of BURUNDI:

_____

Signature

_____

Name and Title (printed)

Date: _____

On behalf of the Government of UGANDA:

_____

Signature

_____

Name and Title (printed)

Date: _____

On behalf of the Government of RWANDA

_____

Signature

_____

Name and Title (printed)

Date: _____

On behalf of the Government of United Republic of TANZANIA:

_____

Signature

_____

Name and Title (printed)

Date: _____

On behalf of FAO:

_____ Date: _____

José M. Sumpsi
Assistant Director-General
Technical Cooperation Department
Food and Agriculture Organization
of the United Nations

OPERATIONAL FOCAL POINT ENDORSEMENT

Country	Name of signatory	Title of signatory	Supervising Ministry	Date
Burundi	Salvator Ndarbirorere	Adviser, Land Planning	Ministry of Environment and Tourism	20/03/2006
Rwanda	Suzanna Uwimana	Directorate of Environmental Protection	Ministry of Lands, Human Resettlement and Environmental Protection	16/03/2006
Tanzania,U.R.	A.R.M.S. Rajabu	Permanent Secretary	Vice President's Office	16/03/2006
Uganda	C.M. Kassami	Permanent Secretary to the Treasury	Ministry of Finance, Planning & Economic Development	20/03/2006

COUNTRY ELIGIBILITY

Country	Convention on Biological Diversity (UNCBD)	Convention to Combat Desertification and Drought (UNCCD	Framework Convention on Climate Change (UNFCCC)
Uganda	Signed12/06/1992 Ratified 08/09/1993	Signed 21/11/1994 Ratified 25/06/1997	Signed 13 June 1992 Ratified 8 September 1993
United Republic of Tanzania	Signed 12/06/1992 Ratified 08/03/1996	Signed 14/10/1994 Ratified19/06/1997	Signed 12 June 1992 Ratified 17 April 1996
Rwanda	Signed 10/06/1992 Ratified18/03/1995	Signed 22/06/1995 Ratified 22/10/1998	Signed 10 June 1992 Ratified 18 August 1998
Burundi	Signed 11/06/1992 Ratified 15 April 1997	Signed 14 October 1994, Ratified 06 January 1997	Signed 11 June 1992 Ratified 6 January 1997

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SUMMARY

The Kagera River Basin is shared by Burundi, Rwanda, the United Republic of Tanzania and Uganda. Maintenance of the Kagera flow regime is vital for maintaining water levels of Lake Victoria and outflow to the Nile, while the riverine wetland areas are vital for deposition of eroded sediments and nutrients and hence maintaining water and pasture quality and associated livelihoods. The natural resources of the Kagera river basin support the livelihoods of some 16.5 million people, the majority rural and depending directly on farming, herding and fishing activities. However, the resource base and the ecosystems are facing increasing pressures as a result of rapid population growth, agricultural and livestock intensification characterised by progressive reduction in farm sizes and unsustainable land use and management practices. The basin's land and freshwater resource base, associated biodiversity and populations whose livelihoods and food security depend on those resources, are threatened by land degradation, declining productive capacity of croplands and rangelands, deforestation and encroachment of agriculture into wetlands.

The overall goal of the project is to support the adoption of an integrated ecosystems approach for the management of land resources in the Kagera Basin which will generate local, national and global benefits including: restoration of degraded lands, carbon sequestration and climate change mitigation, agro-biodiversity conservation and sustainable use and improved agricultural production, and thereby food security and rural livelihoods. The adoption of improved land use systems and resource management practices by the range of land users will be supported by stakeholders at all levels and by participatory and inter-sectoral approaches. To achieve these objectives Kagera TAMP has four components: (1) enhanced regional collaboration, information sharing and monitoring; (2) enabling policy, planning and legislative conditions; (3) increased stakeholder capacity and knowledge at all levels for promoting integrated agro-ecosystems management; and (4) adoption of improved land use systems and management practices generating improved livelihoods and environmental services. Regional cooperation will provide an enabling environment across the transboundary river basin for building local capacities and knowledge and mobilising stakeholders to bring about a transformation towards more productive and sustainable agricultural ecosystems (range, agro-pastoral and cropping). Sustainable management of shared resources of the Kagera Basin and revitalised farm-livelihood systems will generate significant environmental benefits through restoration of well functioning ecosystems and their environmental services, such as water regulation, nutrient cycling, carbon storage and provision of habitats for biodiversity.

LIST OF ACRONYMS

AFRICOVER	Adigital geo-referenced database on land cover for the whole of Africa
ARDCs	Agricultural Research and Development Centres, Uganda
ASARECA	Association for Strengthening Agricultural Research in Eastern and Central Africa
ASDS/P	Agricultural Sector Development Strategy/Programme, Tanzania
CAADP	Comprehensive African Agricultural Development Programme/NEPAD
CBD	United Nations Convention on Biological Diversity
CBO	Community Based Organization
CCD	United Nations Convention to Combat Desertification
CDM	Clean Development Mechanism (of Kyoto Protocol)
CSLP	Cadre stratégique de relance économique et de lutte contre la pauvreté, Burundi
COP	Conference of the Parties
RPC	Regional project coordinator/technical adviser, Kagera TAMP
DOE/VPO	Department of the Environment, Vice President's Office, Tanzania
DPF	District project Facilitators
DPSIR	Driving Forces-Pressures-States-Impacts-Responses (LADA Conceptual Framework)
EIA	Environmental impact assessment
FAO	Food and Agriculture Organization of the United Nations
FESLM	International Framework for Evaluation of Sustainable Land Management
FFS	Farmer Field Schools
GEF	Global Environment Facility
GIS/RS	Geographic Information Systems/Remote sensing
GTZ	Deutsche Gesellschaft Fuer Technische Zusammenarbeit- German Technical Cooperation
ICRAF	World Agroforestry Centre
IFAD	International Fund for Agricultural Development
IGEBU	Institut Géographique du Burundi
INECN	Institut National pour l'Environnement et la Conservation de la Nature
ISABU	Institut des Sciences Agronomiques du Burundi
ISAR	Institut de Sciences Agronomiques du Rwanda
IT-PGRFA	International Treaty for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture
JFF&LS	Junior Farmer Field and Life Schools
KAEMP	Kagera Agricultural and Environmental Management Project, Tanzania
KARI	Kawanda Agricultural Research Institute, Uganda
LADA	Land Degradation Assessment
LUCID	Land use Change Impacts Dynamics
LVEMP	Lake Victoria Environmental Management Programme
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries, Uganda
MAFC	Ministry of Agriculture, Food Security and Cooperatives, Tanzania
M & E	Monitoring and Evaluation
MDG	Millennium Development Goals
MFPED	Ministry of Finance, Planning and Economic Development, Uganda
MINAGRI	Ministry of Agriculture and Animal Resources, Rwanda
MINAGRIE	Ministère de l'Agriculture et de l'Elevage, Burundi
MINATTE	Ministère de l'Aménagement du Territoire, du Tourisme et de l'Environnement, Burundi
MINITERE	Ministry of Land, Environment, Forests, Water and Mines, Rwanda
MLD	Ministry of Livestock Development, Tanzania
MLHS	Ministry of Lands and Human Settlements, Tanzania
MW	Ministry of Water, Tanzania
NAADS	National Agricultural Advisory Services, Uganda
NAEP	National Agricultural Extension Project, Tanzania
NAP	National Action Plan (of CCD)
NARO	National Agricultural Research Organization
NBI-NELSAP	Nile Basin Initiative - Nile Equatorial Lakes Subsidiary Action Programme
NBSAP	National Biodiversity Strategy and Action Plan
NEAP	National Environment Action Plan
NEMA	National Environment Management Agency, Uganda
NEPAD	New Partnership for African Development
NGO	Non-Governmental Organization
NLUPC	National Land Use Planning Commission, Tanzania

NPC	National Project Coordinator/government project focal point, Kagera TAMP
NPM	National Project Manager, Kagera TAMP
NRL	Land and Water Division of FAO in the Natural Resources and Environment Department
OP	Operational Programme of GEF
ORTPN	Office for Tourism and the Protected Areas, Rwanda
PAFOR	Projet d'Appui a l'Aménagement des Forets du Rwanda
PAIGELAC	Projet d'Appui a l'Aménagement Intégré et a la Gestion des Lacs Intérieurs du Rwanda
PDF-A/B	Project Development Facility- phase A/phase B
PDRCIU	Projet de Développement Rural Communautaire Intégré de l'Umutara, Rwanda
PES	Payments for Environmental Services
PRA	Participatory Rural appraisal
PRORENA	Projet de Protection des Ressources Naturelles du Parc National de l'Akagera, Rwanda
PMA	Plan for Modernisation of Agriculture, Uganda
PRSP	Poverty Reduction Strategy and Programme
PSC/RPSC	Project Steering Committee (National/Regional)
RELMA	Regional Land Management Unit/SIDA, now merged with ICRAF
REMA	Rwanda Environment Management Authority
RPC	Regional Project Coordinator
RSSP	Rwanda Sector Support Programme
RTAC	Regional Technical Advisory Committee
SCLUPU	Soil Conservation and Land Use Planning Unit, MAFS, Tanzania
SFI	Soil Fertility Initiative
SIDA	Swedish International Development Assistance
SLF	Sustainable Livelihood Framework
SLM	Sustainable Land Management
SPFS	Special Programme on Food Security of FAO
SSFMP	SFI & Soils and Soil Fertility Management Programme of NARO, Uganda
SVP-NBI	Shared Vision Programme (SVP) of the Nile Basin Initiative
SWC	Soil and water conservation
SWMNet	Soil and Water Management Research Network of ASARECA
TARP	Tanzanian Agricultural Research Programme
TAMP	(Kagera) Transboundary Agro-ecosystem Management Programme / Project
TCI/GEF	FAO GEF unit hosted by Investment Centre, Technical Cooperation Department
ULAMP	Uganda Land Management Project
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

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1. BACKGROUND AND CONTEXT

1.1 Natural Resources of the Kagera River Basin

The Kagera River Basin occupies a highly strategic position, its surface area of some 59,700 km^2 contributing to the capture and largest river inflow (24%[1] equivalent to some 7.5 km^3 of water per year) into Lake Victoria, the second largest freshwater lake in the world. The Kagera River (ca. 400 km long), the most remote headwater of the White Nile, is formed by two headstreams, which rise in the East Central African highlands (alt. ca. 2,500m) near the divide with the Congo basin (see Map 1). The Ruvubu rises just north of Lake Tanganyika in Burundi and the Nyabarongo rises in north-west Rwanda. These two main headstreams converge at Rusumo Falls, close to the Rwanda-Tanzania border, from where the Kagera flows north along the border and then abruptly east through the lowland floodplain in Tanzania and Uganda, before entering Lake Victoria (alt. 1145m) to the south of Sango Bay in Uganda. The Kagera River is estimated to contribute 10% of the outflow from Lake Victoria into the Nile, and is important for sustaining the flow of the Nile.

The natural resources of the basin (soils, vegetation and landscapes) vary widely with rainfall and altitude giving four main agro-ecological zones, from the divide with the Congo basin eastwards:

- a wet highland zone in Rwanda and Burundi (alt. 1,900- 2,500m, rainfall 1,400-2,000mm),
- a central, incised plateaux extending into Uganda (alt. 1,500-1,900m, rainfall 1,000-1,400mm),
- the drier lowlands and floodplains (600-1,000 mm) shared by Rwanda, Uganda and Tanzania,
- a narrow zone with increasing rainfall eastwards reaching over 2,000mm on the fringe of Lake Victoria.

The basin lies in the sub-humid agro-ecological zone with a bimodal rainfall, the long rains from late February to May/June and short rains from late September to early December, providing a growing period of 90 to 200 days. The soil parent materials range from extensive schist, sandstone, quartzite or granite and gneissic formations; to intrusive basic rocks and volcanic materials in the highlands; to alluvial and colluvial materials in the marshes and wetlands. The main soil types are consequently Ferralsols (red soils), Acrisols and Luvisols (sandy loam to clay loam soils), Gleysols and Planosols (clay soils), Andosols (volcanic soils) (FAO/ISRIC, 2003). Most of these soils are highly weathered and leached resulting in poor inherent fertility.

The basin vegetation includes a complex of forest and woodland, savannah shrub and grasslands and wetlands, with the majority of the land used for agriculture by farmers and herders. The diverse ecosystems and convergence of lowland (mainly western Guinea-Congolian) and highland (eastern afro-montane) species, provide an array of habitats for multiple species of high global significance. This includes remaining species of mega-fauna in protected areas (and habitats) such as the Akagera National Park, Lake Mburo and the Burigi Game Reserve, as well as the unique tropical biodiversity of the groundwater forests (Minziro, Munene and Rwasina Forest Reserves). It also includes natural forests (such as Gishwati, Nyungwe and remnants of previously widespread riverine forest) with endemic plant and animal species (including those used in medicine, for wild foods and agroforestry, such as *Ficus toningii, Markhamia luttea* and *Eritrina abbissinic).* Extensive swampy forests and grasslands, with dense tall grasses and papyrus, are important ecological components of the floodplain ecosystem of the Kagera River, providing important water flow regulation and buffering functions.

Inter-linkages between the highland and lowland ecosystems are important in terms of water regulation, also for the transfer of nutrients and sediments. These ecological processes are directly affected by human intervention which determines net losses upstream - runoff, erosion, fertility decline - and net gains downstream; where there is a fine balance between benefits in terms of productivity of aquatic and terrestrial systems and risks of sediment/nutrient loading and flooding.

[1] Or 30% of the total Lake Victoria inflow if lake surface rainfall-evaporation is included.

1.2 Land Use and Socio-Economic Context in the Kagera River Basin

The transboundary area of the Kagera Basin is among the most important areas in Africa in terms of agro-biodiversity and food production. The agricultural systems are characteristic of east and central Africa, notably the dryland agro-pastoral system, based on savannah grasslands rich in indigenous plant and animal species, and the intensive, diversified cereal- and banana-based cropping systems. However, the varying ecologies provide for a range of locally-adapted cropping, livestock and fishing activities and livelihood systems that are strongly influenced by water availability and quality.

The range of farming systems and social organization has built on local knowledge generated over its long history of domestication and resource utilisation, evolving from the prehistoric hunters and fisher folk, to sedentary agriculture based on sorghum and finger millet and, subsequently, more intensive systems to meet increasing demands of the growing human populations and their livestock. Nonetheless, the farming system remains essentially subsistence agriculture, with low or negligible purchased inputs, high labour input and limited sale of surplus food and cash crops (banana, maize, coffee, etc.), and livestock products (meat, milk, hides, breeding stock). Limited areas are under commercial farms (sugar cane, horticulture, coffee, tea). Some of the drier areas in eastern Rwanda and the drier belt across the NW Tanzania–Uganda border were, until recently, still used for semi-nomadic pastoralism – but most pastoralists have now settled to adopt other livelihoods. More widely across the basin there is a breakdown in traditional land protocols that regulate grazing.

The farming landscapes and the socio-economic and cultural context vary widely within and among districts and countries. The land use-livelihood systems can be classified in four main types, with several sub-types according to management intensity and biological diversity:

1. Livestock based systems: transhumant/free grazing, paddock/ ranch
2. Mixed systems: agro-forestry, crop-livestock (tethered, zero grazing); crop-fish;
3. Perennial arable/tree based systems: mainly banana and coffee, but also tea, cassava, mangoes, avocadoes
4. Annual cropping systems – cereal based and integrated to various extents with legumes, tubers and some agroforestry species (e.g. *Grevillea, Cedrella, Calliandra).*

The livestock sector provides milk and meat to urban markets, however, many livestock products are consumed at home by farmers and herders. In mixed systems, livestock is an important source of manure, especially in densely populated areas, and cattle and small stock are a way of accumulating capital to insure the household against risk. In Rwanda and Burundi, cattle and other small stock were decimated during the genocide and wars, however, in lowland provinces, cattle herds have quickly rebuilt, as large herds were brought back by 'old' refugees from Tanzania and Uganda. Small stock numbers have not rebuilt so fast but are an asset that is more widely owned, especially by women

The traditional banana-based cropping system (#3 above), still present in parts of Tanzania, has three typical land use types in a concentric pattern, with decreasing management intensity and hence fertility with distance from the central homestead: i) the intensive perennial banana - coffee home garden (*kibanja*), with multi-layers and mixed crop species and varieties (beans, maize, fruit trees) where nutrient cycling is concentrated; ii) small fields of mixed annual crops (*kikamba*) with lower inputs, poor soil fertility and risk of vermin damage; and iii) extensive annual crops (*omusiri*), such as yams and Bambara groundnut, with long fallow periods and uncontrolled burning on low quality grasslands on steep, shallow or sandy soils (*rweya*), these are grazed, cut for mulch in the *kibanja* and for house thatch and provide useful trees (e.g. *Maesopsis eminii, Ficus spp, Markhamia platcalyx,* oil palm and castor).

The resulting human-induced transfer of nutrients, in addition to variations in soil, land form and hydrology has led to large differences in soil fertility across the basin. Traditional land use systems sustained high productivity with low external resource inputs relying on rotations, fallows, shifting cultivation and transhumance / nomadic livelihoods. Increasing pressures on land resources are leading

to changing land use systems, overexploitation of resources and greater reliance on poorer lands for crop and livestock production. In turn, this exacerbates poverty and vulnerability to environmental and health shocks, as well as inability to satisfy basic requirements - food, shelter clothing and access to health services, education and safe drinking water. The human-induced pressures are largely driven by human population growth, but also by poverty (average income of about US$1/day), illiteracy and the significant migrations of people and their animals that have taken place over recent years due to civil strife.

The 2006 basin population is estimated to be 16.5 million people; it is expected grow to 32.8 million by 2030 based on average population growth rates for the period 1999-2015 of 3%/year, see Table 1 in Annex 13 for details. In Burundi, 46% are under 15 years of age. The river basin covers most of the surface area of Rwanda (80%) and a large share in Burundi (50%) - both among the poorest and most densely populated countries in the world with over 500 inhabitants per km^2 in the cultivable lands. In Rwanda and Burundi over 90% of the populations are engaged in subsistence farming, with extremely small farms and fragmented plots (the mean area is 0.6 ha; only 2% of holdings exceed 3 ha.). In Uganda and Tanzania, some 80% of the population is rural and again the majority engaged in small-scale agriculture. Due to rural-urban migration, urban growth is rapid, averaging over 4% growth/year in larger cities of Kigali (650,000 persons), Bukoba (180,000 persons) and Mbarara (69,360 persons).

The majority of the rural population in the basin are very poor (few tools, poor housing, small land area, little disposable income); they are unable to invest in improved resources management or education (see Table 2 in Annex 13). They have limited access to improved technologies, information and services (research, credit, reliable markets, inputs and dispensaries). In upland areas, water is scarce both for domestic use and livestock as wells and watering points are mostly in lowland areas, or is sold from kiosks at prices most people cannot afford. In large areas of the basin, fuelwood is also in increasing short supply and alternatives such as paraffin or electricity are only accessible in the few urban centres. Labour is a major constraint, especially due to the severe impacts of HIV/AIDS and malaria, which particularly affects women. Sickness also diverts limited incomes from investment in land for care and medicines. Markets are limited to certain commodities and prices for most agricultural products are extremely low and unreliable, often affected by urban pro-policies and exploitation by 'middle-men'. Insecurity of tenure restrains investment in the land and discourages youth from entering into agriculture due to delays in inheriting land and low potential incomes. As a result of HIV/AIDs and rural exodus, there is a serious generational loss in the transfer of local/ indigenous knowledge (traditional medicines, use/management of local species/ varieties, soil and water management, biocontrol of pests and diseases, etc.). Many households are headed by women, and as a result of the war, in Rwanda women now comprise 60% of the total population.

Poverty in Burundi is particularly severe, where the economy has stagnated as a result of the civil war and insecurity (agriculture provides 95% of food needs and 80% of export income - largely tea and coffee; subsistence food crops occupy 90% of cultivated land). Refugee movements in recent decades have increased pressures on resources in the basin, increasing actual and potential conflicts between interest groups and countries and pressures on protected areas. Most notably, two-thirds of the Akagera National Park was de-gazetted in response to population pressure after the civil strife in Rwanda in 1994, for use by return refugees as smallholder arable farms. Resettlement of refugees into these new areas has created major problems as the land resources are very fragile, settlers do not hold indigenous knowledge and wildlife in the park are endangered by reduced habitat area and poaching.

The highly variable biophysical conditions and varied land use-livelihood systems developed by different socio-economic and cultural groups, through local experiences, knowledge and exchange of germplasm and driven by needs and opportunities faced by the growing populations, has led to the conservation and development of characteristic highly adapted species (drought resistant plant species, mobile animal races) and high within-species diversity in the Kagera basin. However, this agro-ecosystems and biodiversity heritage is increasingly threatened by overexploitation of resources and resulting degradation which are influenced by the transboundary nature of the basin.

1.3 Land Degradation Threats and Causes

As confirmed by transects, participatory rural appraisals and consultations with stakeholders in representative agro-ecosystems throughout the basin during the PDFB, the increasing human and animal pressures in the Kagera basin have led to intensification of land use and the adoption of unsustainable practices, notably:

- overstocking and overgrazing of pastures and rangelands, also excess bush burning;
- continuous cropping, with reductions in fallow and rotations, reduced crop diversity in response to markets (food and forage species/ varieties), repetitive tillage, frequent burning, and soil nutrient mining (lack of nutrient restoration practices);
- encroachment of subsistence cropping into more fragile, drier areas, previously used/reserved for pasture and grazing, also into the wetlands;
- over-exploitation of forests and woodland, especially loss of riverine forest, and unsustainable harvesting (timber, fuelwood, charcoal, brick making, etc.); and,
- communal areas, such as forested highland and riverine areas, grazing lands, riverbanks and cultivated steep slopes, are particularly affected by overexploitation and degradation.

These changing land use practices have been accompanied by neglect of the importance of agro-biodiversity and the ecological functions to which it contributes. Existing local knowledge does not encompass how to cope under such changed circumstances, nor in response to insidious, unprecedented environmental changes / variations due to climate change. Population pressures, insecurity and the struggle to meet short term needs have compromised the capacity of farming communities to sustain the land resources even though it is in their best interests.

The resulting land degradation and associated losses of biodiversity and ecosystem structure and functioning are serious problems affecting the sustainability of livelihoods in the Kagera River Basin. The main degradation factors include:

- extreme deforestation and loss of woody biomass, timber and non-wood forest products;
- extensive, pervasive and, in some areas, severe soil erosion, nutrient mining and declining soil quality affecting land potential and productivity of crop, pasture/range and forest lands;
- loss of agricultural biodiversity including habitats, species, genetic resources, domesticated species and the wild associated species that provide beneficial functions (pollinators, predators, soil biota);
- pervasive biomass burning, through bush fires, burning of crop residues, cooking with firewood, reducing vegetative cover and soil organic matter;
- siltation of rivers and lakes, with large sediment and nutrient loads entering Lake Victoria and invasion of water hyacinth (eutrophication and effects on aquatic life);
- loss and sedimentation of wetlands resulting in loss of their important regulatory and buffer functions;
- loss of other vital ecological services (e.g. nutrient cycling, carbon sequestration, biological control of pests and diseases and maintenance of the hydrological regime).

Deforestation is caused by encroachment of agriculture and increasing demands of the growing population for fuelwood, charcoal, timber and construction purposes. Currently, the majority of the basin's population depends on locally gathered fuelwood for their energy. Wood is also used for cooking in schools and other public institutions and for brick making and agro-processing. Deforestation has been extremely severe over the last few decades, especially in Rwanda and Burundi, including loss of high altitude forests, riverine forests, and lowland forest/woodlands in parks and reserves. During the period 1960-2000, Rwanda lost 63% of its natural forests: 59% of its high altitude forests and 83% of its riverine forest (from 150,000 to 25,000 ha.). Remaining forests, woodlands and trees in savanna systems and on-farm across the basin are facing severe pressures, valuable indigenous trees (e.g. *Podocarpus spp.* and *Markhamia lutea* for timber, Fito, *emitongole, eminyinya, enkukuru,*

obukagati, used for making local products), wildlife and non-wood forest products, including diverse medicinal plants, are threatened. Conservation of both natural and planted forests, especially of remnants of riverine forests and high altitude forests is vital to protect the hydrological regime and unique habitats.

Loss of Productivity on Agricultural Land: Soil erosion is extensive across the diverse farming systems and terrain units, with overall moderate sheet and rill erosion; and severe erosion (some gullies) on hilltops, steep slopes. The poor inherent fertility of soils in the Kagera, soil erosion, imbalances in exchangeable bases (especially K and Mg) and increasing acidity are major production constraints. Soil fertility decline is also widespread, resulting from continuous cropping and crop specialisation by resource poor families (nutrient mining) in their struggle to sustain the family and produce marketable surpluses, and by their lack of knowledge and/or application of integrated crop-livestock and agroforestry farming systems and practices (poor vegetative cover, loss of organic matter, inefficient use of rainwater, inappropriate use of fertilisers). The situation is exacerbated by insecurity of land tenure, fragmentation of land holdings, decreasing cattle ownership and hence availability of manure (< 20% of households in some areas), low resource endowments of smallholders and limited marketing opportunities. The result is an all too familiar spiral of degradation, with poor soils and vegetation cover impacting on agricultural productivity, ecosystem resilience, the hydrological regime and food insecurity and poverty.

Declining soil fertility and crop specialisation also have a direct influence on increasing incidence of crop pests and diseases. The major ones cited include: leaf pests such as caterpillars, army worm; banana weevils and nematodes, *Sigatoka* and Panama (*Fusarium* wilt), coffee rust, cassava mosaic virus, mealy bug and green mite. Increasing climatic variability and lack of knowledge of farmers to cope with unreliable rains are also exacerbating the situation. (Farmers cited delays in onset and early cessation of rains and an extended drought/famine in the lowlands in the period 2000 – 2005.) Erosion and soil fertility are among priority problems cited by communities. The use of inorganic fertilizers is well below the recommended rates required to prevent nutrient mining under intensive cropping systems, and needs to be promoted as part of integrated plant nutrient management strategies to avoid losses by runoff and leaching and optimize effectiveness.

Pasture/Range Degradation: The pastures are also facing severe erosion and productivity decline due to overstocking (resulting in changing pasture composition with less palatable and more invasive species and reduced soil cover), shortage of watering points which leads to high concentrations of livestock around those available and accelerated runoff from higher areas onto lowland pastures with risks of erosion, flooding and siltation. Transects conducted during the PDFB in pasture/rangelands showed trampling and compaction by livestock, sheet and rill erosion on hilltops and steep slopes, and in some places gullies, exposed tree roots and pedestals. Farmers cited problems of declining cattle productivity due to degraded pastures and increased diseases, shortage of grazing near urban areas and conflict between herders and farmers for land and crop residues (nutrient cycling or cattle feed).

There has been a gradual sedentarisation of pastoralists, due to reduced availability of grazing lands and corridors as result of encroachment of cropping and recent modernisation policies of the governments that tend to restrict movements, in conflict with traditional pastoral management systems based on migrations for water and grazing. Ranches have been established where some of the pastoralists can be employed. However the majority are obliged to adopt seasonal cropping and/or fishing livelihoods, for which they have no traditional knowledge or management systems, and pastoral livelihoods face the danger of extinction.

Loss of agrobiodiversity and associated functions is strongly related to the above land use pressures, resulting land use changes and degradation of soils and vegetation. It is accompanied by loss of related knowledge. The estimated 134 (critically) endangered and vulnerable species - of which 29 mammals and 15 birds - in the four countries is indicative of the pressures on habitats and species. The effects on agrobiodiveristy in the Kagera basin vary with the farming system see Annex 4:

a) **Reduced diversity of cropping systems:** Replacement of indigenous/local crop varieties by

introduced commercial varieties (e.g. nematode and disease resistant varieties of banana, cassava, maize, beans). Loss or neglect of traditional varieties, including crop wild relatives and landraces, such as simsim, millet, sorghum, sweet bananas, cowpea, sunflower, pigeon pea, Lima and Bambara beans, cassava and yams, wild medicinal plants and local fruits and vegetables due to fire, overgrazing and cultivation) and wetland destruction. Decrease in diversity of indigenous tree associations in banana/coffee farms. Loss of other indigenous species found in cultivated areas. Increasing problems of invasive crop weeds due to specialisation.

b) **Changing composition of pastures and rangelands**, with associated loss of biodiversity and habitats, through excess fire and overgrazing with reduced abundance of palatable/ nutritious grasses (such as *Braccharia spp., Setaria spp. and Hyparrhenia spp. and Thephedes triandra*) and legumes (such as *Glycine spp., Desmodium spp., Siratro spp. and Centrocema spp.*) and increased colonisation by thicket with hardy grass species (such as *Imperata cylindrica, Cymbogon spp.*, *Sprobolus spp.* and *Panicum maximum*) and by woody shrubs (such as *Acacia hockii, Combretum spp., Belanites spp.* and *Lantana camara* (now a serious invasive species in Rwanda).

c) **Replacement of the indigenous livestock breeds** especially the long-horned Ankole cattle (a cross of indigenous long horned Sanga and Zébu) by higher producing cross-bred cattle (such as the Pakistan *Sahiwal* Zebu, French Frisonne, Friesian Holstein, European Jersey, as well as trypanotolerant N'dama from West Africa and *Sukuma* Zebu from Tanzania) and of local races of small ruminants and poultry by introduced races to improve productivity.

d) **Reduced soil biota and biological functions** due to soil degradation and its effects on soil organisms, the soil food web, and its resilience. It is increasingly recognized that important functions of biological tillage, nutrient cycling, carbon sequestration, infiltration and soil moisture retention are negatively affected through continuous disturbance by hoe and plough cultivation, reduced crop rotations, nutrient mining, loss of organic matter and protective vegetation cover (removal and burning). Effects on soil biodiversity have not been researched in depth in the basin and are not in general recognized by farmers, but studies with farmer field schools (FFS) in Bukoba District, Tanzania,, have shown direct relations between soil biological activity and practices of tillage, organic matter and soil moisture management.

e) **Homogenisation of habitats and risk of loss of crop- and livestock-associated diversity**, such as pollinators (reduced habitat; competition by introduced honey bee species), beneficial predators and biological control mechanisms provided by biodiverse systems. Agricultural encroachment into wetlands, riverine woods, riverbanks and reduced fallow lands reduces the habitat and hence populations of such beneficial species. FFS study plots in Bukoba district have shown that reduced plant diversity, rotations and beneficial interactions (pest-predator, plant-soil nutrients) leads to reduced resistance to diseases and pests e.g. in bananas and maize. Communities have noted reduced populations of pollinator species (small bees, butterflies, beetles) due to spraying pesticides to kill birds and mosquitoes, forest clearing and loss of flower species, harvesting of honey using fire or toxic chemicals.

Water Resources and Wetland Degradation: Soil erosion from degraded arable and pastures also from use of riverbanks (e.g. livestock trampling, brick making) is causing serious increases in sediment and nutrient loads of waterways resulting in siltation and eutrophication of rivers and lakes and affecting wetland function. In addition to deposition of suspended soil particles, organic matter and regulation of flow, water flow through wetlands where vegetation is well managed, results in improved water quality [significant reduction in inorganic compounds (up to 50% for total N; 10% for total P) and fecal coliforms, LVEMP, 2001)]. However, wetlands are being increasingly encroached upon for cropping/grazing and resulting poor water quality is cited as affecting fish-stocks and diversity (also influenced by overfishing). Effects on the hydrological regime include changes in water courses, decreasing depth, changes from permanent to seasonal flow, drying up of valley bottoms with effects on pumped wells, drying of permanent water sources and increased incidence of floods as a result of impaired wetland function.

Water hyacinth (*Eichhornia crassipes*) has become a major invasive weed in Lake Victoria and its tributaries since the late 1980's and is a serious threat to aquatic ecosystems, affecting fish stocks and

water quality. LVEMP research shows that resurgence and proliferation of water hyacinth is related to pollution and nutrient loading from the catchments. Various activities have been implemented, with support from international partners, to review and develop a Regional Water Hyacinth Management Plan for Lake Victoria. The Kagera river system is a major source of the invasive weed, and the Institute of Agricultural Sciences of Rwanda (ISAR) also conducted a biological control program through a *Neochetina* weevil species rearing and release effort in 2000-2002, with funds and technical support by Clean Lakes, Inc. – Uganda, the USAID Greater Horn of Africa Initiative and the above regional programme. LVEMP-II plans a further water hyacinth control project.

Atmospheric Pollution: Studies by the Lake Victoria Environmental Management Programme (LVEMP) identified burning as a major source of chemicals, especially phosphorous, introduced from the atmosphere into the lacustrine system. Presence of other chemicals in aquatic systems, although relatively low is likely to be partly associated with pesticides used for intensive horticulture and for some cash crops such as coffee, tea, sugar cane, cotton. The presence in the atmosphere of DDT, Lindane, Endosulfan residues, is likely to be largely from mosquito and other insect control using cheap black market stocks of these obsolete and banned organic pesticides (LVEMP).

Reduced Biomass and Carbon stocks: Widespread practices of burning of grasslands, to generate pasture regrowth and control pests, and burning of crop residues to reduce disease outbreaks, and tillage practices, crop harvesting, reduced fallows and expansion of arable lands into forests and pastures, are resulting in severely reduced biomass. Some 85-95% of households use biomass for cooking and lighting, mainly in the form of wood, but also charcoal, and where these are more limited as in parts of Rwanda and Burundi, shrubs, animal dung and plant detritus. The large scale and long-term effect of these practices is to reduce carbon stocks in both soil and perennial vegetation, increasing GHG emissions to the atmosphere and contributing to climate change. The losses in vegetation cover, biomass and soil organic matter (soil carbon), reduce soil aggregate stability and infiltration capacity, causing increased runoff and soil erosion, leading to loss of productivity and biodiversity. Consequences are increased risk of flash floods, flooding downstream, reduced recharge of soil moisture and ground water resources , and in the long term enhanced drought risk.

Climate Change: Climate change models for the region predict increasing rainfall in humid areas, lower rainfall in dry areas and extended drought periods. Predictions of climate change impacts in the Kagera basin are contradictory (as with models for other areas) but largely in accordance with a wider study on anticipated impacts of climate change in East Africa[2]. Rwanda expects an overall reduction of rainfall, but Burundi between 3 and 10% higher rainfall. Throughout Tanzania, mean daily temperatures are expected to rise by 3.5°C, while Burundi expects an increase of 0.2°C every 10 years. This could lead to heat stress, particularly for exotic, high yielding cows, reducing the area where high yielding dairy cattle can be economically reared. Maize yields are expected to fall by 17 % in the Tanzanian part of the Lake Victoria basin, and Burundi expects a slight reduction in yield of beans, maize and sweet potatoes. Disease and insect pest occurrence is also expected to increase. Rwanda expects a reduction of agriculture/ rangeland productivity. Although the carrying capacity of grasslands could increase in areas of increased rainfall, increased foliage but reduced crude protein content could reduce grazing quality and hence meat and milk production. Farmers would need to adjust their management to ensure livestock have enough grazing all year round. Poor people's livelihoods are particularly vulnerable to climate change, as they tend to live in the highest risk areas and lack economic & social resources and capacity to adjust to rapid changes in long-term conditions. Local economic and social conditions in many parts of the Kagera Basin have already driven poor people to marginal areas and forced them to over-exploit natural resources to support their livelihoods. Climate change from global warming and other local factors (overexploitation) is likely to further erode the natural resource base, and could reinforce conditions of poverty.

Thus, land degradation in the basin is highly variable in spatial and temporal extent as well as intensity. Moreover, poor and most marginal rural people are affected disproportionately. The natural

[2] Paper by Orindi, V.A. and Murray, L.A. (2005)

resource base and environmental integrity of the Kagera Basin and the local knowledge systems are threatened by these socio-economic and environmental pressures, also by the resource-depleting survival strategies of the rural poor to meet their short-term needs. There are upstream-downstream impacts and serious transboundary environmental implications.

1.4 Root Causes of Land Degradation and Barriers to Sustainable Land Management

Past interventions to alleviate land degradation in the Kagera basin have, on the whole, been sectoral, and as elsewhere in the world, tended to focus on erosion control and on blaming the practices of local land users, in particular, the poor and most marginal rural people, for their unsustainable practices. Stakeholders across the basin acknowledge that the local land users hold one of the keys to reversing land degradation, and there is a need to work directly with the farmers and communities affected by, and causing degradation through their mismanagement. However, it is also widely recognised that land degradation is not purely a local problem; there is a need to look beyond those proximate causes to the root causes (indirect or primary drivers) which are forcing land users to overexploit their land resources in order to survive. This includes the demographic and land use pressures mentioned above, as well as the economic, technological, political, institutional and cultural drivers.

A key to maintaining the value of the natural resources is to ensure that the local resource users and stakeholders benefit from their efficient and sustainable exploitation of the resources and ecosystems. This has not been the case in the Kagera basin, partly due to **limited government support and lack of incentives** for natural resources management. There are weak governance mechanisms for common pool land and water resources and many resource users do not participate in decision making, especially the poor, women and youth. This exacerbates conflicts over use of resources, e.g. upstream – downstream. Prices for agricultural products are extremely low, and with limited local agro-processing and markets for alternative products, land users do not have the capacity to invest (labour, cash) in long term management strategies and are discouraged by lack of security of land tenure.

In the region, it is recognized that institutional deficiencies and low human capacities have led to **inadequate policies, laws and regulations** and their enforcement and poor **extension services**[3]. Recent decentralization processes in all the Kagera TAMP countries provide a tremendous opportunity for community-based planning and targeted development actions. However, **local government land resources planning capacity remains weak** (few staff, limited training and equipment), sectoral and ineffective in terms of bringing about a change from unsustainable to sustainable land use and resources management. There has been some development progress, for example, in limited areas support for land registration, improved water supplies, environmental protection, crop and livestock production, local organisation, access to inputs and services. However, sectoral efforts have also led to confused messages, inefficiencies and a failure to address the wide adoption of unsustainable farming systems and management practices. Even though national poverty reduction strategies and programmes (PRSP) show the need for integrated development processes, in general, **activities remain uncoordinated** driven by separate land, environment, agriculture, forest and water policies, institutions, strategies and action plans.

Transects and PRAs conducted with communities during the PDFB captured some of the main threats to and effects on agricultural biodiversity of current agricultural systems and resource management strategies. However, they also demonstrated a general **lack of awareness and understanding of land users and local governments** of: i) the effects of their practices on land degradation and biodiversity loss; ii) impacts of loss of habitats and species, especially loss of associated species that contribute to critical ecological functions (e.g. nutrient cycling, carbon stocks, pest and disease control; and iii) of improved techniques for preventing degradation and restoring degraded soils and opportunities for generating socio-economic and environmental benefits from more diversified, sustainable farming systems, including the conservation of agricultural biodiversity. Land users often do not have access to such knowledge as they are not well organized and capacities of agricultural, pastoral and forest

[3] Review of reports from the Lake Victoria Environmental Management Programme (LVEMP).

extension services are very limited (staff, resources, remoteness). The governments recognize the need to **strengthen collaboration with civil society and private sector**, for example, in Uganda the National Agricultural Advisory Services (NAADS) is supporting and working through private service providers which replace the former extension services.

These policy and institutional weaknesses influence the capacity of countries and stakeholders across the basin to adopt sustainable land management practices, and thereby, enhance livelihoods and food security and generate global benefits, including preventing land degradation, restoring the structure and functions of ecosystems and the water regulatory, carbon storage and other services provided.

1.5 Policy Context

Regional Policy context for Kagera TAMP

The Kagera river basin is managed and supported through the **Nile Basin Initiative - Nile Equatorial Lakes Subsidiary Action Programme (NBI-NELSAP)** which in addition to Kagera countries includes Congo D.R., and Kenya, as well as downstream Egypt and Sudan. The Council of Ministers (NEL-COM) provides oversight of NELSAP, policy advice and guidance; the Technical Advisory Committee (NEL-TAC) reviews the project portfolio and provides technical guidance to NEL-COM, the coordinating unit (NEL-CU) is responsible for delivery and information sharing. Expected outputs include a set of investment projects, demonstrated benefits from cross-border cooperation in poverty-focused development and strengthened cooperation at sub-regional level. Kagera TAMP management, for coordination purposes, should share information with and seek policy guidance, as required, from NEL-TAC and NEL-CU. Two of NELSAPs seven technical assistance projects are of particular relevance to Kagera TAMP, see below.

The East African Community (EAC) (recreated in 2000) provides a framework for extensive political cooperation and integration, among Tanzania, Uganda and Kenya (which share Lake Victoria) as well as Burundi and Rwanda which have both recently joined. EAC has established the **Lake Victoria Basin Commission (LVBC)** to manage the entire basin area, including the Kagera, and in this regard, had already invited Burundi and Rwanda in 2003 to sign a MoU to facilitate cooperation in this venture. The LVBC was launched in July 2005 and became effective in June 2006, with its seat in Kisumu City, Kenya (previously, since 2001, the mandate for coordination was with the Lake Victoria Development Programme (LVDP). It is envisaged that the LVBC could provide the appropriate institutional mechanism for taking over responsibility for transboundary cooperation and hence sustainability of management of the Kagera basin.

In the **Environment Programme and Action Plan of NEPAD** (New Partnership for African Development), land degradation is a major area of attention, alongside biodiversity conservation, drought and climate change mitigation, protection of fragile ecosystems and the ozone layer. **NEPADs Comprehensive Africa Agriculture Development Programme (CAADP)** is also a key entry point for integrating SLM in agriculture and natural resources management and with mainstream national priorities of poverty eradication, improved food security, accelerated economic growth and development, promotion of women in development and international Millennium Development Goals (MGDs). Kagera TAMP is part of the umbrella TerrAfrica/SIP program for sustainable land management in Sub-Saharan Africa and through this process will ensure that its activities to promote Sustainable land and agro-ecosystems management will be well integrated in NEPADs action programme, in line with its long term objectives (poverty eradication, sustainable growth and development, promoting participation of all groups, especially women in development) and priorities:
- creating an enabling environment for sustained economic growth of >7%/year over 15 years;
- reduction of the population living in extreme poverty by half, between 1990 and 2015;
- implementing national strategies for sustainable development by 2005 so as to reverse loss of environmental resources by 2015.

The countries sharing the Kagera Basin have all adopted various national strategies and action plans that address sustainable management of natural resources, biodiversity conservation, agriculture, forests, desertification and climate change mitigation. Land degradation is recognized by all

stakeholders as a major threat to the natural resource base and to livelihoods. Ratification of the **Convention to Combat Desertification (UNCCD)** in the late 1990s by the four countries and subsequent development of **National Action Programme (NAPs)** for its implementation has led to raised awareness from national to local levels, including of the close links between degradation and poverty. These NAPs are intended to be largely implemented through local and district level planning and actions, however, **financial and human resources are extremely limited**, except through specific technical assistance/investment projects.

Loss of biodiversity has been widely recognized in the environmental sector, especially for the protection of large fauna, birdlife and indigenous forest species through national parks and forest reserves. During the decade since ratification of the **Convention on Biological Diversity (CBD)** by the Kagera countries, there has been raised awareness of the importance of biodiversity and the ecosystem approach. **National Biodiversity Strategies and Action Plans (NBSAPs)** have been prepared in each country but besides some targeted studies and activities, there are limited resources for their application. Moreover, it is only recently that the loss of agricultural biodiversity and its impacts on food security and livelihoods have been highlighted and, to date, recognition and action remains largely at international level and among a few individuals involved in national level decision making, plans and assessment. This includes, for example: national contributions to the **CBD Programme of Work on Agricultural Biodiversity**; the **FAO International Treaty for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture** (IT-PGRFA) and national reporting to FAO global assessments of the **State of the World's Domestic Animal Diversity** and **State of the World's PGRFA** and implementing the resulting plans of action**.**

In addition actions have been developed in each country under the **Framework Convention for Combating Climate Change (UNFCCC)** and the **Ramsar Convention**.

The four countries have decided on the importance of working together to address the issues of land degradation across the basin which have global environmental implications and are transboundary in nature requiring coordination and collaboration among countries and sectors, as well as coherency among the various national strategies and action plans. The **key / critical transboundary issues** for eventual inclusion in Kagera TAMP, identified during a regional meeting with decision makers, planners and projects during the PDFB (Entebbe, November 2005) were:

- control of soil erosion and sedimentation;
- control of water hyacinth
- reduced pressures on wetlands, management of water resources and links with health;
- control of bush fires, reduction in biomass burning;
- conservation of agricultural biodiversity;
- control and management of cross-border livestock movements and disease;
- control of transboundary transmission of crop pests and diseases;
- impact of (returning) refugees, migrations and settlement expansion on land resources; and
- reduction in illicit exploitation of resources in protected areas and wildlife management.

As agreed with the Regional Project Steering Committee (PSC), these transboundary issues will be addressed to a greater or lesser extent by Kagera TAMP (see project description, Outcome 1, Output 2), taking into account support through other projects or mechanisms, notably:

- control of water hyacinth will be addressed by LVEMP-II through expansion of relevant actions from the current focus on Lake Victoria to upstream branches of the Kagera River;
- wildlife management and control are to be directly addressed through protected areas interventions, though Kagera TAMP should contribute to stakeholders and partner consultations and solutions to reduce pressures and generate opportunities for neighbouring farming communities and to the development of required policy, programme and legal support; and,
- effects of water quality on health should be addressed by health and water sectors.

1.6 National Policies and Priorities

In addition to the referred national plans to implement the environmental conventions, also important are the National Environment Action Plans (NEAPs), National Agricultural and Livestock Strategies and related plans/programmes, and the Poverty Reduction Strategies and Programmes (PRSPs). The latter have been developed in accordance with country decentralisation processes and recent targets to meet the Millennium Development Goals (MDGs) (especially [#1] eradicate extreme poverty and hunger; and [#7] ensure environmental sustainability). Kagera country PRSPs have identified agriculture as the lead sector in poverty reduction and priority attention is placed on increasing productivity and reliability of production, inter alia, through improved water management and soil fertility re-capitalization. An outline of relevant national policies, laws and priorities is presented below and in more detail in Table 1 of Annex 7.

In Rwanda, the **Poverty Reduction Strategy (PRS)** links human development with environment and natural resources management, and recognises the need to accompany agricultural/rural development by environment protection (soil and water conservation, reforestation, rational use of wetland, water, energy). A new **Agriculture Sector Policy (2004)** and a **Strategic Plan for Agricultural Transformation** have been adopted for intensifying sustainable production systems and promoting agri-business and thereby contributing to poverty reduction and food security. This is linked to NEPADs Mid-term Investment Plan and aims to shift from subsistence agriculture to an agriculture sector integrated with markets. Rwanda has confirmed that reversing land degradation and biodiversity loss in the Kagera basin is a top priority in view of the serious impacts on resources and livelihoods. In addition to environmental conservation, Kagera TAMP actions should improve crop and livestock production and forestry and thereby improve income and food security.

Recognizing that the Kagera basin covers almost 80% of the country, initially during the PDFB a focus was placed on the three lowland provinces of Umutara, Kibungo and Kigali Rural adjacent to the Kagera River (since the 2006 administrative reform, now largely Eastern Province). However, for the full GEF project, the government recognizes the importance of addressing the serious land pressures and causes of erosion and sediment production in the highlands, in addition to the downstream implications. As a result the diagnosis was extended into the highlands and it has been agreed that Kagera TAMP will also target the main tributaries and catchments feeding into the Kagera River, in the new Eastern, Southern and Northern Provinces.[4]

In Burundi, although over 20% of the Kagera basin lies in Burundi, and represents some 50% of the country, Burundi was not a beneficiary of the PDFB due to security situation in the country when the PDFB was developed. However, during the Entebbe workshops in November 2005, the Burundi delegates from the Ministries of environment and agriculture confirmed their strong interest in being a project partner and subsequently the PSC meeting (Rwanda, Uganda, Tanzania) endorsed Burundi's involvement, subject to agreement by the GEF family and co-funding arrangements.

Through the **Interim Poverty Reduction Strategy (2003)** the Government of Burundi seeks to support the reintegration of displaced persons and other victims of conflict into agricultural production, rehabilitating and developing rural and agricultural infrastructures, supporting micro-watershed management, sustainable farming approaches, resource use planning for protection areas and buffer zones, land titling and community management. The **National Strategy for Food Security (2003)** recognizes as priorities: raising production, productivity and diversifying sources of incomes in rural areas, improving the quality of services and their delivery to farmers, promoting sustainable land use and improving natural resource management through improved farming practices. Efforts are

[4] Through Rwanda's 2006 administrative reform, Eastern Province merges Umutara, Kibungo and the southern region of Kigali Rural; Southern Province merges Butare, Gikongoro and Gitarama provinces; and Northern Province merges Byumba, Ruhengeri and the northern part of Kigali Rural.

being made to implement the **National Environment Strategy (1997)** and strategies/actions to meet the goals of the biological diversity (NBSAP, 2000), climate change, desertification and Ramsar conventions; however, efforts are constrained by lack of resources and capacity. Relevant reforms include: legal instruments to improve agricultural planning and management, enacting a **Land Law**, updating national policy for managing natural resources and the environment and involving communities to help restore and protect vulnerable ecosystems, adoption of a **National Environment Law** (2000) and developing a **National Forest Policy** (draft).

In the United Republic of Tanzania**,** the **National Strategy for Growth and Reduction of Poverty (1998)** is the guiding framework that links poverty eradication with environmental degradation and the agriculture sector. The **National Environmental Policy (1997)** is an umbrella framework that promotes socio-economic development while maintaining environmental quality and resource productivity, supported by a set of environmental laws and specific policies on land, water, resources, forest and wildlife. Land degradation and drought are priority problems implemented through the **National Environment Action Plan (1994**), the **Forestry Action Plan (1994)** and the **Action Plan arising from the Soil Fertility Initiative (2000)**. The **Agriculture and Livestock Policy (1997)** promotes integrated, sustainable use and management of natural resources and improving the wellbeing of those dependent on agriculture. It is implemented through the **Agricultural Sector Development Strategy (2001)**. Following CBD ratification a **National Conservation Strategy** (draft) was developed and **NBSAP (2000)** which gives clear directions towards biodiversity conservation and links to **NAP-CCD** including promotion of sustainable development in areas adjacent to protected areas and rehabilitation of degraded ecosystems. Through the **Land Act** and **Village Land Act 1999**, village councils are to categorize their land according to pre-existing or new land use plans to be approved by the village assembly and subject to advice of district councils.

In Uganda, the **National Environment Management Policy (1995)** is the umbrella framework that recognizes the importance of conservation and restoration of ecosystems, biodiversity and ecological process and of enhancing public awareness and local participation in environmental actions. Linkages between poverty and environment and inter-sectoral actions are implemented through the **National Poverty and Environment Action Plan (PEAP)** and its **District Development and Environment Action plans (DEAP)**. The draft **National Land-use Policy** aims to fill a gap in integrated, harmonized land-use planning/ management across sectors and among land users/ stakeholders; and the draft **National Soils Policy** aims to maintain productivity of land /agro-ecosystems. The **Plan for Modernisation of Agriculture** is in line with the PEAP aiming to increase production/unit area and to promote sustainable use and management of natural resources forest, wildlife, livestock and rangeland. This is supported for example by the **Livestock Policy** which sets optimum stocking rates to prevent over-grazing and soil compaction, by the multi-sector **Food and Nutrition Policy (2003)** and the **National Policy for the Conservation and Management of Wetland Resources (1995),** aiming to maintain ecological and socio–economic functions of wetlands through optimal use of resources and partial exploitation for economic development.

As articulated in the referred policies, strategies and action plans, Kagera TAMP, as a coordinated programme aiming to promote sustainable land and agro-ecosystems management (SLaM) across the basin and thereby generate local and national benefits and global environmental benefits, responds to key priorities of the countries sharing the Kagera river basin. It will contribute to the implementation of these various national strategies and plans in a coherent, harmonious and effective way, through working closely with local governance and communities to build the capacity of technical and district level staff in promoting inter-sectoral approaches for SLaM. Kagera TAMP will also work at international level to harmonise strategies across the basin for the generation of global environmental benefits through reversing land degradation, conserving biodiversity, enhancing carbon sequestration and thereby contributing to protection of the shared water resources.

1.7 GEF Operational Programme Context

A preliminary in-country and transboundary diagnostic analysis was prepared during the PDFB through consultations with stakeholders and development of a detailed information base through: transects and PRAs in 9 representative areas and communities in Rwanda, Tanzania and Uganda; ten district level stakeholder meetings; and analysis by a range of technical experts (soil, agriculture, forestry, socio-economics, and others) and by the national Technical Advisory Committees (TACs). This diagnostic provided the basis for the formulation of this project including specific actions (policy, legal, institutional reforms or investments) for adoption at national level, within a harmonized context for the overall river basin, to address the priority environmental and transboundary concern(s), to restore the sustainability of the agricultural ecosystems and protect the shared Kagera River and its basin in the long-term.

The proposed project **Transboundary Agro-Ecosystem Management Programme for the Kagera River Basin (Kagera TAMP)** was initially designed to be consistent with the objectives of the GEF-3 Operational Program on Sustainable Land Management (OP#15), as it adopts a landscape approach and integrates ecosystem-based concerns with human activities based on land use (agriculture, rangeland, forest /woodland management). In rescheduling the project under GEF-4, efforts have been made to ensure the project design is consistent with objectives of the Land Degradation focal area strategy and Strategic Program for GEF-4. Moreover, it will contribute to the long term goal and intermediate results of the umbrella program - TerrAfrica/SIP for SLM in Sub-Saharan Africa: IR-1 through the identification and demonstration of innovative SLM approaches and their implementation (outcomes 3 & 4); IR-2 through building capacity and skills of communities and government for intersectoral planning, management, legislation and harmonized policies (outcome 2), and generation of knowledge and coordination mechanisms at community, national and river basin levels (outcome 1). It will catalyze inter-sectoral partnerships between institutions in all four countries to overcome barriers to SLM, including enhancement of institutional and human resource capacity for land use/resources planning.

Strategic Program 1 (SP-1 element b) is the selected entry point as the project's main focus is on restoration of the health and functioning of the different agro-ecosystems in the Kagera basin through promoting sustainable land and agro-ecosystem management. SLM will be promoted to overcome the severe soil erosion and loss of fertility through use of a landscape approach and integrating ecosystem-based concerns with human land use activities (agriculture, rangeland, forest/tree management). The project's activities will address the root causes and negative impacts of land degradation on ecosystem stability, functions and services as they affect local people's livelihoods and economic well-being, and to identify and find ways to overcome bottlenecks. **SP-3** will also be addressed through innovative incentive mechanisms that encourage wide adoption of SLM practices.

Specifically, the project will contribute to **Strategic Objective SO-2** by demonstrating and up-scaling successful, innovative and cost-effective SLM practices and investments that should reduce the extent and severity of degradation and deforestation, enhance productivity and resilience of agricultural systems and generate socioeconomic/livelihood benefits for local land users as well as global environmental benefits. Capacity building will be promoted through farmer field school approaches for adaptive management of SLM practices, and through community planning and integrated ecosystem approaches for the range of cultivated and grazing lands, forested areas and wetlands in the basin. SLM activities are expected to be scaled up in 46 micro-catchments and 35 agro-ecological units representing threatened or degraded common property resources (pasture/range, wetlands, riverine forest, buffer zones). Innovative practices will include: adapted conservation agriculture systems and improved access to required inputs; integrated crop-livestock systems; viable integration of adapted trees/agroforestry practices into catchment management (fuel, timber, C-sequestration, non-wood forest products, etc.). Replication of diversified land use systems/ practices and government support will be enhanced through monitoring (on-farm, downstream, and between land uses) and demonstrating the multiple local, national and global benefits gained through improved farm-

livelihood systems and catchment management approaches (sustaining/restoring the resource base, biodiversity conservation, ecosystem functioning, provision of goods and ecosystem services and reduced risks- climatic variability, food insecurity, etc).

The project will contribute to **Strategic Objective SO-1** through catalyzing inter-sectoral partnerships among institutions in all four countries to overcome barriers to SLM, including building institutional and human capacity for land use/ resources planning and incentive/support mechanisms to promote wider SLM adoption. This is expected to lead to a harmonized policy and legal framework guiding communities and districts in SLM in the 4 countries; and capacities for the development, implementation and monitoring of intersectoral community action plans on SLM (21 district offices; 136 communities), operating inter-alia through improved government-NGO-private sector collaboration. In Uganda in particular the project will be linked with the process for developing the country Strategic Investment Framework. The project results will be fed into the TerrAfrica Knowledge Management process.

2. THE BASELINE

2.1 Current Situation

Reviews conducted during PDF-B show that a variety of environmental, agricultural and social development activities have been, or are being undertaken in parts of the Kagera River Basin. However, the resources mobilized for concrete actions on the ground are still limited in time and space, implementation approaches continue to be piecemeal - they do not adequately address the root causes, nor the need for common solutions. Support available through governmental institutions tends to be sectoral, addressing crop or livestock production, environmental protection or social issues, but without the capacity to address wider implications of overexploitation of land resources and ecosystems. Further, the sectoral approaches of many projects tackle technical and economic causes of degradation, while allowing underlying institutional and policy failures to persist, thereby maintaining processes of degradation. Notable recent and on-going projects have not adopted participatory approaches, or they have involved promotion of exotic, often inappropriate animal breeds / plant species without due consideration of locally adapted biological resources. Past projects have also had limited efficacy, having been largely within-country, with gaps and constraints in solving complex, inter-related, basin-wide environment and development problems.

2.2 Relevant On-Going Development Activities

At regional level Kagera TAMP activities to promote sustainable land and agro-ecosystem management (SLaM) are consistent with **NEPAD's Environment Programme and Action Plan** and with long term objectives and priorities of its **Comprehensive Africa Agriculture Development Programme (CAADP).** In this regard, the **TerrAfrica Partnership** and its SLM Knowledge Management (KM) process are expected to facilitate collaboration and enhance sharing of data, lessons learned and successful processes between the Kagera basin countries and other SSA countries. Kagera TAMP will become an integral part of the Country Strategic Investment Frameworks (CSIF), policy dialogue and partnership process for mainstreaming and scaling up of SLM in Tanzania and in Uganda. This will include collaboration by Kagera TAMP Technical/Steering Committees with TerrAfrica/SIP country teams and stakeholder mechanisms (capacity building, partnerships and leveraging investment and knowledge management and sharing of experiences with SLM project in Kilimanjaro Region, Tanzania, and Mainstreaming SLM for recovery of the Uganda Cattle Corridor.

The following projects complement the proposed Kagera TAMP activities and contribute to the baseline:

2.2.1 GEF supported projects

- The **Nile Transboundary Environmental Action Project (NTEAP)** (GEF World Bank and UNDP, 2004-2009, US$39 million, regional unit hosted by Khartoum) was developed under the multi-donor **Shared Vision Programme (SVP) of the NBI** (launched in 1999 among members-Rwanda, Tanzania, Uganda, Burundi, Congo, D.R., Kenya, Sudan and Egypt). NTEAP promotes cooperation among the Nile Basin countries in protecting and managing the environment and the Nile River Basin ecosystem. Skills development training is provided to government ministries, NGOs and local communities in environmental management and monitoring (knowledge management, capacity building for EIA; prevention of transboundary erosion and pollution, including agriculture non-point source pollution; water quality monitoring; conserving wetlands and their biodiversity). Local NGOs and communities can receive small grants (US$10,000-25,000) to promote community-based approaches to land and water conservation to reduce soil erosion, desertification, pollution and control invasive water weeds. Trained persons and small grants could be linked to Kagera TAMP activities in target communities. In turn, guidance, know-how and capacities for sustainable land and agro-ecosystem management by Kagera TAMP should feed into skills development processes established by NTEAP in the region. It includes components on
    - Confidence Building and Stakeholder Involvement
    - Applied Training- capacity building
    - Socioeconomic Development and Benefit sharing
    - Regional Power Trade
    - Water resources planning and management
    - Efficient water use for agriculture

- **The NTEAP Water use for agriculture project** (3-years, 2008 US$5.46 million) includes the four Kagera countries, Congo DR and Kenya – the host. It aims to provide a sound conceptual and practical basis to increase water availability and efficient water use for agricultural production including an enabling environment and demonstration of water harvesting (sharing experiences of best indigenous and modern practices), community-managed and public/private managed irrigation (including possible reforms and improved systems performance). It will build networks of professionals from institutions and research organizations, farmers' and other water users, community and women's groups, and local NGOs who can work together to explore practical options. To better reflect a required transboundary nature, it is suggested to support a country specific crop focus and inter-country trading of products. This project is complementary to Kagera TAMP and collaboration will be established to seek co-funding for certain activities in target land units.

- **Lake Victoria Environmental Management Program (LVEMP-II): Phase I** of this program (1997-2005, GEF-US$37M, IDA-US$48M; Kenya, Tanzania and Uganda-US$10M) focused on scientific research and data collection, monitoring and analysis for formulating policies/strategies for sound management of the Lake Victoria ecosystem and harmonizing and strengthening support services (fisheries, water hyacinth control, water monitoring, waste and wetlands management, catchment afforestation, support to universities and land use management). An independent evaluation recommended for phase II, integration and sustained use of the databases, continued focused research and capacity building, investment for remedial measures (pollution) and private-public partnerships, a focus on livelihoods and participatory approaches and dissemination of best practices. Following a bridging phase (2006-2008) supported by EU, Japan, SIDA and GEF which allowed some continuity, **LVEMP-II** (15 years) is expected to shift gear from improving the knowledge base, to achieving environmentally and socially sustainable development in the lake basin. The objective of the GEF support and co-financing by IDA, SIDA and the beneficiary countries is to improve collaborative management of the transboundary natural resources of Lake Victoria Basin (LVB) for the shared benefits of the EAC Partner States; and (ii) reduce environmental stress in targeted pollution hotspots and selected degraded sub-catchments to

improve the livelihoods of communities, who depend on the natural resources of the LVB. This includes a) harmonized policy and regulatory frameworks for the management of water and fisheries resources and environmental health and natural resources data and information systems available to the public and used for policy decisions and planning, b) reduced point source and industrial pollution through waste water treatment and cleaner production technologies and c) increased awareness on the sustainable management of the Lake Victoria ecosystem, including adoption and monitoring of sustainable land management practices (range, afforestation and wetlands) by participating communities in a few targeted sub-catchments, as well as increasd accountability and management, While only one watershed is selected per country, close collaboration and coordination will be established between Kagera TAMP and LVEMP-I in particular the watershed management component and development of data and information systems to ensure complementarity. LVEMP is clearly complementary to Kagera TAMP which will promote sustainable and viable agro-ecosystems, of particular relevance are LVEMP's activities on: water quality and water hyacinth control, wetland management, soil and water conservation, catchment afforestation and investment in capacity building and micro-projects. Kagera TAMP management will coordinate closely with LVEMP (and with EAC and LVBC) to ensure information sharing among water, land and agriculture sectors and complementary strategies and actions. This will include linkages between the two regional PSCs and institutional focal points and technical and financial collaboration for joint actions to ensure enhanced synergy and investment in integrated land and water management processes.

- **Integrated Management of Critical Ecosystems (IMCE)** project in Rwanda (GEF/WB, full project February 2006, US$4.3mn of which US$ 400,000 counterpart funding) is focusing initially on assisting the Government in the sustainable management of critical marshlands and later community management of watersheds and buffer zones to reduce pressure on protected areas. This is a clear complement to Kagera TAMP which focuses on agricultural ecosystems and both projects rely on close collaboration between agriculture and environment sectors. Although the geographical coverage differs, linkages can be made for sharing experiences and methods and capacity building.
- **Rehabilitation and sustainable land management project (PRASAB)** in Burundi (GEF/WB, 2004-2010, US$40.47 million of which IDA-US$35M, GEF-US$5M, beneficiaries, 0.4M). The project covers all 5 agro-ecological zones and 9 provinces, including the 3 covered by Kagera TAMP (Kirundo, Muramvya and Mwaro), aiming at restoration of certain degraded lands, development of community and national strategies for sustainable use of natural resources in certain wetlands and swamp areas, promoting an integrated approach of watersheds and wetlands management, as well as emergency support for returnees and internally displaced persons. Collaborative arrangements and close liaison by Kagera TAMP with PRASABs Inter-provincial management units (IPCMUs) will be established to ensure the projects are mutually supporting and avoid duplication by covering different communes and complementary issues. Kagera TAMPs added value will be the transboundary collaboration mechanisms, integrated agro-ecosystem (intersectoral) approaches, conflict resolution and legal awareness/arrangements for improved tenure, land rights and planning at community level, as well as scaling up improved land and agro-ecosystem planning and management for impact across the Kagera basin in collaboration with other basin countries,
- **Land Use Change Analysis as an Approach to Assessing Biodiversity Loss and Land Degradation (LUCID)** was a UNEP/GEF funded targeted research project that generated GIS models and maps of land-use change in some of the concerned districts in Uganda and Tanzania. Kagera TAMP has used some of this information during project formulation and will further develop existing databases/GIS systems for land-use change analysis during implementation.
- Links could also be made with the GEF/World Bank project on **Novel forms of livestock and wildlife integration adjacent or protected areas in Africa-Tanzania** (US$4,5million IBRD grant, started end September 2005, supported by FAO/LEAD and ILRI). Although not in the

Kagera basin[5], experience sharing is envisaged on participatory land use planning and wildlife management areas; benefit sharing mechanisms and increasing returns from integrated wildlife and livestock production systems; and decision support tools to strengthen rational resources access and management. This project will contribute to the state of knowledge on wildlife corridors, traditional grazing systems and grazing hotspots, using existing databases on livestock (ILRI, FAO) and wildlife in Tanzania and recent studies on human welfare (by June 2007).

2.2.2 FAO supported projects

Relevant experiences, tools and methods as well as human capacities/expertise are also available through a number of FAO technical assistance projects, which also contribute to co-funding:

- **Information Products for Nile Basin Water Resources Management** (FAO/Italy trust fund project US$5 million, 2005-2008, with the 10 Nile riparian countries) has been strengthening the common knowledge base in order to facilitate sustainable and equitable development of the shared Nile resource, and the capacity of the governments to manage scarce water resources and to deal with competing water demands from different societal sectors. Kagera TAMP will further this information sharing process and promote harmonised land and water policies and will, in turn, benefit from capacities in database management on water resources.
- **The FAO Africover Project** has completed mapping of land cover in Tanzania, Uganda, Rwanda and Burundi from medium resolution satellite imagery, and additional layers (e.g. roads, rivers and water bodies). These maps provide an invaluable resource to Kagera TAMP. However, the mapping has been conducted at different scales and imagery dates differ between the countries: Tanzania at 1:200,000 (1997), while Uganda (2001), Rwanda (1999) and Burundi (1999) are mapped at 1:100,000). Collaboration with Kagera TAMP could include re-mapping the basin to provide a time-series analysis of patterns of changes across the basin from dates of the original Africover.
- The regional project on **Improvement of Food Security in Cross-border Districts of Burundi, Rwanda and Uganda,** is supporting the modernization of agriculture and poverty reduction under the NEPAD framework. It could help Kagera TAMP target communities, for example, in developing viable opportunities for sustainable use of agro-biodiversity, improved processing and marketing of local products from domesticated and wild resources and use of local varieties and breeds.
- **Conservation agriculture for sustainable agriculture and rural development (**CA-SARD, **Phase II** in Tanzania and Kenya builds on Phase I and other activities for piloting soil productivity improvement and Conservation agriculture (CA) practices in Eastern Africa, including Bukoba district during 2004-2006. CA is identified as one of the key technical options in the basin for reversing land degradation, reducing labour and improving livelihoods. However, its scaling up would depend on specific government and donor support for making available CA tools and equipment and strengthening expertise, through existing mainstream national agriculture programmes.

There are also other FAO technical assistance projects and partnerships that could contribute expertise and support for linking sustainable land management with food security, strengthened agricultural services and enterprise development, Farmer Field School approaches for integrated pest and production management, promoting payments for environmental services, and so forth, see Annex 12.

[5] Analyses of land use change dynamics at district level and land use option impacts on wildlife, natural habitats and human welfare in 6 villages in Samanjiro and Monsuli districts (Tarangire and Manyara national parks, Marang and Esimingo forest reserves, a highland forest in Ngorongoro Conservation area).

2.2.3 Other donor and government supported programmes

At regional level:

- The **Transboundary Integrated Water Resources Management Project of the Kagera River Basin (TIWRM)** of NELSAP (funded by SIDA and Norway US$4.7 million, and EU 3.0 million; hosted by Kigali; 2006-2009) which also covers the entire Kagera basin, is of great relevance as a twin project to, and co-financer for Kagera TAMP. It focuses on tools and institutional development for a joint investment strategy among the basin countries, for optimal use of scarce water resources through pre-feasibility studies; capacity building (national and basin staff) for sustainable management and development of the river basin water resources; community awareness raising on environmental management issues and development options; basin-wide hydro-meteorological network, water quality survey and implementation of investment projects e.g. Rusoma Falls HEP. Of particular relevance to Kagera TAMP is the long term investment project for afforestation in the Kagera Basin and a number of smallscale projects: water supply/harvesting systems for people and livestock (1/country); cross-border biodiversity (through catchment afforestation); wetlands restoration; environmental management and awareness raising in Lake Cohoha ecosystems and Akanyaru Basin. This project which focuses on water resources has complementary goals to Kagera TAMP, but as confirmed by the coordinators of NELSAP and this project, sustainable land management through Kagera TAMP will be essential for its sustainability. Collaboration has been ensured during the formulation of both projects to optimise synergy and cooperation; during implementation joint planning and close collaboration among project teams, activities and sites will ensure an effective partnership. Links between the two Project Steering Committees will ensure dialogue and integration among water, agriculture and environment sectors in developing cooperative mechanisms for transboundary basin management.

At national level

In the four countries, though less in Burundi, due to the security situation in the recent past, there are many agricultural, environmental and community development programmes and projects that provide important baseline support at national and district levels for infrastructure, crop, livestock and forestry extension, research and marketing, as well as sustainable natural resources management. Kagera TAMP will be closely integrated with the mainstream agriculture investment and development programmes that focus on productivity, profitability, increased rural incomes; food security and reduction of rural poverty. Areas of collaboration at district/community level will include support to extension, technology transfer (integrated pest management, soil erosion control, water management, etc), promotion of off farm livelihoods, marketing, scaling up/out of successes.

- In Rwanda, the **Rural Sector Support Programme (RSSP)** (World Bank, 2001-2011) is the main agricultural investment nationwide and aims to increase food production and support off-farm income generation in rural areas in all provinces of Rwanda.
- In Burundi, the **Projet de Relance et de Développement du Monde Rural (PRDMR)** (FIDA-OPEP, 2000- 2008) promotes smallholder agriculture (extension, livestock, seed multiplication, inputs); land management (wetlands, .watersheds, agro-silvo-pastoral integration); support to local initiatives (artisans, literacy, micro-finance, agro-processing); and community infrastructure (schools, health centres, water points, rural roads).
- In Tanzania, the **Agricultural Sector Development Programme (ASDP)** which comprises investment in the development of District Agricultural Development Plans; at national level to support development and management of policy interventions, in the institutional framework and national support services. In 25 districts in NW Tanzania including the Kagera region, support is also provided by **District Agriculture Sector Investment Project (DASIP)** (2006-2012, AfDB) which will support the preparation and implementation of more effective Village Agriculture Development Plans (VADPs) through farmer capacity building; community planning and investment in agriculture and support to rural micro-finance and marketing.
- In Uganda, **Promoting the Modernisation of Agriculture (PMA)** aims at the eradication of poverty by means of a long term strategy for the transformation of the agricultural sector through

multi-sector interventions and a decentralised planning process. It is supported by the **National Agricultural Advisory Services Programme (NAADS)** which aims to establish a demand-driven client- and farmer-led agricultural service delivery system, particularly targeting the poor and women. The focus is on a commodity driven approach for increasing productivity, empowering farmers and building their demand for both research and agricultural advisory services. During a recent evaluation, natural resources management was identified as an area requiring specific attention as the short term goals of farmers could lead to increased exploitation and degradation of resources without required investments in restoring natural resources.

In the environmental sector, besides the above mentioned GEF projects, in Rwanda support was provided until recently to the **Akagera Park and its Vicinity** (Rwanda Office of Tourism and National Parks-ORTPN and DED, phase II, which followed the GTZ supported "**Projet de Protection des Ressources Naturelles du Parc National de l'Akagera (PRORENA)**" (phase I completed early 2005) which aimed to strengthen the park through organisation and management after two thirds of the Akagera Park was de-gazetted in 1995 (park boundaries, community awareness of the value of the park, income generating activities targeted at park visitors and improved ecological balance of the park). This provides an important knowledge base for reducing pressures from agro-ecosystems and identifying needs for biodiversity conservation and long term protection of the park.

Kagera TAMP will complement these various projects and programmes by demonstrating the importance and ways and means to ensure a holistic agro-ecosystems approach that allows land users to match sustained productivity and improved livelihoods (food security, poverty reduction) with appropriate long term resource management strategies. More details of relevant programmes and projects are provided in Annex 12. Through the public involvement plan, Kagera TAMP will collaborate with the various projects, agencies and NGOs that provide support in the basin, many that are not mentioned here.

Lessons Learnt from Projects and River Basin Experiences

In preparing the project, linkages have been established with **relevant research and development networks** operating in the region such as ASARECA and its SWMNet, with a view to enhancing collaboration among actors and drawing on best available technical expertise, see Public Involvement Plan, Annex 5. The PDF-B team has taken note of experiences and lessons learnt by ongoing and recent programmes and projects and networks in the East Africa region, see case studies on the project website (www.fao.org/ag/agl/field projects/) inter alia:

- in the Great Ruaha River Basin, Tanzania, Sustainable management of Usangu wetland and its catchment project (1998-2002) and subsequent Kimani (sub)catchment resource management programme;
- recommendations of the USAID supported assessment of successful community based natural resources management practices in Tanzania (2002);
- experiences of Uganda Land Management Programme (ULAMP) in Mbarara district;
- FAOs programmes and links with partners (ICRAF, RELMA, FARA, ASARECA, ACT, WOCAT etc.) to promote food security, improved land and water management, productivity and farmer empowerment in Eastern Africa, especially through Farmer Field School approaches;
- the NAADS programme in Uganda supporting privatisation of extension services;
- participatory land use planning for implementation of the Land and Village Land Acts, Tanzania;
- Consortium for improved land management in the Lake Victoria basin in Tanzania; INSPIRE and UGADEN networks in Uganda etc.
- IW LEARN.

These experiences have provided guidance for planning the Kagera TAMP interventions, including:

- Involving the full range of local community members (age, gender, landowners, landless, poor, better off), also local government, decentralized technical services, private sector in on-the-ground project activities;

- Ensuring participatory approaches with stakeholders in project design, implementation, monitoring and evaluation of activities and impacts, including selection of simple biophysical and socio-economic indicators with main stakeholder groups;
- Provision of incentives and removal of disincentives regarding the choice of land use/management practices, particularly land tenure issues and time-lags between investment and implementation;
- Building on local innovation in adapting new technologies to ensure they are culturally acceptable and viable under local conditions;
- Taking account in project activities of the impact of HIV/AIDS on communities' ability to adopt alternative strategies (particularly the impact on labour and household finances);
- Establishing effective mechanisms of collaboration, cooperation and coordination among stakeholders at local, national and regional levels.

Areas which are given particular attention in the Kagera-TAMP project framework include:

- Facilitating local community planning with local actors based on participatory diagnostic and mapping, use of large scale maps (e.g. 1:10,000 based on GPS and enlargements of available topographic maps/satellite imagery)for land use planning of target micro-catchments/land units and mobilizing district and additional resources for implementation of local community action plans;
- Capacity building and empowerment of local actors, through learning by doing and research-action approaches, with a focus on farmer field schools, strengthening of and improved access to support services, and building on local knowledge and innovations in the development of improved agriculture/natural resource management practices that have environmental and livelihood benefits.
- Developing a knowledge management system including i) data compilation, analysis and use based on monitoring of selected environmental and livelihood indicators with stakeholders from target sites and use of analytical tools such as WOCAT (World overview of conservation approaches and technologies) and LADA-Local; and ii) dissemination of findings and viable options for local, district and national institutions and partners through targeted products, manuals, guidance, case studies of byelaws and land tenure arrangements and other recommendations;
- Increasing impact by extending the application of locally adapted, proven management techniques/approaches through sharing results of pilot micro-catchments and interventions (exchange visits, field days, mass media, collaborative partnerships and training of trainers materials for out-scaling);
- Ensuring close co-ordination and collaboration among interventions in the basin; notably between Kagera TAMP and Kagera IWRM project which target the full Kagera basin (data, information, planning, decision making), other activities of NELSAP, LVEMP-II and co-financing partners;
- Harmonizing, adapting and simplifying relevant laws and regulations governing management and use of the river basin's natural resources, with an emphasis on local by-laws and land tenure arrangements negotiated among various local actors (herders, farmers, etc.) in community territories;
- Investigating mechanisms by which local land users can benefit from options for payments for environmental services (PES), particularly carbon offset credits as piloted by EcoTrust in Uganda [e.g. under the Clean Development Mechanism (CDM) of the Kyoto Protocol (Article 12), the World Bank Biocarbon Fund or bilateral payment programmes between US and Kagera countries for CDM type credit schemes or voluntary agreements for carbon emissions reductions (Plan Vivo system -ECCM)];
- Exploring options to address the impacts of HIV/AIDs on agriculture and food security, through interacting with primary and secondary schools, particularly using school gardens and FFFLS, whose main objective is "to empower children *(who have lost one or both parents to AIDS*) to handle their future, improve their livelihoods and become agents of their own change";

- Establishing an efficient and transparent financing mechanism at project and district levels for natural resources and agro-ecosystems management actions, mobilizing co-funding from local, national, regional and international resources.

3. THE GEF ALTERNATIVE

3.1 Justification

Land degradation is having a strong negative impact on the structural and functional integrity of the ecosystems, driven largely by changes in land use and management practices in the diverse agricultural ecosystems of the Kagera River Basin. The basin's increasing ecological vulnerability threatens the livelihoods of the 16.5 million who live in the area today and the ability of the basin to sustain the predicted increases in population over the coming decades (see Table 1, Annex 13). The agro-ecosystem resources of the region have come under increasingly severe pressure in recent years due to natural population increase and returning refugees – accelerating the break-down of traditional agricultural practices (rotations, fallow, shifting cultivation and nomadic livelihoods) and giving rise to food shortages, poverty and economic vulnerability.

Degradation as a result of unsustainable intensification is negatively affecting agricultural ecosystems and their productivity and since, in most rural areas, alternative livelihoods are absent or negligible, with deleterious impacts on human societies in the four countries and increasing risk of conflict over access to resources. Degradation is also affecting biodiversity and in particular agricultural biodiversity through fragmentation and loss of habitats, loss of plant and animal species and intra species diversity (varieties and breeds). Climate change is also negatively impacting on agricultural livelihoods through unreliable and more intense rains and higher temperatures with effects on crop and livestock systems, their productivity and viability. Improved natural resources and agro-ecosystems management (land, water, biological resources and their diversity) and protection of the more fragile areas are recognized as being critical for sustaining agricultural productivity and livelihoods and thereby maintaining hydrological, social, economic and political stability within the basin countries – and also more widely in downstream countries of the Nile Basin.

The Kagera River Basin is a regional entity where the project can successfully intervene using multiple approaches to **reverse land degradation and achieve global benefits through restoring ecosystems structure and functioning and ecosystem services**, such as water regulation, carbon storage and provision of habitats for important fauna and flora and associated species. The key entry point for Kagera TAMP will be land degradation, the project will enable local farmers and herders to break out from the vicious circle of land degradation into a virtuous circle of land restoration and sustainable use through the engine of agriculture.

Kagera TAMP will focus attention and interventions on the **agro-ecosystems** on which the large share of the population depend but which have come under increasingly severe pressure in recent years due to natural population increase and returning refugees. Ways and means will be identified to promote the widespread transition **from unsustainable to sustainable intensification** and thereby improve agricultural productivity and the conservation of natural resources leading to improved food security, reduced poverty and economic vulnerability. The reversal of land degradation processes and enhanced agricultural productivity will **reduce conflicts over resources** for instance between farmers and herders, and improve economic and social stability. **Youth** will, where appropriate, be encouraged to remain in rural areas through improved livelihoods opportunities (agrobiodiversity; local markets). **Improved practices** will be developed through participatory learning action-research (PLAR) with communities building on local knowledge and innovations and resulting in viable agro-ecological and integrated ecosystems approaches. **Alternatives** to traditional practices that are no longer viable (rotations, fallow, shifting cultivation, nomadic livelihoods) and to practices that negatively impact on the environment (burning, repetitive tillage etc) will be developed to improve land cover, nutrient cycling and biological control, water quality and quantity, to reduce biomass losses, and enhance systems' **diversification and resilience.** Improved practices include, for example, agroforestry, crop-

livestock integration, inter and relay cropping and species/varietal improvements, conservation agriculture, pasture improvement and sustainable harvesting of wild species and products.

Coordinated support and effective investment by local governments, civil society and the private sector is a prerequisite to promote sustainable use of resources and thereby to maintain the ecosystem services and preserve the long term asset value of the Kagera basin. In this regard, local government support and capacity will be built to strengthen **resources planning and management capacities** of farmers, herders and their communities and thereby generating local livelihood and both local and global environmental benefits. Local communities will be empowered in decision making, planning and monitoring for improved land use systems and resources management practices through **strengthening community capacity and organization** in developing and implementing agro-environmental action plans and associated micro-projects to generate benefits in terms of food security and livelihoods (as an integral part of community and district planning processes). LVEMP and various NGOs/CSOs have shown that such community level interventions demonstrate cost-effectiveness, show impact within short periods, use of local resources, sustainability, gender sensitivity, transparency and accountability.

Coordinated resource management strategies will be developed for the basin resources as a whole to mitigate pressures on limited resources, notably, nutrient mining of croplands, soil erosion as a result of poor vegetation cover, loss of biodiversity through habitat loss and fragmentation, loss or threats to genetic resources, overgrazing of pastures and rangelands, agricultural encroachment of wetlands and deforestation. **Raised awareness and improved understanding will be created** among Kagera basin stakeholders of on-site and off-site impacts of resources management (actual and potential).

The community level action will be supported by efforts to enhance **district and regional capacity** for **cross-sectoral approaches** (integrated technical support) for sustainable agro-ecosystems management at community, micro-catchment and river basin levels. Holistic (inter-sectoral) approaches will allow Kagera TAMP to address the **land use-livelihood system** as a whole, considering both the environmental and socio-economic benefits that can be obtained from more integrated land use systems and better resource management practices (i.e. improved efficiency and ecological functions of sustainable, diversified systems generating improved productivity and income with reduced inputs and costs; while contributing to the conservation of resources, restoration of degraded lands and maintenance of ecosystem services). District capacity will also be enhanced for **mobilizing financial resources** (public and private sector investment) for long term agro-environmental management, while making required linkages with other sectors - health, education and infrastructure.

Sustainable land management and **capacity building** to prevent/manage resource use and degradation in the **short and long term** will be enhanced through addressing institutional issues of tenure security, land use planning capacity, local empowerment and decision making (e.g. through community by-laws) and organisation of local communities (land and water users associations, conflict resolution mechanisms). Attention will be paid to the multiple interlinking factors from **local to global levels** that provide an enabling environment for the wide adaptation and adoption by land users of productive and sustainable land management practices. The satisfactory resolution of the various land use pressures and conflicts will be tackled through **negotiation and planning capacities** at basin-wide, national and local government levels, as well as adaptation of traditional practices that are no longer sustainable or economically viable through developing **alternative livelihood strategies and off-farm income**.

The pressures on the natural ecosystems and habitats of the Kagera River Basin will be reduced through identifying ways in which **neighbouring communities** can benefit from the conservation and sustainable use of the resources in and around the protected areas (Akagera National Park, Magaju Forest Reserve, Lake Mburo and the Burigi Game Reserve) also natural forests of Gishwati and Nyungwe and remnants of previously widespread gallery forest. This could include **sustainable harvesting and improved marketing** of products from endemic plant and animal species (including

species used in medicine and for wild food and local agroforestry species including *Ficus toningii, Markhamia luttea* and *Eritrina abbissinic* and non-wood forest products).

Actions will be identified to reduce threats on traditional **crop species/cultivars and livestock breeds** and loss of local potentially valuable genepools by improving participatory plant breeding and cross-breeds with attention to farmer preference. This includes promoting the **use and marketing** of local drought and disease resistant varieties of cereals, pulses and tubers (including sorghum and millet, beans and cassava) and crossing the resilient Ankole cattle with more productive breeds. There has been raised awareness of the status and trends of genetic resources for food and agriculture (through reviews and national reports on plant and animal genetic resources). Kagera TAMP will illustrate effects on land use/resources management of recent trends in agriculture, increasing specialization for markets and uncoordinated sectoral support for crops, livestock and forestry and fisheries. It will go further by developing **conservation strategies** and **demonstrating the interactions** among components of the farming systems and the contributions of beneficial associated species (predators, pollinators and soil biota) to **systems' productivity and resilience** that have hitherto been neglected. Practices will be tested and developed through farmer learning-action-research to enhance vital **ecological functions** - nutrient and carbon cycling (including sequestration), biological control of pests and diseases and maintenance of the hydrological regime.

Raising awareness of the **impacts of climate change and variability** at community and district levels will lead to dialogue and development of **coping strategies** to adapt to change and to mitigate negative effects including reducing emissions of the greenhouse gas CO_2 (through reduced burning, alternative fuels and efficient use of energy) and enhancing carbon sequestration (through grassland management and restoration, holistic livestock management and conservation agriculture). Uganda's proposed adaptations to mitigate climate change, for example, are closely in line with Kagera TAMP aims, including diversification of crops, mulching for soil and water conservation, improvement of agriculture management and practices, development of food processing and storing. For climate change mitigation and adaptation across the arable areas of all four countries and to restore soil organic matter (C) and fertility, Kagera TAMP will promote minimum or reduced tillage combined with cover crops and green manure crops to restore nutrient losses. To cope with unreliable rains and increased temperatures, Kagera TAMP will promote improved practices for **efficient use of rainfall** (soil moisture management, runoff farming and water harvesting for household and livestock use). For livestock systems, recommended adaptation and mitigation methods include: adjusting grazing habits and management to ensure livestock have enough grazing all year round, improving market opportunities (selling and processing), diversifying economic activities of herders and use of drought resistant species.[6]

Many of the land use changes which contribute to **carbon sequestration** are in-line with Kagera TAMP objectives (adoption of zero/minimal tillage systems (CA), reducing soil degradation, reducing deforestation, increasing forest stocks, agroforestry activities, rehabilitating degraded forests). Basin-wide, Kagera TAMP will specifically take-on the role as a catalyst to help groups of farmers to work together with intermediaries (existing institutions or NGOs e.g. using the EcoTrust Uganda model) to benefit from carbon offsets or other payments for environmental services, overcoming the impediments which have so-far limited projects which have secured payments (under CDM or other) e.g. due to: i) the discounting operated due to the perceived risk of sequestration reversal by small-farmers; ii) the willingness of small-farmers to be competitive suppliers of credits; iii) how participation may affect food security, also the timing and amount of labour required; iv) the size and timing of investments & returns; v) problems of market integration; vi) incentives and constraints land users face in making decisions; vii) endowment of resources (land/labour/capital); viii) property rights. Kagera TAMP will demonstrate how payment for the adoption of land use systems which generate sequestration are a "win-win" solution, as both environmental and poverty reduction goals can be attained.

[6] The full report is available at www.fao.org/ag/AGL/fieldpro/kagera/index.stm.

3.2 Global Environment and Development Objectives

The overall long-term environment and development goal of the project is to support the adoption of an integrated ecosystems approach for the management of land resources in the Kagera Basin which will generate local, national and global benefits including: restoration of degraded lands, carbon sequestration and climate change mitigation, agro-biodiversity conservation and sustainable use, protection of international waters and improved agricultural production, food security and rural livelihoods.

The environmental objective of the project is to address the causes of land degradation and restore ecosystem health and function and generate a range of global environmental benefits across the Kagera basin through the introduction of adapted agro-ecosystem management approaches.

The development objective is to improve the livelihoods and hence contribute to reduced poverty of rural communities in the Kagera Basin through more productive and sustainable resource management practices that are technically feasible and socio-economically viable.

In realizing the above closely inter-related development and environment objectives, the project is expected to achieve the following outcomes**:**

Outcome 1: Transboundary coordination, information sharing and monitoring and evaluation mechanisms operational and effective in promoting sustainable, productive agro-ecosystems and restoration of degraded lands.

Outcome 2: Enabling policy, planning and legislative conditions are in place to support and facilitate the sustainable management of agro-ecosystems and the restoration of degraded land.

Outcome 3: Capacity and knowledge are enhanced at all levels for the promotion of – and technical support for – sustainable management of land and agro-ecosystems in the basin.

Outcome 4: Improved land and agro-ecosystem management practices are implemented and benefiting land users for the range of agro-ecosystems in the basin.

Outcome 5: Project management structures operational and effective.

Kagera TAMP offers a unique and innovative approach, using agriculture as the engine for reversing land degradation, enhancing biodiversity conservation and carbon sequestration across a transboundary river basin and, consequently, also contributing to the protection of international waters of the Kagera. TAMP will complement the wider programmes and projects of the Nile Basin Initiative and Lake Victoria Environmental Management Programme, with the ability to focus on land resources and agricultural ecosystems and provide greater attention to local community and district action. Kagera TAMP is designed to ensure it does not duplicate but will harmonize and work hand in hand with the NELSAP TIWRM project, which focuses on water resource issues in the Kagera Basin.

Kagera TAMP will help the countries sharing the Kagera basin to achieve the environment and development goals of the project through:

(1) Effective coordination and collaboration mechanisms across the basin resulting in policy harmonization, conflict management and resolution of transboundary resources management issues, with particular attention to agro-environmental synergy;

(2) An enabling policy, planning and regulatory environment and incentive measures catalyzing successful replication and uptake by farmers/communities of improved resources management practices;

(3) 68 target communities in 21 districts benefiting from increased capacity of local institutions and partners at all levels (trained personnel, participatory learning- research-action methods, improved knowledge and information, for promoting best practices, integrated ecosystems and biodiversity management); and

(4) Improved land use/agro-ecosystems and management practices (SLaM) developed and piloted on 43,700 hectares in 46 micro-catchments and 10 distinct agro-ecological units in the basin, and 100,000 hectares by the end of the project, generating improved livelihoods and -global environmental benefits and being scaled up across the basin.

Kagera TAMP will follow two main phases. Initial activity areas (years 1-2) will be to establish the transboundary mechanisms, set-up field-based activities and establish the baseline in target micro-catchments in the range of agro-ecosystems in all countries, including the status and trends in pasture/range, cropland, wetlands, in terms of agrobiodiversity and energy, and quantifying land cover/degradation status (for project M&E, with support of the regional GIS / RS centre and as required a competent GIS / RS institute in each country). During the third year of the project, following the mid-term review, plans will be made for scaling-up from the target micro-catchments and community action plans, during subsequent years of the project, to enable more people living across the basin to benefit from the approaches that will have been developed and proven in the target micro-catchments and agro-ecological zones.

3.3 Detailed Project Description

Outcome 1: Transboundary coordination, information sharing and monitoring and evaluation mechanisms operational and effective in promoting sustainable, productive agro-ecosystems and restoration of degraded lands.

<u>Output 1.1</u> A basin-wide coordination mechanism is established to facilitate transboundary dialogue, basin-level policy harmonisation and coordination of national/sub-national actions.

Each of the four participating countries has its own policies and legal instruments for sustainable natural resource use; this output will support coordination and harmonising approaches among countries sharing the basin and across basin wide programmes through:

(i) **National-level workshops among stakeholders and decision-makers leading to the development of policy, institutional and legal mechanisms for enhanced intersectoral cooperation to address the priority transboundary issues identified, resolve conflicts and promote sustainable land and agro-ecosystems management (SLaM)** including biodiversity conservation in each beneficiary country and across the Kagera basin. These will build on results of policy and legal reviews and stakeholder consultations at local and district levels (Outcome 2) and will involve national representatives of Lake Victoria and Nile river basin programmes, LVEMP and NBI-NELSAP, as appropriate.

(ii) Appropriate, **affordable institutional mechanisms developed for sustained regional cooperation and support across the basin for SLaM,** including protocols, guidelines and other tools (conflict management procedures; benefit-sharing and sustainable financing arrangements); Memorandum of Understanding (MOU) and practical SLM collaboration mechanisms (training, co-funding, joint or back-to-back PSC meetings) during planning and implementation on the ground with LVEMP-II and NBI-NELSAP programmes, to ensure synergy in capacity building and investment.

(iii) **Regional workshop held to finalise and agree on required policy, legal and institutional mechanisms and tools and implementation arrangement across the basin** (resulting from i and ii above); for subsequent endorsement by the regional PSC in consultation with LVEMP and NELSAP decision making processes for subsequent adoption and funding by (inter)-ministerial processes (end Year 3 for implementation in years 4 and 5).

(iv) A broad **public information and awareness-raising campaign** conducted of the importance and benefits of SLaM based on pilot experiences (years 1-3) and opportunities for policy, legal, planning and decision support with a view to wider scaling up across the basin. This will target land users, local authorities and other stakeholders, decision-makers and development partners and emphasise the need for collaboration across the basin and at all levels to generate the multiple livelihood and environmental benefits of Kagera TAMP.

(v) **National and transboundary mechanisms established and functioning for coordinated and harmonised policy and legal approaches and decision making** to address gaps, inconsistencies and conflicts that are leading to degradation of resources and to promote targeted policy/legal interventions/enforcement for SLaM (e.g. legal awareness, by laws, tenure security, common property and cost-benefit arrangements). An ad-hoc basin-wide task force (the same or building from the regional technical advisory committee -RTAC) composed of high level experts from concerned sectors would guide the development and implementation process. Concrete actions to establish integrated agro-environmental processes, inter-sectoral mechanisms, synergy among planning processes, and close collaboration with basin-wide water resources programmes, will provide an enabling environment for SLaM and the generation of livelihood and global environmental benefits (reversing degradation, biodiversity conservation, carbon sequestration, ecosystem function) in accordance with UN-CCD, -CBD, and -FCCC. Coordinated approaches and mechanisms among Kagera countries will lead to increased support (especially in years 3 and 4) for district/community empowerment, policy/legal enforcement, feedback and knowledge sharing (local - policy) and will achieve progress in addressing each of the priority transboundary issues identified, thereby reversing land degradation and biodiversity loss in target communities and agro-ecological areas. Consultation with relevant projects/ programmes will help ensure that other transboundary issues are addressed, such as water hyacinth, wildlife conservation and health issues related to water quality.

Priority Kagera TAMP transboundary issues include:

- control of soil erosion and sedimentation and their impacts;
- management of water resources through rainwater capture/soil moisture management
- reduced pressures on wetlands, on fragile lands and protected areas and wildlife;
- control of bush fires, reduction in biomass burning;
- conservation of agricultural biodiversity;
- control of cross-border livestock movements, animal and plant pest and disease transmission;
- land use change and impacts on resources of (return) refugees, migrations and settlement expansion.

<u>Output 1.2:</u> An efficient basin-wide knowledge management system is established to support information requirements and decision-making processes at all levels.

The Kagera TAMP knowledge management system will be set up in years 1 and 2 and will be developed in close consultation and with a view to integration with other information systems on natural resources management in the basin (NELSAP, LVEMP). This will include:

(i) **An environmental monitoring and information system for SLaM (SLaM-IS)** in place, supported by a geographic information system and remote sensing tools (GIS/RS) and linked/integrated with LVEMP and NBI-NELSAP data/information systems where feasible. This will consist of a central unit for the river basin (institution to be confirmed through bids on the basis of agreed criteria) supported as required by subsidiary units hosted in appropriate institutions in the other three countries, with:

- GIS / RS information collated and analysed to support better-informed decision making and early warning;
- Two way information flow between participatory land use planning activities, national technical units and the basin-wide RS/GIS unit, complemented by other monitoring data and analysis (e.g. bush burning/vegetation status) using near real-time satellite imagery;

User friendly reports, maps and other products made available by central and national units for use by local and national decision makers.

(ii) **A pilot district level GIS capacity developed in each country** and staff trained to collect and use information with local stakeholders and to make use of information from regional / national centres for developing adapted community land use planning and decision support tools (despite the interest this is not proposed to be applied more widely because of high risk of departure of trained GIS persons);

(iii) **District/Community information centres** developed on land use, agricultural systems and resource management interventions, impacts on livelihoods in community territories and target micro-catchments and used by local stakeholders for keeping records, updating land use plans, etc.;

(iv) **Project information and communication system** in place, including use of internet and other media (radio, news, advocacy materials), and a central Kagera TAMP website, linked to other websites and managed from the project regional unit with password facilities for updating by beneficiary countries and FAO.

(v) **Linkages with relevant networks** established and leading to enhanced capacity building, for example with IW LEARN, WOCAT, and SARECAs SWMNet.

Output 1.3: Project monitoring and evaluation system and technical reporting supporting Kagera TAMP implementation and decision making in the basin.

Collation and sharing of information to enable periodical assessment of project performance, impacts and lessons learnt, and thereby support informed decisions in the Kagera TAMP programme and with partner institutions and projects. (see also Outcome 5 for project management). This includes:

i. **Development of the project participatory M&E system** (with support of a consultant) building on other M&E systems and experiences and in close consultation with the GIS/RS centre. This will include participatory M&E of project impacts in target micro-catchments and land units with communities and districts (through FFS, local stakeholder workshops and field visits). The M&E system will highlight key institutional, technical and socio-economic barriers that could impinge on Kagera TAMP achieving its objectives and allow remedial measures to be taken.

ii. **Training in participatory M&E** for accurate data collection, analysis and stocktaking, with project management, beneficiaries and partners, of project performance and impacts (environmental and socio-economic) including lessons learned, challenges faced and opportunities identified in the field. This will facilitate reporting monitoring of SLaM impacts and participatory gender disaggregated processes with stakeholders.

iii. **Independent mid term (year 3) review and a final (year 5) project evaluation** (external) conducted to assess project performance and impacts (building from the baseline as documented through the PDFB). These will involve the review of M&E documentation, participatory thematic assessments, meetings with key informants, analysis of remote-sensing/GIS products and specific technical studies, in-depth policy analysis, and assessment of environmental and socio-economic impacts, with attention to gender considerations (see Outcome 5 for associated management review).

OUTCOME 2 ENABLING POLICY, PLANNING AND LEGISLATIVE CONDITIONS ARE IN PLACE TO SUPPORT AND FACILITATE THE SUSTAINABLE MANAGEMENT OF AGRO-ECOSYSTEMS AND THE RESTORATION OF DEGRADED LAND.

Output 2.1 Sustainable management of land and agro-ecosystems (SLAM) mainstreamed in national and district development programmes and basin institutions, enhancing synergy among sector strategies and across the river basin

The four countries have ratified the desertification (CCD), biodiversity (CBD), climate change (UNFCCC) and wetlands (RAMSAR) conventions, and the process is ongoing for the FAO

International Treaty on Plant Genetic Resources for Food and Agriculture (IT-PGRFA[7]) For each there are national strategies, action plans and/or programmes with targets, however in general, implementation is problematic due to the lack of synergy among the plans and with the agricultural and poverty alleviation strategies as well as financial and human resources constraints. Kagera TAMP will contribute as follows:

i. **Mechanisms and approaches for improved synergy and harmonisation** among sectoral plans for enhanced implementation at district level, especially for addressing identified transboundary issues in the Kagera basin, in close consultation with concerned national bodies.

ii. **SLaM Mainstreaming into policy and planning processes** to build on successful experiences and approaches and pilots in target districts in the basin to support the restoration of degraded lands through sustainable agro-ecosystem and agro-biodiversity management

iii. **Inter-sectoral workshops to review results and lessons learnt** at all levels of intervention, with decision makers from concerned ministries and institutions during year 3, to build on recommendations of RTAC and PSCs, with a view to obtaining endorsement for mainstreaming and strengthening sustainable land and agro-ecosystems management at national and river-basin levels.

iv. **Knowledge and expertise shared with districts and communities** on the relevant conventions, treaties and national agricultural, food security and poverty alleviation strategies to support implementation of the above activities, whose feedback is in turn reflected in implementation plans and processes.

<u>Output 2.2</u> Regulatory actions and conflict resolution mechanisms developed and used to promote - or remove existing barriers to - sustainable land and agro-ecosystem management.

i. **Increased effectiveness of implementation of enhanced policies, laws and by-laws for SLaM** including those that address transboundary issues in the basin and improve land tenure security and access to resources (through community sensitisation, training of policy/law enforcers, provision of tools, establishment of agro-environmental committees at district and community levels).

ii. **Monitoring of policy/legal application/enforcement and conflict resolution capacities** of relevant institutions dealing with identified cross-border issues strengthened (capacity building, stakeholder consultations, negotiation and development of locally adapted, acceptable by-laws).

Points (i) and (ii) above both include, *inter alia*

- improved tenure security for land users and access to water, land, biological resources (e.g. community by-laws, land registration), with attention to vulnerable groups (youth, female headed households, orphans and widows);
- conservation and sustainable use of wetlands, with attention to agricultural encroachment and effects of sedimentation on wetland functions;
- harmonised agriculture and forest policies and by-laws and enforcement mechanisms to control deforestation and promotion of on-farm tree planting, woodlots and sustainable community management of forests/woodlands (natural and planted), use of indigenous species and non-wood forest products;
- provision of incentives (payments and non monetary) for sustainable management and restoration of croplands, pasture and rangelands (specifically bush burning and stocking rates), of forests/woodlands (specifically to meet community timber and fuelwood needs, including reduced use of woody biomass for brick burning, etc.), as well as agro-biodiversity conservation.

[7] (Accession by Uganda 25/3/2003, Tanzania 30/4/2004 and Ratification by Burundi on 28/4/2006)

iii. **Experiences and lessons–learnt on the above regulatory and legal issues shared among stakeholders, and appropriate mechanisms developed for their application at a wider scale** (for example, community land tenure arrangements, management of common property resources. PES schemes including experiences from other countries).

<u>Output 2.3</u> A coherent strategic land use planning framework in place (from river basin to district/provincial and community levels) (based on thematic reviews, stakeholder consultations and priority setting) to support SLM efforts by rural communities.

Decentralisation processes in the beneficiary countries have mandated district, and in some case regional, offices with the responsibility for implementing sustainable agricultural development and natural resource management. This includes implementation of key national action plans, such as NAP-CCD, NBSAP-CBD, PRSPs, agriculture strategies and development of appropriate district and community plans and their coordination with plans developed under national/regional programmes and projects for poverty reduction, water resources, environment (in particular NEPAD, NBI-NELSAP and LVEMP). Successful implementation in target areas first requires a good knowledge base of land degradation threats, constraints and opportunities, instruments for priority setting, planning and implementation of identified actions and validation of mechanisms and approaches through piloting (years 1-3). The various reviews will draw upon relevant LVEMP and NELSAP studies and experts on water resources, soil erosion and wetlands and fill gaps in knowledge. In this regard, this output will include:

i. **District consultations and priority setting for inter-sectoral processes among planners (land use; financial) and technical advisors** from the various sectors concerned with agriculture, natural resources and community development (year 1). This includes review of relevant plans and studies, including those of basin wide programmes, consultation with local stakeholders and agreement on priority actions and inter-sectoral mechanisms to meet Kagera TAMP goals and to empower rural communities for sustainable land resources and biodiversity management (i.e. transfer of responsibility from the government, benefit sharing).

ii. **Status and trends of land degradation on croplands assessed, and cost-benefit options for improved management and restoration of degraded lands identified** and made available among government and project partners.

iii. **Status and trends of pasture and rangelands assessed and cost-benefit options identified and a coherent strategy developed for improved range management** by pastoralists, sedentary livestock keepers and other resource users across the basin, building on local knowledge and preferences (cattle corridors, ranching, zero grazing, mixed farming, improved pastures, etc.) and giving due recognition to the multiple values of pasture and rangelands and need for de-stocking strategy and incentives.

iv. **Status, trends and opportunities for better protection and management of wetlands across the basin identified** with specific attention to encroachment of agriculture, wetland function and development-conservation conflicts and supporting actions promoted.

v. **Awareness raising consultations at district level** with technical specialists and target community leaders leading to the identification of **prioritised concerted actions for inclusion in district and community action plans for the conservation and sustainable use of agricultural biodiversity and associated livelihood benefits** (e.g. diversified farm-livelihood systems, associated beneficial species, promotion of indigenous plant and livestock species, improved productive potential of indigenous livestock breeds/cross-breeds).

vi. **Status and trends of energy use and needs at community level and across the basin, and actions identified and implemented to meet energy requirements and ensure the maintenance and regeneration of trees and forest resources**, (including farm/community woodlots, agroforestry and options to reduce dependence on woody biomass and promote alternative cooking / fuel systems).

vii. **Dialogue with local stakeholders on risk of crop and livestock pest and disease transmission leading to mechanisms identified to better manage cross-border movements** (crushes, dips, vaccination points, watering points for livestock; on farm crop pest and disease control, by-laws etc.)

viii. **District officers and local government staff enabled to develop and implement inter-sectoral actions and plans for agriculture and natural resources management** through hands-on training in land use and action planning and land use policy enforcement with attention to the outcomes of the above reviews and workshops and to ensuring integrated land and water management and ecosystem approaches.

ix. **Communities and districts supported (human and financial resources) to implement the above action plans and strategies** (including improved pasture, rangelands, wetlands management, agrobiodiversity conservation, sustainable supply of energy).

OUTCOME 3: CAPACITY AND KNOWLEDGE ARE ENHANCED AT ALL LEVELS FOR THE PROMOTION OF – AND TECHNICAL SUPPORT FOR – SUSTAINABLE MANAGEMENT OF LAND AND AGRO-ECOSYSTEMS IN THE BASIN.

<u>Output 3.1</u> Methods and approaches to promote the adoption of SLM practices and agro-ecosystems (pastoral and cropping) developed and validated through demonstrations and study plots and participatory learning and adaptive management processes.

There have been numerous land management interventions in the basin, however, few have proven to be sustainable after project. Participatory methods and approaches are well known but they are practiced by sectors independently. Kagera TAMP will facilitate inter-sectoral approaches, linking actions with incentives and empowering communities to plan and manage their resources and agro-ecosystems in ways that generate livelihood and environmental benefits. Different approaches are required for different scales of interventions:

√ for farmer level, participatory extension and learning-action-research approaches through Farmer Field School (FFS), demonstrations, on-farm trials and seed fairs for on-farm level and for scaling up to micro-catchment level (year 2)

√ for community territories, community action plans can be used to empower local responsibility in resources management and decision making and to address issues of equity and sustainability;

√ for wider land units, notably, common property resources (pastures, wetlands, riverbanks etc.) the focus will be on common interest groups and associations (farmer, pastoralist, water users, etc.) .

The main activity areas include:

i. **District consultations and agreements** on the main areas of intervention, methods and approaches to be used and existing capacities and training needs assessed.

ii. **Pilot micro-catchments and communities, representing the range of agro-ecosystems and target land units and contexts, selected** by district experts and project staff on the basis of remote sensing and local information, pre-established criteria, and consultation with local government and community leaders;

iii. **Knowledge base created in target areas** on natural resources potential, status and trends of land use, degradation situation, socio-economic conditions and preferences/specificity of socio-cultural groups and the institutional set up, through participatory diagnosis and review of relevant previous or ongoing local interventions in the districts;

iv. **Training methods and materials in beneficiary districts developed with support of subject matter specialists/trainers to support integrated agro-ecosystems approaches and FFS approaches**. These will address, *inter alia*, agrobiodiversity, gender, local knowledge and innovation, land use planning, improved management options such as conservation agriculture, holistic livestock management, water harvesting and aroforestry. For the various areas of intervention for community and district levels, these will include management guidelines,

extension manuals, curriculum development workshops and modules for training of trainers (TOT) for FFS (see Outcome 4 Output 3) and will build on experiences in the basin and other projects operating in the four countries. Attention will be paid to vulnerable groups such as resource poor farmers, the elderly and people living with HIV/AIDS (30-50% of beneficiaries). Materials for training and extension purposes regularly reviewed and updated on the basis of experiences, stakeholder consultations and findings of participatory M&E processes in each of the target areas.

v. **Varied information/materials produced and disseminated** to stakeholder groups, partner organizations, donors and the mass media to increase awareness of the threats of many current practices, of viable alternatives for generating improved livelihoods and ecosystem services. (Leaflets, posters, maps and other awareness raising literature will be prepared in collaboration with on going regional and national programmes and actors- GO, NGO and CSO).

vi. **Development of effective extension, scaling-up, income generation and marketing strategies** to back-up activities with farmer groups and communities, including supporting farmer/community linkages to micro-finance institutions and training in savings and credit, in close consultation with partner agricultural and rural development programmes.

vii. **Community awareness/ training sessions held on the effects of current practices on-farm and on ecosystem services and opportunities identified for reducing/ preventing negative impacts and generating benefits through integrated agro-ecosystem approaches and longer term management strategies** (including effects of burning, overgrazing, deforestation, encroachment on wetlands, use of agrochemicals and other pollutants, and sustainable options identified building on local knowledge and innovations building on local knowledge and innovations, including conservation and sustainable use of fragile areas, indigenous plants/breeds).

viii. **Intervention areas and sites identified and agreed upon with communities and districts for demonstrations/study plots to test and locally adapt technologies building on local experiences and innovation** (years 1-3) and for subsequent wider scaling up, as appropriate (years 4-5) (see Outcome 4 Output 2). This will build from experiences such as FFS on land and water management in Bukoba, Eastern Uganda and Kenya, Participatory Village Land Use and Management Planning in Tanzania, Uganda Land management project in Mbarara, and Africa 2000 Network in Kabale) including, inter alia:

- √ Micro-catchment and watershed management approaches;
- √ Restoration of degraded crop, pasture and forest lands and enhanced carbon sequestration;
- √ Improved pasture/range management, livestock management, agro-silvo-pastoral systems;
- √ Integrated crop-soil-water management, agro-ecological approaches
- √ Agro-biodiversity conservation and management (habitat, species, genes, interactions);
- √ Conservation agriculture approaches adapted to various agroecosystems
- √ Soil moisture management/rainwater harvesting, drought resistant strategies and species;
- √ Community actions to meet energy demand (use of indigenous species, local nurseries, mixed woodlots, protective fire breaks, agroforestry);
- √ Labour-saving technologies to address impacts of HIV/AIDS on agriculture;
- √ Identification/use of indigenous, nutritive species for vulnerable groups.

<u>Output 3.2</u>: Enhanced quality of services provided to rural communities in the basin for improved agro-ecosystems management, through training by intersectoral teams, participatory research and monitoring and building on local knowledge and innovations.

Communities receive support from many actors including extension staff, district authorities, agricultural researchers, private sector providers and NGOs. At district and national level there are also many sectors involved: land, environment, water, forestry, agriculture, fisheries, as well as health, education and local governance. Kagera TAMP aims to develop and strengthen intersectoral approaches for more effective support for widespread adoption of sustainable agro-ecosystem management building on local knowledge and innovations and ensuring gender sensitive approaches. Specific activity areas in each district include:

i. **Practical training workshops held to develop the knowledge and build capacity of service providers and community leaders (male and female) on integrated agro-ecosystems approaches and the benefits of agricultural biodiversity** (cf. training materials and suggested intervention areas in Outcome 3 Output 1);

ii. **Training of trainers held on participatory learning-action-research approaches for working with local land users** to develop more diversified and productive farming systems and reducing gender and other socio-economic constraints (e.g. FFS with farmers and pastoralists, junior farmer field and life schools (JFF&LS) for HIV/AIDS affected communities) and identifying other local opportunities;

iii. **Short courses and exchange visits conducted for sharing knowledge and experiences among service providers and local innovators across the basin**.

iv. **Linkages established between communities and farmer groups with private sector suppliers and researchers for improved access to inputs and training in their use** (seed, seedlings, fertilizer, adapted CA tools and other equipment, etc.).

v. **Collaboration between researchers, service providers and land users/farmers/common interest groups promoting diversified farming systems that are productive and sustainable in the short and long term** (this should build on local knowledge, use locally adapted varieties and breeds; and create or strengthen local networks).

vi. **Raised awareness of the importance of sustainable land management for ensuring reliable and good quality water supply and community-level opportunities identified and supported** (effective use of rainwater, protection and management of water resources with links to relevant projects).

OUTCOME 4: IMPROVED LAND AND AGRO-ECOSYSTEM MANAGEMENT PRACTICES ARE IMPLEMENTED AND BENEFITING LAND USERS FOR THE RANGE OF AGRO-ECOSYSTEMS IN THE BASIN.

This outcome is one of the most important and substantive elements of the project, initially supporting interventions in pilot communities (and selected micro-catchments) - 12 in Uganda, 12 in Tanzania, 24 in Rwanda and 20 in Burundi and in other key land units that are targeted (pasture/range, wetlands/riverbanks, woodlots), (with preliminary results by year 3), and then more widely through out-scaling approaches across the basin (years 4-5).

Output 4.1: Participatory land management plans are developed and implemented in targeted communities, micro-catchments and wider land units.

Many interventions and many sectors target rural communities for agricultural development and land management in response to multiple national policies, strategies, programmes and action plans. Community action planning is an essential prerequisite to ensure that communities are empowered and have the capacity to integrate/accommodate the various interventions and to develop their own priorities for their territories and development goals. However, many community action plans remain as a plan as they are developed primarily to secure land rights (registration, titles) rather than becoming practical land resource management and monitoring tools. Kagera TAMP will work with district level and project partners to strengthen support for developing and implementing community action plans and assessing resulting short and long term livelihood and environmental benefits. Activities include:

i. **Training conducted and participatory land use plans developed for targeted community territories (68), micro-catchments (46), and specific land /agro-ecological units (10)** (target areas selected under output 3.1.2 including prioritised croplands, degraded pastures/range, steep forested or arable slopes, wetland fringes and riverbanks etc.) (see Annex 5).

ii. **Capacity built for implementation and monitoring of action plans** through targeted interventions, and appropriate by-laws and incentives.

iii. **Stakeholder review conducted of pilot results and experiences from year 1-3 leading to promotion and wider application of successful planning and management tools, processes and interventions** across the basin with the support of agricultural and rural development programmes and other partners (year 4-5).

<u>Output 4.2</u>: Improved land use and agro-ecosystem management practices are successfully adopted by farmers and herders in targeted communities and replicated in other areas.

Direct support will be provided to communities and land users for the testing, adaptation and wider adoption of improved SLaM by target communities and then more widely across the basin with additional co-financing support as required), including:

i. **Target communities and land users sensitized on agro-ecosystems approaches** (see list of interventions in Outcome 3 Output 2) and their potential multiple benefits (increased yields, reduced labour requirements, increased food security, biodiversity conservation, cash income from sale of surplus or PES / carbon offset credits, drought and climate change coping strategies).

ii. **Required back-up support provided for the uptake and adoption by farmers and herders and communities of improved land use and management practices on-farm and on common property lands**,(inter alia: grants managed by land users groups; revolving funds managed by target districts for community micro-projects; strengthened farmer organizations and networking, business and financial management skills, improved access to credit and savings; support of local and district authorities ensuring inter alia involvement of disadvantaged groups).

iii. **Locally adapted training and technical support for community adoption of diversified land use systems, and improved management practices and participatory monitoring** (of costs and benefits generated in terms of sustainable resource use/restoration, productivity and environmental services, see list of interventions in Outcome 3, output 1).

iv. **Community-level inventory and rapid assessment conducted by all target communities on status of and threats to agricultural biodiversity** and leading to identified actions for improved conservation, sustainable use and fair and equitable benefit sharing (including habitat, species and genetic levels, domesticated and wild species, effects of breakdown in the transfer of indigenous knowledge between generations -HIV/AIDS, youth exodus, return refugees, etc.) (building also on workshops in Output 2.3.5).

v. **Land users, farmer groups and communities across the target micro-catchments, adopting and generating benefits** from more diversified farming systems, agro-biodiversity and opportunities for added value (processing, marketing, etc.) following participation in training/ participatory research action.

<u>Output 4.3</u>: Market opportunities and other cost-benefit sharing mechanisms for the provision of environmental services identified, demonstrated and promoted among land users.

Land users are invariably blamed for environmental degradation; however, they are often the poorest and least able to invest in sustainable, long-term resource management practices due to many factors. Practices that reverse land degradation are long term in nature and most often generate benefits that are difficult to fully internalise by farmers. The whole of society benefits from the environmental services generated from these practices and there has been recent recognition of the need to identify ways and means to ensure that land users benefit directly from their management of natural resources. Kagera TAMP will contribute to the following activity areas:

i. **Mechanisms identified and supported for reduced risks, improved farmer income/benefits and reduced costs (labour, energy) and equitable sharing of costs and benefits (monetary and non-monetary) of sustainable agro ecosystem management.** (For example: collaboration between upstream and downstream land and water users, between farmers and pastoralists; market opportunities from the conservation and sustainable use of agrobiodiversity; incentives for investing in traditional crops, medicinal plants, other local products; sustainable harvesting

/marketing of non-wood forest products; benefits from payments for carbon sequestration and other PES, ecotourism and alternative livelihoods.[8])

ii. **Review and testing of possible incentive measures** including inter alia: mechanisms for land users to benefit from payments for carbon sequestration and other PES; local exchange of seed/ germplasm and participatory breeding, especially proven locally adapted varieties/landraces, across the basin; rewards (field trips, prizes, certificates, other locally appropriate recognition)

iii. **Promotion of improved farmer/community organization, empowerment and business management for agro-ecosystem management,** including participatory research, decision making, income generation and savings, marketing, micro-project development and resource mobilization, and links with friendly credit institutions and/or relevant investment projects. Close collaboration will be developed with mainstream agriculture and environment programmes and attention will be paid to gender equality, vulnerable groups, encouraging youth in SLaM and reduced dependency on government/ private sector.

iv. **Review conducted of constraints to adoption of diversified systems and problems and needs identified for added value and improved marketing of local agro-environmental products** (sustainable use of biodiversity).

OUTCOME 5: KAGERA TAMP PROJECT MANAGEMENT STRUCTURES ARE OPERATIONAL AND EFFECTIVE

<u>Output 5.1</u>: Project management, institutional and administrative structures in place and linked to national and regional decision making structures

Under this output project management, institutional and administrative structures are put in place during year 1, to ensure effective implementation of the Project over the four and half years in a timely and cost-effective manner:

i. **Project management structures established and functioning effectively**, including Regional and National Project Steering Committees (to meet once a year) and a regional Technical Advisory Committee (to meet once before month 6), guided by the national focal point/institutional coordinator. Committee members consulting frequently with project management through e-mail, teleconferences, project website, and occasional visits.

ii. **Project staff recruited and managing activities at regional and national levels**, guided by project committees and Government institutions and supported by designated district project facilitators and by national experts and consultants as required.

iii. **Adequate office premises and equipment and support services provided** by the host Governments including a regional and national office in Kigali (if possible in the same building as NELSAP Kagera TIWRMP for close collaboration) and office space in three national host institutes in the three countries (Bukoba, Kabale and Bujumbura) and support of district authorities.

iv. **Project coordination mechanisms established and functioning** among project teams and FAO headquarters, regional offices (as appropriate) and country Representations.

v. Resource mobilisation strategy and funding plan developed, regularly updated and shared with partners.

<u>Output 5.2</u>: Project monitoring and evaluation system and reporting supporting project management and execution.

Collation of information to enable periodical assessment of project performance, impacts and lessons learnt, and thereby support informed management decisions in the Kagera TAMP programme and with

[8] A recent World Bank study in Rwanda shows that coffee growers only benefit from 20% of the price at port, 40% is lost to cover costs of transport to Kigali and a further 40% to the sea port – improved roads could cut transport costs by 50%, thereby coffee farmers would triple their incomes [8]

partner institutions and projects. The M&E system will allow the project to be accountable, transparent and to share information through reports and financial statements to beneficiaries, project partners and donors. This includes:

i. **Regular monitoring and reporting** (see Annex 7 M&E) by the project team to FAO, GEF Secretariat and financial partners and continuous stocktaking of project performance with national counterparts and project committees.

ii. **Conduct of a project management and performance review** as part of the independent mid term (year 3) review and a final (year 5) project evaluation (external) to assess project performance and impacts.

4. IMPLEMENTATION ARRANGEMENTS

A preliminary work plan is provided in Annex 6, Table 1.

FAO, as the GEF agency and executing agency of the project, will be responsible for ensuring, in close cooperation with the Regional Coordinato, National Project Managers and Project Steering Committee, that the project achieves its objectives and has a positive, measurable impact on the environment in the Kagera basin. The FAO Land and Water Division (NRL) of the Natural Resources and Environment Department will be the Lead Technical Unit (LTU) to coordinate and support project implementation in collaboration with outposted technical officers in the FAO Sub-regional Office in Addis Ababa, as required, particularly with respect to links with NEPAD and the wider TerrAfrica/SIP process. A multi-disciplinary Project Task Force will be set up within FAO to provide guidance on issues related to land and water management, climate change, livestock, plant production and protection, agrobiodiversity, payments for environmental services, marketing, gender and indigenous knowledge and legal and regulatory mechanisms related to land tenure and resource access and use rights.

FAO will maintain primary accountability for the timeliness and quality of technical services rendered for project execution as well as for administrative and reporting functions and authorizing disbursement of funds. This will include identification and recruitment of international and national project staff, in close consultation with participating countries, facilitating the establishment and work of the regional and national Project Steering Committees (PSC) and Technical Advisory Committee TAC), developing sub-contracts with partners. A Regional Coordinator (RC) will be recruited to guide and facilitate the day-to-day implementation of the project, working in close collaboration with the National Project Managers (NPMs) and in consultation with the PSC. The country FAO Representations will play a vital role in closely supporting project implementation, liaising with Government bodies and linking with other relevant FAO interventions.

4.1 Project Management

The management structure is outlined below and a more detailed description of the institutional, coordination and implementation arrangements can be found in Annex 6.

The **Regional Project Steering Committee (RPSC)** is the policy advisory body for the project for the overall Kagera basin and coordination with relevant Lake Victoria and Nile basin processes. It will be composed of up to ten persons, including representatives of environmental coordination bodies and Ministries of Agriculture of the four countries and FAO. Representatives from NELSAP, LVEMP and donors will be invited to participate as observers, when appropriate. The Kagera TAMP National Project Managers (NPM) for each country will attend as observers and act as secretary when the meeting is hosted by their country. Members of the RPSC will be responsible for representing their country / institution at technical and policy/administrative levels. The RPSC will meet or teleconference annually to review and approve the annual work plan, and at other times will work through e-mail and, as required, teleconference facilities, and will oversee timely implementation and delivery of project outputs and outcomes. RPSC meetings will be hosted by one of the project

countries (on rotation), facilitated by the Regional Coordinator who will also serve as the Secretary to the RPSC. Draft Terms of reference (TOR) of the RPSC are provided in Annex 6.B and will be reviewed and adopted by the RPSC at its first meeting.

The **Regional Technical Advisory Committee (RTAC)** will be inter-sectoral and have the mandate to provide independent technical guidance taking into account the views of environment and agriculture sectors, research bodies, local government, key donors and NGOs and civil society organizations. The RTAC will facilitate co-operation at policy, technical, transboundary and local levels. There will be ten official members of the RTAC (two National Experts per country, two International experts nominated by RPSC). The initial meeting attended by FAO and donor partners, will review and provide advice on initial proposed project sites and interventions and agree on the baseline and monitoring process and collaboration with research. Subsequently, the RTAC should largely function through email and telephone to provide technical guidance in coordination with FAO-NRL and the RPC: members will only meet on a needs basis. Any specific RTAC tasks will be developed and updated by the RPSC on the basis of suggestions by national PSCs, NPMs, and the Regional Coordinator. FAO and donor partners will attend RTAC meetings to the extent possible. The TORs for the RTAC will be developed at the launching workshop and approved by the RPSC.

The **National Project Steering Committees (PSC – one per country)** will provide policy and technical guidance focusing on inter-sectoral collaboration and liaison for integrated ecosystem management with particular attention to land degradation, biodiversity conservation and carbon sequestration, as well as agricultural productivity, food security and poverty alleviation. It will be composed of technical and policy experts (not more than fifteen members), including representatives from district and provincial/regional levels, and NGO/CSO representatives.Members of the NPSC will be responsible for representing their country / institution at technical and policy/administrative levels. The NPSC will meet at the start of the project (stakeholder launching workshop) and two other times during the project's lifetime, linked with visits and participation in workshops/training on policy, legal and institutional issues. The Kagera TAMP National Project Managers (NPM) for each country will attend as secretary. At other times the NPSCs will work through e-mail and as required teleconference facilities, and will oversee timely implementation and delivery of project outputs and outcomes. NPSC meetings will be held where possible in the beneficiary districts to allow national-district and policy-partner interaction. The TOR of the NPSC are provided in Annex 6A.

The Kagera TAMP Regional Co-ordination Unit (RCU) will be based in Kigali, Rwanda (as agreed by PDF-B PSC in Entebbe, in November 2005) in an office provided by the government and/or shared with the NELSAP IWRM Project to improve complementarity and synergies between the two projects. The RCU will be staffed by a **Regional Project Coordinator (RPC)**, specialised in integrated natural resources and agro-ecosystems management with overall responsibility for management of the project across the four countries. The RPC will be selected by a panel with FAO and country representatives. This unit will be supported by consultants to provide in depth technical advice and expertise as required. A letter of agreement will be developed with the selected partner GIS/RS centre for technical support across the basin and in each country as required. The RPC will establish close communication with the National Project Managers and designated national focal points for the project and will organize Regional PSC meetings and TAC meetings to provide guidance to the project to achieve its goals and ensure cost effectiveness and sustainability. The unit will be supported by consultants to provide in depth technical advice and expertise as required. A letter of agreement will be developed with the selected partner GIS/RS centre for technical support across the basin for natural resources and land use monitoring, and to the extent possible, with a focus on one selected pilot district in each country. A large proportion of the time of the RPC will concern policy and technical advice, working with partners in the basin (national institutions, projects, regional bodies) and supervising NPMs to ensure a coherent technical strategy and process at all levels (community, district, country, basin) and mobilising required policy support for achieving project outcomes. Project management will account for an estimated 12 months (3 months per year) of the RPCs time. He/she will be supported by FAO Headquarters and Country Representations on financing and budgeting, human resources and procurement issues. Detailed TOR of the RPC are provided in Annex 6B.1

National Technical Units (NTUs) will be established in each participating country to facilitate the execution of project-supported activities. The NTUs will be hosted in a suitable government office (research, planning) with space for national/international consultants, GIS/map work and good communication facilities (Internet connection supported by the project as required). They will be led by a **National Project Manager (NPM),** in each country, recruited on a fixed term contract for the project duration. They will be selected on the basis of experience in agro-environmental management and knowledge of the region and participating districts (from Government/external candidates) through vacancy announcement and a selection panel in accordance with FAO procedures. The NPMs will establish close collaboration and working arrangements with an interdisciplinary team composed of members of decentralized public services, NGOs, private sector and other professional associations, to ensure timely conduct of country activities, including contractual arrangements if required. The NPMs will work in close contact with the RPC who will provide technical and financial project guidance, in close consultation with the FAO lead technical unit, NRL. In regard to policy and institutional issues the NPMs will be guided by the national PSC and designated national project focal point (in the capital city). Their work will be supported by international/national consultants, and if possible a VNU/APO, a driver (casual labour basis) and a 4WD vehicle in each country. The greater proportion of their time will concern technical advice, working with partners in the basin and supervising the field work in target communities, catchments and land units. Project management will account for an estimated 1 month per year of the time of the NPMs. They will be supported by FAO Headquarters and Country Representations on finance and budgeting, human resources and procurement issues. Detailed TOR for the four NPMs are provided in Annex 6B.2

The District Project Facilitators (DFs) with appropriate agricultural and environmental expertise in each of the twenty-two target districts (6 districts in Uganda, 4 districts in Tanzania, 6 districts in Rwanda and 6 provinces in Burundi) will be selected with the district authorities and designated to coordinate the activities, and contractual arrangements with the beneficiary districts will be facilitated (motorbike; office equipment; stationery) to supervise and coordinate project interventions in target communities, micro-catchments and land units through close consultation with district authorities and wider beneficiary populations. The NPMs will work closely with the DPFs, in liaison with district authorities, to ensure appropriate technical support to local communities/ actors by establishing a close-knit *interdisciplinary team* of interested and competent district officers, extension workers and partners. The DFs will help ensure synergy and avoid duplication with other actors/projects/interventions in the district. The involvement of the DPF and district team will be agreed upon through a memorandum of understanding/Letter of Agreement with each district and will be assessed annually (if required the DPF could be replaced). Draft Terms of reference are provided in Annex 6B.3

The RPC and the four NPMs (long term consultants) will supervise the short term international and national consultants that will be recruited and the national institutions that will be contracted to provide specific policy and technical support. Terms of reference for these consultants and contracts will be developed and reviewed at the regional launching and national stakeholder workshops, and updated as required by the regional and national PSCs to respond to project needs during implementation. This includes:

<u>International expertise (short term)</u>

- Land/Agro-ecosystem management /planning (12 months, up to 9 missions)
- Land tenure/access to resources (2 months, 4 missions)
- Participatory Natural resources management/M&E (3 months; 3 missions)
- Sustainable agro-ecosystems incentives & policy (2 months; 2 missions)
- Adviser SLM Farmer Field School process (6 months and required travel costs covered using GEF resources and a further 6 months and travel supported through co-funding as required)
- International/regional project evaluation (Mid-term 1.3 months and Final evaluation 2 months)

- Finance and budget advisory support (14 months)
- Human resources and procurement advisory support (13.8 months)

National consultants (short term)

- SLM Baseline (3 months Burundi; 1 month each in Rwanda, Tanzania and Uganda)
- SLM Trainers and Workshop Facilitators (10 months)
- FFS Master Trainers (5,5 months)
- Communications & website consultants (11 months)
- National SLM experts for project evaluation (Mid-term 4 x 0.2 months and Final evaluation 4 x 0.3 months)

Contracts with competent national/international institutions/organizations

- GIS/RS Database and Monitoring (initial LOA years 1-3, second LOA years 3-5)
- Target studies/monitoring environmental impacts: pastures, wetlands, energy, C-sequestration, burning, land degradation, biodiversity (average of 3 LOAs per country)
- Agro-ecosystems/biodiversity management (crop & livestock based) (2 LOAs per country)
- Monitoring of sustainable livelihood (SL) benefits/impacts (2 LOAs per country)
- Community/landscape planning for SLM and land tenure (2 LOAs per country)
- SLM technologies training + equipment demonstration– conservation agriculture, holistic livestock management, water harvesting (average of 3 LOAs per country)
- Data/information systems management (1 LOA per country)
- On hands training and curriculum development for SLaM (NGOs, colleges)- continuous support (1 LOA per country)
- District land use planning and SLaM support (22 LOAs) including support for facilitators and interdisciplinary teams who will be co-funded by the Governments
- Design and testing of incentive measures (6 LOAs on a regional or national basis)

More details on these contracts are provided in Annex 6.A.

5. CO-ORDINATION WITH OTHER IMPLEMENTING AGENCIES AND EXECUTING AGENCIES

5.1 Links to other IA and EA Programmes

As Implementing and Executing Agency, FAO has a key technical and coordination role consistent with its contributions to the GEF programme for achieving global environmental benefits, and partnership with the IAs in supporting major environment-development initiatives such as TerrAfrica/SIP, implementation of the UN Convention to Combat Desertification, and NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) and Environment Initiative. In accordance with its mandate, FAO is assisting its member countries and partners in developing and implementing policies, strategies, programmes and projects to enhance food security and sustainable agriculture and rural development worldwide and is able to draw on its wealth of experience and expertise in supporting projects such as Kagera TAMP which focus on land and agro-ecosystem management.

The Land and Water Division (NRL), the lead technical unit of the project, contributes to "*Sustainable food and agricultural systems*" and "*Sustainable Natural Resources Management*" by providing the essential knowledge-base for sustainable use of land and water resources through their improved management, development and conservation, in order to increase food security, alleviate poverty and secure a healthy environment as they contribute to the Millennium Development Goals. It provides policy and technical advisory services to help improve access to and increase efficiency and productivity of land and water resources in agriculture (irrigation and rainfed) while maintaining land and water quality and addressing transboundary management issues. FAO will draw, inter alia, on its inter-departmental working groups and interdisciplinary programmes on Desertification and Biodiversity for Food and Agriculture.

5.2 Linkage to Other GEF Projects

Firstly, links will be established with the umbrella **GEF TerrAfrica/Strategic Investment Programme (SIP)** and **Partnership Platform** (www.terrafrica.org) which aim at building capacity and providing an enabling environment to implement Sustainable Land Management (SLM) across Sub-Saharan Africa (SSA). Recognizing that land degradation is a major development issue that cuts across poverty, health, the environment and economic growth, this regional initiative will enable governments of SSA, the international development community and other global, regional and national stakeholders to better work together to scale up financing and mainstreaming of effective and efficient country-driven SLM. FAO as a key Terrafrica/SIP partner and as the IA for Kagera TAMP, will work closely with the Kagera countries in developing their Country Strategic Investment Frameworks (CSIF) in liaison with the TerrAfrica conveners (the World Bank, UNCCD and NEPAD) and other partners (IFAD, UNDP, UNEP, AfDB, Global Mechanism, European Commission, Regional and Sub-regional African Organisations, NGOs and bilateral donors). Lessons and experiences from Kagera TAMP will feed into the country and Africa wide process.

Contacts will be made with the **Nile Transboundary Environmental Action Project (NTEAP)** to identify and, if possible, work with persons in the districts trained in environmental management and monitoring and prevention of transboundary erosion and pollution and to identify opportunities for communities and NGO partners to apply for micro-grants for their actions to reduce soil erosion, desertification, pollution and control invasive water weeds.

For land-use change analysis during Kagera TAMP, the GIS/RS centre will draw on models and maps of **LUCID** and their use for assessing biodiversity loss and land degradation. Kagera TAMP will also draw upon the methodologies and expertise developed through the **East African Cross Borders Biodiversity project** through district and research staff in Bukoba district in Tanzania and Rakai district in Uganda.

Close collaboration with **Lake Victoria Environmental Management Program (LVEMP-**II) will identify with stakeholders opportunities for making use of LVEMP data, maps and studies, especially water monitoring, and sharing Kagera TAMP products, for training of Kagera TAMP staff /partners and support in disseminating best practices, and identifying opportunities for larger investments with target communities such as wetland management, catchment afforestation. Kagera TAMP management will coordinate closely with LVEMP (and with EAC and LVBC) to ensure information sharing among water, land and agriculture sectors and complementary actions.

More specifically in regard to sustainable wetland management, Kagera TAMP will benefits from lesson learnt by the **Integrated Management of Critical Ecosystems (IMCE)** project in Rwanda and will coordinate with MINITERE and MINAGRI to share its own experiences in watershed and buffer zone management to reduce pressure on protected areas. Kagera TAMP will focus on a watershed approach and harmonising cross-border strategies to reduce agricultural encroachment and pressures on critical wetlands, protecting wetland fringes and identifying opportunities for development with attention to maintaining ecosystem services where parts of wetlands are reclaimed for crop and livestock production (flood control, flow stabilisation, siltation and purification of water etc.).

Kagera TAMP will share experiences with the GEF/World Bank project on **Novel forms of livestock and wildlife integration adjacent or protected areas in Africa-Tanzania** on participatory land use

planning and integration of pastoralism, cropping and wildlife management and benefit sharing mechanisms.

6. STAKEHOLDER PARTICIPATION

6.1 Beneficiary and Stakeholder Profiles

The direct beneficiaries of the Project are rural communities living in the Kagera river basin that are directly dependent on the natural resources for their livelihoods. They include several land user types:

- Farmers: mainly subsistence farmers but practicing a wide range of farming systems from intensive perennial banana-coffee based systems, to annual cereal based systems, to mixed agroforestry and crop-livestock systems..
- Pastoralists/Herders: livestock herding and seasonal migrations to find water and grazing used to be more common, however, due to unfavourable policies, many pastoralists are becoming sedentarised and now growing crops and managing smaller livestock herds. There are still large herds of Ankole cattle, owned by many persons, but although well adapted to local conditions, these are being gradually crossed with introduced breeds for greater milk and meat productivity
- Households relying for their livelihoods on a combination of farming or herding with fishing or forestry activities are included, as their activities directly influence the land and water resources. This includes, for example, those settled near the Kagera River, wetlands and lakeshores, and those managing woodlots or making use of resources from natural forests. It is recognized that the majority of farmers and herders rely to a greater or lesser extent on hunting and gathering of food, fodder, timber, medicinal products and other non-wood forest products, especially those without access to land and those living near wetlands, parks, forest reserves and other protected areas. Fisherfolk, foresters, wood craftsmen, beekeepers, traditional healers and other groups whose activities depend on the management of the natural resources, although not the main target groups will also benefit through integrated community management plans.
- Community level leaders and decision makers with responsibilities for land resources allocations and conflict resolution within and between community territories, for developing and applying local by-laws and for representing the community /civil society at higher level decision making fora- district, region, national levels;
- Civil society organizations such as farmers groups and associations, water users associations, will be the basis for capacity building in participatory learning and research-action approaches

Women are among the direct project beneficiaries and a major target group as they are largely responsible for many agricultural and resource management activities, in addition to their family and household tasks. This includes land preparation and planting, weeding, collecting wood for household energy needs, collecting water for household needs, watering and feeding stall-fed and small livestock, gathering medicinal plants or wild foods to supplement their diets, and so forth. Moreover, as a result of HIV/AIDS and rural exodus there are many female headed households that are entirely responsible for farm and livestock management. Special attention will be paid to enhancing womens involvement in decision making on resource management and involving HIV-AIDS infected or affected households.

In addition to these direct beneficiaries of the Project, there are a number of other stakeholder groups that will be involved to varying degrees, as developed in Annex 5:

- National and international NGOs already supporting on-going actions at local community levels in natural resources management will be important partners for experience sharing, capacity building and backstopping activities.
- Local and district authorities and government bodies will be strengthened with a view to their implementing cross-sectoral approaches, empowering land users through participatory processes, supporting community action planning, implementation, monitoring and resource mobilisation.

- Researchers from district and regional bodies and, as appropriate, university staff will be involved in providing technical support for sustainable land management (SLM), data analysis for decision makers, and monitoring of impacts on land degradation, biodiversity, carbon sequestration and other ecosystem services.
- The private sector will be involved for the provision of required inputs, services, financial mechanisms and investment.
- The donor community and projects with complementary objectives and activities will be involved for co-funding of activities.
- Regional organizations will be involved through the project steering committee to ensure coordination and harmonization of activities and responsive decision making among the countries sharing the Kagera basin based on experiences and lessons learnt.

6.2 Participation and Consultation

The Kagera TAMP has been prepared through the active participation of the widest possible range of stakeholders, ensuring that the project team have taken into account all elements necessary for successful implementation and project sustainability. Relevant government bodies, academic bodies and partner programmes involved in land resources management, agriculture, biodiversity conservation and sustainable ecosystem management have been directly engaged in the project through strategic partnerships based on their comparative strengths. They have played a substantive role in the transboundary diagnosis and project development and will contribute to the capacity building of local stakeholders, contributing to the provision of an enabling environment and opportunities for the adoption of sustainable management practices in the Kagera TAMP.

To ensure sustainable management of the basin's natural resources, the full project will continue to adopt participatory approaches, bringing together all relevant stakeholders and involving them not only as participants but encouraging active participation in its implementation, decision making monitoring and evaluation. The active participation of whole communities (young, old, men, women, landed, landless HIV-AIDS infected / affected people, female and child-headed households) will also be encouraged. Activities will include building awareness and providing information on project goals and activities. Implementation of project activities, in particular, will be ensured by the local communities and their organizations with the support of the Project's technical services, private sectors, NGOs supporting local development, and traditional, political and local administrative authorities. A participatory monitoring and evaluation system (see Annex 7) will be established so that local communities and civil society in general are kept up to date with project activities and results. Particular attention will be given to gender issues and social status of the populations in the decision-making process, as well as consensual membership of all parties concerned in the project, prior to its start-up. Community contributions to project implementation will be mainly in-kind and their participation modalities will be defined in each country.

When project activities begin scaling-up from pilot micro-catchments to watershed level, it is important to ensure all stakeholders are represented in watershed associations that transcend individual villages and in negotiations over large-scale problems. Stakeholder co-operation is more likely if benefits are demonstrable (e.g. crop yield increases by FFSs has been verified or through mechanisms catalyzed by Kagera TAMP to generate PES), the distribution of benefits as well as costs is considered fair, acceptable and agreements are enforceable (by law of by-law).

6.3 Involvement of Regional Organizations

The Project was designed so that all parties concerned have a role in the decision-making process. In particular, the river basin organizations (NELSAP-Kagera IWMP; LVEMP) are already providing substantial efforts towards integrated management of watershed and water resources along the river basins. Collaborative arrangements will be established (see section 8), for co-funding and collaboration to further ensure the conservation and sustainable use of the Kagera basin resources. Coordination mechanisms with other executing agencies will be developed through their participation

in Project Steering Committee meetings as well as through information exchanges and the creation of new institutional networks.

The Kagera TAMP, in targeting land resources management, is highly complementary with certain of the technical assistance projects of the ***Nile Equatorial Lakes Subsidiary Action Programme*** (NELSAP). Of particular relevance is the **Kagera Transboundary Integrated water resources management project (TIWRMP)**, which also targets the entire river basin but focusing on water resources on integrated water resources management and water sharing. Close collaboration will be extremely beneficial to stakeholders Collaboration was initiated during the PDFB at an NBI workshop in Kampala, in September 2003, during which concerned institutions reviewed the IWRM draft project document and the proposed Kagera TAMP was presented as a partner project. More recently, during the regional Kagera TAMP workshops in November 2005, and a follow-up meeting in February 2006 with the coordinator of NELSAP and TIWRM project coordinator more detailed collaborative arrangements were identified by representatives of both projects and agriculture, environment and water sectors of the 4 countries:

- Planning and information sharing: If possible shared offices in Kigali but in particular mechanisms to ensure shared information management including meta-database, GIS and documentation as well as collaborative planning processes and coordination between project steering committees and their members.
- Synergetic actions: There are certain areas that are of particular relevance to Kagera TAMP and can be considered as co-funding: awareness raising and training on water resources management will complement
- A detailed MOU will be worked out in the first 3 months of the project.

The **Lake Victoria Environmental Management Programme (LVEMP-II)** is also highly complementary with Kagera TAMP. Its contribution to strengthening capacities and coordination in the management of lake resources with involvement of local communities, NGOs and CBOs is of particular interest. The most relevant component to Kagera TAMP during LVEMP phase I, on land management, largely focused on Rakai district, Uganda (in the Kagera basin), and Mwanza and Mara regions, Tanzania (beyond Kagera), but it has plans to extend activities in the Kagera region during phase II. Activities with farmers and local NGOS (CARE, Help Age and ECOVIC) mainly addressed soil erosion and agro-chemical monitoring, safe use of chemicals and soil and water conservation. During the November 2006 Regional workshop of Kagera TAMP PDFB, the LVEMP Executive Secretary welcomed collaboration with TAMP and potential areas were identified. A detailed MOU will be developed during initial months of the Kagera project.

The **Association for Strengthening Research in East and Central Africa (ASARECA)** is a non-political organization of the national agricultural research systems (NARS) of ten countries (Kagera countries plus Congo DR, Eritrea, Ethiopia, Kenya, Madagascar, Sudan) aiming to add value to the national programmes, by pooling resources to promote shared objectives and improving efficiency by attaining economies of scope and scale. It is a key player in implementation of NEPAD-CAADP. The NRM research strategy of ASARECA focuses on "Research and development of technologies for management of soil, water, vegetative and livestock resources for economic growth and sustainability of the agricultural base". ASARECAs **Soil and Water Management Research Network (SWMnet)** for East and Central Africa provides a sub-regional networking and knowledge platform which can support development initiatives and has indicated interest and co-funding to support Kagera TAMP.

Linkages will be established with IW LEARN for sharing experiences and lessons from other programmes and regions.

7. SUSTAINABILITY, REPLICABILITY AND RISKS

Institutional sustainability: At the basin level, it is expected that project outcomes and achievements will be sustained due to the commitments and priorities of the countries (poverty reduction,

environment and agriculture strategies and plans) to the conservation and sustainable management of the shared basin natural resources in the medium and long term and to thereby generate improvements in the livelihoods of local people. Regional co-operation will enhance joint actions and harmonised approaches to address transboundary issues through an enabling policy and regulatory environment and community empowerment for sustainable land and agro-ecosystems management (SLaM). Sharing experiences across countries and developing a joint programme will encourage its implementation. Information and awareness raising actions will enable a larger population to be aware of opportunities and potential benefits of SLaM and to replicate relevant actions in the community, district and river basin plans.

A key component of Kagera TAMP design is building institutional and human resource capacity for inter-sectoral and multi-stakeholder approaches at community, micro-catchment, AEZ and basin levels. Partnerships among concerned sectors, institutions, civil society and service providers will promote sustainable land use/management practices and integrated ecosystems approaches that generate local socio-economic benefits as well as global environmental benefits. At community level, capacity building will focus on the development of action plans that include medium and longer term needs (restored soil fertility, food security, energy, secure income, etc.) building on a combination of farmer knowledge/innovation and modern scientific know-how, farmer empowerment and incentive measures. Adaptive management, community organization and information sharing will contribute to mobilizing change in behaviour towards improved management practices, in particular for common property resources. Participatory monitoring and evaluation will enable land users/communities to see the results/impacts of their pilot actions, which will stimulate further adoption and, in turn, mobilize further government support.

The regional PSC will operate during the life of the project but a longer term institutional arrangement will be needed to maintain transboundary dialogue and collaboration post-project. Close collaboration will be developed with NELSAP, which currently ensures transboundary cooperation for the water resources and river basin under the Nile Basin Initiative, through information sharing, coordination of planning and actions and leading to strengthened intersectoral collaboration (water, agriculture and environment). The establishment (ongoing) by the East African Community of the Lake Victoria Basin Commission (LVBC) to manage the entire basin area, among Tanzania, Uganda and Kenya, as well as Burundi and Rwanda (once joining EAC) could be the most appropriate institutional mechanism for taking over responsibility for transboundary cooperation and hence sustainability of land and agro-ecosystem management in the Kagera basin. This commission would need to have the necessary executive powers, be dedicated and focused on the task, and be endowed with a mechanism to prepare decisions and to follow them up.

Environmental sustainability Community actions, based on diagnostic of needs, constraints and opportunities, will test and demonstrate how to use land resources and agro-ecosystems more effectively, conserving the resource base, restoring ecosystem functioning, rehabilitating degraded lands, meeting household needs and generating a range of benefits (yields, income, sustainable use of biodiversity, food security, reduced labour/drudgery, accrued benefits e.g. PES). In order to bring about a change in practice, incentive measures will be required, as well as empowerment and capacity building of communities to take responsibility for planning and implementing actions to reverse land degradation and ensure sustainable resources management. However, once the improved practices/diversified land use systems will have been adopted, the benefits generated in terms of ecosystem function, and as a result the improved livelihoods and food security achieved, should incentivate/ensure their sustained uptake by land users and government support (land productivity, water supply and quality, reduced pest and disease damage, reduced risk of drought, alternative products, increased income and livelihood opportunities). The generation of socio-economic benefits as a result of improved land use systems/practices and resulting sustained ecosystem function will help ensure the wider uptake of improved practices in the target districts and across the basin.

Financial Sustainability: The mainstreaming of Kagera TAMP actions into major national development programmes, as well as district and community planning processes, will ensure the institutionalization of regular support from governments (financial and human resources) and local

communities (in kind and cash) for SLaM in the transboundary Kagera river basin. Linkages and harmonisation with transboundary investment programmes (LVEMP, NELSAP) and coordination mechanisms, will ensure continued funding and sustainability of regional activities. Also at community level, Kagera TAMP will promote the sustainable use of resources through increasing economic returns to land users through sustained productivity, payments for environmental services, opportunities for neglected biodiversity (wild foods, local animal breeds cover crops, agroforestry, niche markets, medicinal products, biomass production, etc.) and government support (carbon sequestration, drought mitigation, biodiversity conservation). Kagera TAMP is essentially a capacity building project, its success and the wider scaling up and adoption of improved diversified systems and management practices will depend on secure funding by districts, through national and regional agricultural and environmental development programmes supported by the donor community (LVEMP, NELSAP, ASSP and DASIP in Tanzania, RSSP in Rwanda, PMA/NAADS in Uganda etc.).

At the end of the Project, it is assumed that: the national project management units would be integrated into government structures and a regional cooperation framework established (NBI/Lake Victoria Commission); the four NPMs would have terminated their contracts or be integrated into government structures; a collaborative network and partnership arrangements will have been established between districts and among countries; cooperation arrangements will have been established and/or the land and agro-ecosystem management fully integrated with the water resources management programmes in the basin; the district offices (agriculture, livestock, environment) will have been strengthened through capacity building and planning tools.

The success of the project over the four and a half year funding period and in the medium to long term across the Kagera River Basin, is highly dependent on the widespread replication of successful outcomes and lessons learned from the target communities and micro-catchments, where on the ground activities will be established and tested in the initial 2 years and subsequently scaled up. A mid term evaluation will assess progress and impacts, and identify opportunities for further adaptation of SLaM to specific biophysical and socio-economic contexts and for wide dissemination and uptake of successes across the basin.. The results will be applicable more widely in the Southern and Eastern African region and information will be made available through databases, websites and products (guidelines, reports and training materials) which will have been validated through participatory processes, avoiding the risks of blanket adoption of techniques and approaches. The project's website (developed in PDF-B) will be used and promoted to show-case lessons learned to a global audience.

Lessons learned that are expected to be relevant and suitable for replication elsewhere include:

- harmonised institutional frameworks for co-operation among countries which share a river basin;
- collaborative approaches to addressing transboundary issues;
- community-based land use and agro-ecosystem management plans and improved approaches and technologies (e.g. conservation agriculture, curriculum development and training of trainers, rainwater management, community energy supply);
- establishment of tools to support improved community / local government level planning (including early warning systems based on the project's regional GIS / RS centre (EMIS)
- empowerment of local communities to sustainably manage and benefit from local natural resources (Kagera TAMP catalysing PES and other monetary benefits).

Project sustainability will depend on minimizing deleterious impacts of the following risks:

Agricultural and Environmental risks: **C**rop and livestock pest & disease outbreaks both in-country and transboundary, and crop failure due to climatic vagaries would seriously affect the project (Medium Risk). As a result of climate change, the basin is likely to, and already faces to some extent, extended dry spells and unreliable rains which will exacerbate drought and may affect biodiversity, invasive species and tolerance levels of new pathogens. The lowland part of the basin is a natural floodplain so very heavy rains and flooding could seriously influence settlements and land use activities in low lying areas. Severe flooding or drought, pest/disease outbreaks, large scale crop

failure or animal mortality, or civil strife, would divert attention from sustainable management to emergency relief and rehabilitation (Risk: Medium).

Mitigation measures: Integrated agro-ecosystems management should contribute to reduced risk of crop and livestock pests and diseases, for example, crop rotations, inter-cropping, integrated pest management. Sensitisation will include the need to respect transboundary pest and disease prevention and control mechanisms and links made to appropriate services (livestock treatment; dips, safe use of pesticides etc.) Risk of crop failure through drought, pests and diseases are expected to be reduced in FFS through better soil health, water conservation, and regular observations to control pests Improved land and water management practices will enhance infiltration, reduce runoff and associated risks of erosion and flooding and will also contribute to climate change adaptation. Knowledge and monitoring of biodiversity and invasive species will be enhanced in the range of farming systems and land use types (crop, livestock, forest) and as required biodiversity conservation and invasive species control mechanisms identified and tested in target communities. Opportunities for soil carbon sequestration as a mitigation measure will be explored and soil carbon will be monitored in improved land management practices.

Political and institutional risks: High staff mobility and more seriously insecurity or civil strife and refugee movements within and between countries would compromise the project (Risk: medium-high). Maintained security in the region will be essential for conflict resolution between resource user groups and for enhanced cross-border and basin wider cooperation to address transboundary issues. Lack of and political support, uncoordinated strategies, problems of sharing of data and information across the basin (ownership and mandates) and inadequate stakeholder involvement are also risks (Risk: Low).

Mitigation measures: Efforts will be made by the project team to obtain full cooperation of local and national government authorities for inter-sectoral processes and to work closely with all stakeholders to ensure timely achievement of project goals and outputs. Strengthened political support for SLaM and the generation of environmental benefits will require demonstrating clear links between natural resources management and poverty reduction/socio-economic development (agricultural productivity). The project team will work with the PSC to enhance collaboration among environment, agriculture and finance bodies/ministries to support joint planning /management in the basin and to allow sharing of data and monitoring across sectors and countries to enable adequate monitoring and evaluation of impacts (Risk: medium).

Human capacity risks: Availability of motivated, competent staff for the posts of regional coordinator and national project managers and for district level facilitators (designated by the government) and timely recruitment of national project managers (NPMs) and CTA/regional coordinator will be crucial to the success of the project. Significant mobility among involved technical/district staff, or their inadequate investment in time to project activities due to other duties, will compromise the capacity to meet objectives and targets in a timely manner. The population in the Kagera basin is already severely affected by impacts of HIV/AIDS and malaria, and combined with rural exodus of youth, results in reduced labour and financial capital which compromises involvement and uptake of better practices. Conflict between stakeholder groups in target areas would further hinder the project (Risk: High).

Mitigation measures: Labour requirements of land management practices will be assessed and practices that reduce drudgery promoted (e.g. conservation agriculture, water harvesting, etc.) and community action plans will include measures for improved water and fuelwood supply. Community action plans will, as appropriate, address resource needs of refugees and youth and improve security of tenure and access to resources. Communities and FFS groups will be linked to other projects/ services that address health and nutrition. Conflicts over use of resources and movements of people and their livestock, their causes and impacts will be investigated and responses developed. Sensitization will take place to demonstrate to youth the opportunities of SLM for increased productivity, livelihoods, reduced drudgery, and opportunities to add value (processing; marketing, carbon trading etc.).

Financial and Economic Risks: Severe seasonal price fluctuations, inflation, market failures could restrict community capacity to invest in SLaM. Large change in exchange rates (relative to US$) could reduce the project budget and lack of district funds/allocations to agriculture/environment would

reduce the co-financing. Farmers' activities remain driven by marketable commodities with little interest to improving natural resources management. (Risk Medium-High)

Mitigation measures: The project aims to demonstrate the multiple social, economic and environmental benefits of more integrated farming systems instead of maize monocultures or large herds of cattle for example. This should reduce vulnerability to price fluctuations and better FFS organisation will enhance marketing and value of products Capacity of district planners and local authorities will be built to increase the place of agriculture and support services in their district plans and budgets (FFS grants, training, inputs, etc.)

Management risks: The project is complex involving four governments, many sectors, several regional projects/mechanisms and multiple stakeholders. Implementation could be impeded by inadequate communication, lack of transparency, inappropriate management/organisational procedures, inadequate delegation of responsibility, lack of flexibility to adapt to change and inadequate office space and facilities. (Risk: Medium).

Mitigation measures: The potential risks have been taken into account and will be minimized through efforts to set up the regional and national project management units and recruit personnel rapidly in the host countries, with support by concerned authorities to allocate required office space and designate support staff. FAO will optimise project flexibility and a decentralized and participatory management approach through close communications and clear division of responsibility among HQ, project staff and government focal points and regular workplan and budget reviews and progress reports. Extensive consultation from local to basin-wide level with the range of stakeholders and co-ordination mechanisms and supportive district planning processes should also reduce threats of lack of continuity of activities post project. Institutions in all four countries have demonstrated their commitment to support transboundary agro-ecosystem management across the basin in order to generate global environmental and local livelihood benefits.

8. INCREMENTAL COSTS AND PROJECT FINANCING

The incremental costs and benefits of the full project are presented below and in Annex 1 Table 1. The total incremental costs of the GEF Alternative amounts to an estimated US$30.9 million of which US$ 7,000,000 (23% of the total cost) represents the amount requested from GEF to fund the full project. Co-funding of the 75% balance (US$24.5 million) will be provided from the four participating countries, direct collaboration with regional programmes, local beneficiaries (communities, farmers and herders), FAO, and additional donor support.

8.1 Summary Table of Incremental Costs

Capital Costs	**Baseline-B**	**Alternative A (situation with project)**	**Increment A-B GEF and Co-funding**
Outcome 1: Transboundary coordination, information sharing and monitoring and evaluation mechanisms	**Baseline: US$4,328,981** Governments: US$ 1,563,000 Donor programmes; regional (NELSAP/ LVEMP; FAO-Africover etc.) US$ 1,944,760 and national (RSSP;ASDP; PMA) US$ 821,221	**Alternative: US$8,412,374**	**Increment: US$4,083,393** GEF: US$1,766,873 Co-funding (Governments, projects, beneficiaries) = US$ 2,316,520
Outcome 2: Enabling policy, planning and legislative conditions in place.	**Baseline: US$6,216,255** Government and national donor programmes US$ 5,066,255 Regional donor programmes	**Alternative: US$7,912,917**	**Increment: US$1,696,662** GEF: US$423,342 Cofunding: US$1,273,320

Capital Costs	Baseline-B	Alternative A (situation with project)	Increment A-B GEF and Co-funding
	US$ 1,150,000		
Outcome 3: Capacity and knowledge for the promotion of and technical support for SLaM in the basin	**Baseline: US$15,446,004** Government and Donor: US$14,485,684 Regional donor : US$ 960,320	**Alternative: US$20,312,527**	**Increment: US$ 4,866,523** GEF: US$ 1,230,003 Cofunding: US$ 3,636,520
Outcome 4: Improved land and agro-ecosystem management practices implemented and benefiting land users in all agroecosystems in the basin.	**Baseline: US$18,219,885** Government and Donor US$ 16,705,885 Regional donor: US$ 1,514,000	**Alternative: US$36,263,417**	**Increment: US$18,043,532** GEF: US$2,360,682 Cofunding: US$ 15,682,850
Outcome 5: Project management	**Baseline** incorporated in components above as not possible to separate	**Alternative: US$2,182,800**	**Increment: US$ 2,182,800** GEF: US$582,800 Cofunding 1,600,000
Total Capital Costs	**Baseline US$44,211,125**	**Alternative US$75,084,035**	**Total: US$30,872,910** **GEF: US$6,363,700** **Cofunding: US$24,509,210**

8.2 Cost Effectiveness

During project preparation, a number of options were examined to identify the most cost-effective approach to address land degradation issues in the very large and diverse river basin. This consisted of assessing (i) options for bringing about a change from unsustainable to sustainable agricultural management practices –techniques and approaches and (ii) required institutional arrangements for agreeing on, planning and implementing options with stakeholders.

In regard to techniques and approaches, an option that was considered was a process that would spread interventions widely across the basin to reach as many communities as possible. In regard to institutional arrangements, an option was a focus on strengthening the institutional and regulatory framework for preventing degrading practices (establishing and enforcing laws and accelerating implementation of the national action plans (NAP) for combating desertification and increasing productivity through input supply. This would entail achieving a high degree of regional co-operation among the countries sharing the basin and efficient delivery by their multiple government bodies concerned with the various natural resources and agricultural services.

In light of the size of the basin and very limited capacity of institutions in the basin (notably the district agricultural and planning office) and large distances for research bodies to reach the communities and taking into account lessons learned from other GEF- and FAO-supported projects, it was decided as the GEF alternative to use a more focused and two phase approach for cost effectiveness. First, to improve crop and livestock management practices with a limited number of selected communities, micro-catchments and transboundary land units to address specific issues identified and subsequently (PY3) to scale up successful practices more widely across the basin through FFS networking and district development plans building on demonstrations effect from proven SLM practices.

Certain practices and approaches were identified during project preparation (e.g. conservation agriculture, water harvesting, improved pasture management, rotational grazing, stall feeding, etc.)

from the basin and wider region but require demonstration for local training, adaptation and validation through the collection of cost-benefit and impact data (environmental and livelihood). Thus when identifying the most suitable SLM practices to test and if proved successful to scale up, the national technical teams will draw on R&D results of successful land resources/agricultural management activities/projects and local knowledge systems and farmer innovations throughout the region. Attention will be placed on selecting the target sites for their best demonstration effects and access to research /technical support to optimise success and help in assessing the environmental and socioeconomic impacts and benefits. This should facilitate subsequent scaling up and expansion across the basin using trained FFS facilitators and technical staff, according to the interest expressed by other communities and opportunities for collaboration and funding. Participatory adaptive management through FFS approaches should ensure that improved SLaM techniques are those prioritised and validated by the communities through FFS study plots. Participatory monitoring tools (such as LADA) and local indicators will be used to assess the impacts of pilot interventions on farms and in target micro-catchments and transboundary land units level to ensure they are technically and socially appropriate, cost effective and generate global environmental benefits in terms of reversing biodiversity, sustainable use of biodiversity, carbon sequestration and water supply. Capacity building is an important part of the project at farmer, district and basin levels and cost-effectiveness will be optimised through use of extension approaches that allow cost effective delivery and scaling up, building capacity of local institutions and NGOs, and development of user-friendly information and decision support systems.

In regard to institutional support, instead of focusing on protection of resources and input support by the multiple sectors (seed, veterinary products, soil erosion control, irrigation, etc) for certain commodities, a focus will be placed on involving and building capacity of multi-sectoral teams in the districts for integrated ecosystem approaches that restore the health, productivity and resilience of farming systems. Demonstration of the multiple benefits generated is expected to increase district planning and budgetary support for the agriculture sector notably for training and supporting FFS approaches, community action planning and developing market opportunities for the products of biodiverse agro-ecosystems and incentives for sustaining valuable ecosystem services and adapting to climate change

The selected strategy is the more cost effective option as it will avoid diluting financial and human resources among many target sites and many institutions which would risk achieving little impact after the project 4.5 years. Rather than agricultural specialisation which tends to increase vulnerability to climatic vagaries and markets, the agro-ecosystem approach is expected to also increase food security and livelihoods of the population through better resource use efficiency (nutrient cycling, rainwater retention), multiple and quality products (diverse foods, fuel, building materials, etc), and reduced risk of pest and diseases (biocontrol). Collaboration with interventions that address food security (social nets, nutrition, etc), agricultural services (supply of fertilisers, improved seed) and marketing should enhance the uptake and viability of the resulting productive and sustainable agroecosystems.

The process of developing the full project with all actors on the ground (PDF-B) has been instrumental in generating understanding of the added value of GEF funding and, as a result, substantial co-funding by districts, governments and partners and interest to cooperate in project implementation.

The Baseline for the Project is also considerable, through financing of sectoral activities for water resources, crop and livestock development, forest management and coordinated water resources management in Nile and lake Victoria basins. Such efforts are evaluated at approximately US$44.2 million throughout the Kagera river basin during the life of the project. The investments are however, unevenly distributed across the basin and the countries and tend to focus either on development or conservation rather than an integration of concepts leading to sustainable land use and integrated ecosystem approaches. The high baseline will ensure that the GEF financing will be cost effective as the project is expected to strengthen processes in the Kagera basin for intersectoral coordination and land use planning and mainstreaming land, water and agroecosystems management into district and national programmes and planning processes.

9. MONITORING, EVALUATION AND DISSEMINATION

9.1 Monitoring and Reporting

The objective of monitoring and evaluation is to assist all project participants in assessing project performance and impacts, with a view to maximizing both. Monitoring will consist of continuous or periodic review and surveillance of activities with respect to management and the implementation of the work plan and budget. This will help to ensuring that all required actions are proceeding as planned. Monitoring and Evaluation will take place at three levels: *project execution, project performance,* and *impact evaluation.*

Project Execution. Monitoring will concentrate on the management and supervision of project activities, seeking to improve the efficiencies when needed so as to improve the overall effectiveness of project implementation. It is a continuous process, which will collect information about on actual implementation of project activities compared to those scheduled in the annual work plans, including the delivery of quality outputs in a timely manner, identify problems and constraints (technical, human resource, and financial), make clear recommendations for corrective actions, identify lessons learned and best practices, etc.

Project Performance. Performance evaluation will assess the project's success in achieving its objectives (above).The project will be monitored closely by FAO (LTU and FAO-GEF Units), and by the Project Steering Committee through semi-annual reports, quarterly implementation reviews, technical reports, and regular technical supervision missions will be provided as required to enhance success. Project achievements will be evaluated after two years of project execution (mid-term) and at the end of the project (final) through an independent evaluation.

Project impact. Evaluation of the project's success in achieving its outcomes will be monitored continuously throughout the project. The key indicators can be found in the logical framework in Annex 2. The indicators will be further refined at the Inception Workshop, and tools and methods and indicators for measuring impact will be determined and agreed to ensure that a standardized framework is shared by the four participating countries.

Specific technical reports that will be developed to guide and monitor project implementation include:

- Sustainable land and agro-ecosystem management guides/manuals for farmer field schools, selected micro-catchments and landscapes;
- Community planning guide for SLaM - development, implementation and monitoring of community action plans including land tenure and access to resources;
- Incentives and policy for SLaM - including agricultural, environmental and land tenure issues;
- SLM baseline studies, indicators and methods for monitoring by FFS, communities and districts.

The monitoring and evaluation plan for the Kagera TAMP will serve two functions: first, periodic assessment of project implementation and performance of activities and, second, evaluation of their results in terms of relevance, effectiveness and impact in promoting the adoption of sustainable land and agro-ecosystem management (SLAM). Both will contribute to improved decision making and management, by keeping the project on track towards achieving the human development and global environmental goals/objectives and by feeding knowledge from experiences and lessons learnt into planned activities.

The Project Logical Framework in Annex 2 provides performance and impact indicators for project implementation along with the corresponding means of verification. Project progress, technical and financial reports and other sources identified in the logical framework will serve as the means of verification. Once operational, the basin-wide information centre that will be established to monitor

change in the status of natural resources, agro-ecosystems and impact on livelihoods will contribute to the preparation of these reports. This monitoring system would be developed in close consultation with the various levels of stakeholders to enable them to provide feedback and observations. The Monitoring and Evaluation Plan is described in detail in Annex 7.

Indicators of project impact will be applied at the project, community, district and national levels. Key indicators will reflect*, inter alia*:

- status of land, natural resources and ecosystems, their conservation and capacity for production of goods and services;
- evidence of positive changes in the management and use of biodiversity and natural resources,
- improvements in productivity, livelihoods and reduction of poverty;
- strengthening of capacities at different levels.

The indicators will be further elaborated at the Project Inception Workshop with the participating countries, stakeholders and FAO. The GEF Global Land Degradation Assessment in Drylands (LADA) project (FAO/UNEP) and as appropriate the Medium-size Project on Dryland Biodiversity Indicators (UNEP/GEF) will provide valuable inputs and guidance in this respect.

Day-to-day monitoring of implementation progress will be the responsibility of the Regional Project Coordinator and the National Project Managers, based on the project's annual Work Plan and its indicators. The RPC will advise the FAO Lead Technical Unit and Technical Cooperation Department, who will duly inform the GEF Secretariat, of any delays or difficulties faced during implementation so that appropriate support or corrective measures can be adopted in a timely and appropriate manner.

9.2 Independent Tripartite Evaluation

Evaluation is a process for determining systematically and objectively the relevance, efficiency, effectiveness, progress and impacts of the activities in light of their objectives and inputs, both during the project lifetime and beyond.

Independent Mid-Term and Terminal Evaluations of the project will be organized, in close consultation with the participating countries and FAOs evaluation unit (PBEE). The independent Mid-Term Evaluations will be undertaken at the beginning of the third year of project implementation. The Mid-Term Evaluation will determine progress being made towards achievement of outcomes and will identify corrective actions if necessary. It will, *inter alia*:

- review the effectiveness, efficiency and timeliness of project implementation;
- analyze effectiveness of implementation and partnership arrangements;
- identify issues requiring decisions and remedial actions;
- identify lessons learned about project design, implementation and management;
- highlight technical achievements and lessons learned;
- analyze whether the project is on track with respect to achieving the expected results; and
- propose any mid-course corrections and/or adjustments to the Work Plan as necessary.

An independent tripartite Final Evaluation will take place three months prior to completion of the project and will focus on the same issues as the Mid-Term Evaluation. In addition, the final evaluation will review project impact, analyze sustainability of results and whether the project has achieved the outcomes and the development and environmental objectives. It will also provide recommendations for follow-up actions. Table 1 below provides a summary of the main M&E reports, responsible parties, timeframe and estimated budget.

9.3 Table: Kagera TAMP Monitoring and Evaluation Plan and Budget

Type of M&E activity	Responsible Parties	Time-frame	Budget US$ *[1]

Type of M&E activity	Responsible Parties	Time-frame	Budget US$ *[1]
Regional Inception Workshop	Regional Project Coordinator - RPC National Project Managers -NPMs FAO (NRL, FAO country offices)	Within two months of project start up	35,000
Project Inception Report	RPC with NPMs + FAO	Immediately after workshop	RPC/NPMs no extra cost FAO staff time in kind
Establish/refine outcome- and site- specific indicators (environmental + socioeconomic)	RPC + NPMs International M&E consultant with guidance of FAO	During year 1	10,000 (2,000/country+2,000 river basin level)
Field based impact monitoring	Oversight by RPC and NPMs Monitoring by district facilitators, local implementing agencies FAO guidance	Continually, but annual analysis prior to progress report, PIR and annual work plan preparation	50,000 (2,500/country/year)
Annual impact monitoring and Adaptive management of SLaM practices and Lessons learnt	RPC with NRL/SAF to oversee SLM activities and monitoring in the basin, in coordination with NPMs (responsible for country level activities and monitoring by national teams/contracts)	Annual Review	40,000 (10,000/country-indicative)
Project Implementation Review – FAO internal monitoring tool	Project Team + FAO	Annual	Project team no extra cost FAO in kind
Regional and National Project Steering Committee Meetings	RPC + NPM Participating countries FAO + Main partners/donors	Immediately after inception workshop and at least once a year	50,000 (travel and DSA costs) FAO staff in kind
Quarterly Project Implementation Reports - QPIR compare delivery with approved work plans; take remedial action	FAO Budget Holder TCOM, TCI/GEF	Quarterly	FAO in kind
6 monthly Project Progress Reports	Project team FAO (NRL, SAF, TCI/GEF, TCOM)	June and December	Project team no extra cost FAO in kind
Technical reports- see below*	Project team FAO (NRL, SAF, Project Task Force) Consultants as required	Indicative list of outputs of contracts/ consultancies below	21,000 (review, printing, dissemination of technical outputs)
Supervisory visits to project and field sites	FAO technical missions [9] Government PSC representatives	Yearly or as required	FAO (covered by fee) and GO staff time in kind
Independent Mid-term Review	PBEE –FAO independent evaluation unit) Project team Participating countries FAO-NRL, SAF, TCI/GEF, TCOM	At mid-point of project implementation	39,600
Independent Tripartite Final Evaluation	External Consultant Project team Participating countries FAO (NRL, SAF, PBEE, TCI/GEF, TCOM)	At the end of project implementation	65,000
Lessons learnt	Project team FAO (LTU+ project task force) FAO GEF Unit +TerrAfrica Partners	Yearly	75,000 (av. 3,000 per year for outreach; national and regional experience sharing workshops)
Terminal Report	RPC with support of NPMs FAO	At least one month before end of project	6,000
TOTAL Indicative Cost to GEF project (ex*cludes project team and part of FAO staff time covered by IA fee)*			**US$391,600**

* Specific technical reports will be developed to guide and monitor project implementation including:

[9] Part of FAO staff time and travel covered by the fee

- Sustainable land and agro-ecosystem management guides/manuals for farmer field schools, selected micro-catchments and landscapes
- Community planning guide for SLaM - development, implementation and monitoring of community action plans including land tenure and access to resources
- Incentives and policy for SLaM - including agricultural, environmental and land tenure issues
- SLM baseline studies, indicators & methods for monitoring by FFS, communities & districts

ANNEX 1: INCREMENTAL COSTS ANALYSIS DESCRIPTION

The Kagera River basin represents a globally important ecosystem and extremely important areas at the divide between Eastern and Central Africa in providing multiple environmental and economic services especially in terms of agro-biodiversity and the basis for sustainable livelihoods and food security of some 16.5 million people and some 18.5 million by 2015. However, in the four countries that share the river basin (Burundi, Rwanda, Uganda and Tanzania), land degradation and the resulting loss of ecosystem structure and function has been a growing issue and exacerbated by refugee movements and reduced capacity due to the prevalence of HIV/AIDS. The sustainability of resource management in the Kagera basin through its effects on the hydrology and functioning of its aquatic and terrestrial systems, directly influences the Lake Victoria basin (shared among Uganda, Tanzania and Kenya), being the largest tributary and providing 24% of the inflow, and also directly influences the larger Nile Basin of which it is also a part.

The rapid population growth and increased climatic variability has increased the vulnerability of the population in the basin and is resulting in land use change, land degradation, deforestation, fragmentation of land into smaller and smaller parcels and increasing pressures on limited and often fragile resources to meet household needs (food, firewood, etc.). The degradation of natural resources in the Kagera basin is exacerbated by poor management practices and market forces (burning, overstocking of pastures, crop specialisation, loss of soil nutrient restoring practices etc.) is leading to serious loss of ecosystem structure and function, loss of habitats and loss of globally important biodiversity, in particular, agricultural biodiversity on which rural population particularly depend for their livelihoods,

The key issue for countries sharing the Kagera basin is how to sustain socioeconomic development and livelihoods of those depending on the basin resources through reversing degradation and biodiversity loss and ensuring the sustainable management and use of land resources and the pastoral, cropping and mixed agricultural ecosystems. The Kagera basin and its ecosystems play crucial ecological and hydrological roles, sustaining water resources and offering a large range of habitats and land use systems allowing the conservation and sustainable use of globally significant biodiversity and providing multiple socio-economic opportunities. There are several programmes for transboundary and integrated management of the water resources, however, reversing degradation on productive arable and rangelands and reducing pressures on wetlands and forests and the watershed requires transforming unsustainable agricultural systems and management practices into sustainable practices. This requires a coordinated framework for collaboration and concerted efforts among the countries sharing the Kagera basin and watershed.

The transboundary diagnostic analysis (TDA) developed during the PDFB highlighted the problem of increasing degradation of resources, loss of productive potential of the land, loss of biodiversity and related loss of ecosystem function and services driven by population growth and the dependence of the majority of the rural population on increasing small land areas to provide their livelihood needs- food, fuel, income etc. The TDA also identified a number of policy and institutional constraints that hinder capacities of land users and other stakeholders from adopting more sustainable land sue systems and practices. The analysis of the project baseline and incremental costs was considered by a regional workshop, held in Entebbe, among district planners, policy makers and relevant projects/programmes. The analysis was pursued in the beneficiary districts and at central level identifying relevant actions and investments that address land degradation, biodiversity loss and productive potential and functioning of agricultural ecosystems.

The baseline identifies government programmes and donor supported investments relevant to the project's component areas over the five years of the project life to support land resources management and agricultural and environment priorities in accordance with relevant national strategies and action plans. In addition to national investments in the beneficiary districts in the Kagera basin, the baseline includes specific land management related activities of regional river basin management programmes (NBI-NELSAP, in particular, the Transboundary Integrated Water Resources Management Project,

also operating across the Kagera basin, and the Lake Victoria Environmental Management Programme (LVEMP) among Kenya, Tanzania and Uganda (currently under a bridging phase 2006-mid 2007 in preparation for the phase II investment). These do not specifically address coordination and sharing of information among agriculture, livestock, water, land and forestry sectors with a view to reducing negative impacts of farming and herding activities on soil, water and biological resources and on ecosystem functions (direct impacts on arable and pasture systems, and impacts on wetlands, forests and protected areas) through community planning, development and management of sustainable and productive land and agroecosystems' management.

A summary of relevant programmes and projects contributing to the baseline is in Table 3 of Annex 1. Categories of activities include crop and livestock development, soil and water conservation and environmental protection and community forestry /agroforestry.

Component 1: Transboundary coordination, information sharing and monitoring and evaluation mechanisms

The transboundary river basin and water resources management programmes for the Nile Basin, including the Kagera basin, and Lake Victoria basin focus on transboundary cooperation for management of the water resources and lake ecosystems. Of relevance to Kagera TAMP, the GEF supported LVEMP-Phase I invested in scientific research including soil erosion studies and mapping and will continue to support water resources monitoring and management, data and information sharing and policy development as well as a component on land management. LVEMP Phase II is starting up after an interim phase, with more activities on the ground, estimated baseline US$3.8 million.[10], Also planned is the NTEAP of the SVP for all Nile basin countries and a Water Use in Agriculture project, as part of NELSAP, in the 4 Kagera countries and 2 others, which will support irrigation and cross-border trading of resulting crop products (estimated 5% as baseline US$180,000). The baseline for project management is estimated from the national institutions responsible for managing natural resources and agricultural and livestock development. Taking also into account maps and data form the regional Africover and FAO Nile basin water resources information projects, and the government support and referred regional projects the total baseline for this component is estimated at US$4,328,981.

Component 2: Enabling policy, planning and legislative conditions

The governments and their development partners have supported the development of national policies and strategies and legislation relevant to Kagera TAMP activities, notably, poverty reduction strategies and programmes (PRSPs), national action plans to combat desertification and drought (NAPs), national biodiversity strategies and action plans (NBSAPs), national environment programmes (NEAPs) as well as Agriculture, Livestock and Forestry strategies and related programmes. However, the extent to which approaches are harmonised and their implementation effectively supported at local and district levels is variable, but on the whole limited, due to uncoordinated sectoral support services, short term planning processes and inadequate awareness, knowledge or capacity in particular for their integration and provision incentives for their application by land users. The baseline for this component is thus estimated at US$6,216,255.

Component 3: Capacity and knowledge for the promotion of and technical support for Sustainable land and agro-ecosystem management across the basin.

The governments' provide substantial support to institutional and human capacity building, through programmes for environmental protection, agricultural and livestock development, poverty reduction

[10] TAMP will be implemented in full collaboration with the Kagera TIWRM project of NBI-NELSAP which aims to establish a sustainable framework for joint management of the shared water resources of the Kagera River Basin. Collaboration on policy, legal and institutional issues, data and information systems and project management is modestly estimated at US$ 830,000 the two projects will be coordinated very closely this will contribute to ensuring an integrated land and water framework and coordinated among water, environment and agriculture bodies. Links established between the PSC of TIWRM which is guided by Ministries of water resources and the TAMP PSC which is steered by environment and agriculture ministries in the four countries,

and improved food security. These are often, large scale donor-supported programmes, in some cases multi-donor through basket funding mechanisms, and are increasingly based on principles of decentralisation of resources and decision making, participation, empowerment and self reliance of local communities and privatisation of service providers (notably ASSP in Tanzania, RSSP in Rwanda, and PMA in Uganda). The baseline for this component is important estimated at US$15,446,004 as it includes the extension and research activities in the districts which have focused on increasing productivity and improving marketing of commodities and on environmental protection. There is a clearly identified need throughout the Kagera basin for building capacity at local and district and basin levels for developing and promoting integrated agro-ecosystem approaches and for identifying and developing ways and means to incentivate land users and communities for their wider adoption of sustainable land use systems and management practices.

Component 4: Improved land and agro-ecosystem management practices implemented and benefiting land users in all agro-ecosystems in the basin.

The programmes mentioned under component 3 also provide substantial support for agricultural and livestock development (supply of inputs and marketing - for certain commodities - veterinary products and services, intensification and for natural resources management (catchment afforestation, soil and water conservation) and land registration/demarcation. The estimate baseline for this component is also quite high US$18,219,885. However, the actions on the ground are often quite scattered and do not address the constraints that land users face and that hinder adoption of sustainable agriculture systems and resources conservation including biodiversity (insecurity of tenure, poverty and lack of knowledge and tools, lack of markets for local varieties/products, lack of support for livestock breeding using adapted local breeds, lack of alternative energy sources, local customs e.g. large livestock herds). Thus land degradation, overexploitation of resources and loss of biodiversity continue. The actions tend also to support the better off farmers and herders and not to reach the poor and vulnerable groups. There is an identified need for support for development and implementation of community action plans and participatory learning-research-action approaches for improved and long term management of their common property resources and integrated management of their agricultural ecosystems which also requires operational incentive mechanisms and benefit sharing mechanisms.

Component 5: Project management structures operational and effective.

This has not been included as a separate component in the ICA as it proved too difficult to separate management from implementation for calculating the baseline and alternate for national programmes. The management issues are included in the other components in the ICA table below.

The GEF Alternative

Regional cooperation will be established among countries sharing the transboundary Kagera river basin and intersectoral collaboration to deal with issues of land degradation, biodiversity loss, especially threats to agro-biodiversity, and their impacts on carbon sequestration, the hydrological regime, shared water resources (part of the larger lake Victoria basin and Nile River basin) and interactions with climate variability and change. Inter-country and multi-stakeholder collaboration will address the transboundary issues identified and the institutional, policy, technical and socio-economic factors that are leading to degradation, unsustainable use and overexploitation of resources in the basin. Increased awareness and understanding will be generated in the East African region and internationally of the root and direct causes of land degradation and its effects on biodiversity and ecosystem structure and functions and hence on the potential of the land to support livelihoods.

Mechanisms will be identified, tested and adapted for the range of agro-ecosystems (pastoral, mixed and cropping) providing an enabling environment for land users and communities to adopt viable, sustainable and integrated land and agro-ecosystems management (SLaM). Community action plans will be the basis for promoting wider uptake of improved land management practices for common property resources and individual land holdings, through adaptive management, enhanced opportunities and incentive measures. Improved land use/management systems will be adapted and demonstrated through participatory action-research for a range of agro-ecosystems, targeting community territories, micro-catchments and larger land areas/ecologies (pastures, wetlands, riverine forests) across the basin. Successes will be scaled up including diversified production systems,

incentives for biodiversity conservation and the restoration of degraded arable and rangelands, and ways and means to reduce pressures on wetlands, forests and protected areas. Sustainability will be ensured through empowerment of local communities in decision making and planning for longer term resources /landscape management, through mechanisms for conflict resolution and supportive research in the development of improved, sustainable farming systems and restoration of degraded lands.

Increased awareness by stakeholders, of resource/ecosystem values and potentials and of vital ecological functions and their implications on livelihoods, through demonstrations, adaptive management and local empowerment, will help catalyse wider uptake of livelihood and economic opportunities/options for improved management of land and agro-ecosystems. Benefits of sustainable intensification to cope with population growth and other pressures on resources, will include enhanced productivity (per unit of land, water and labour), practices that restore degraded lands and sustainable use of agrobiodiversity (including habitats, plant and animal genetic resources and associated species - pollinators, soil biota, beneficial predators). Additional benefits of SLaM include reducing costs to local /district governments (road repair, water supply and quality), diversified market opportunities (decreased reliance on limited commodities), conservation of local tree species, crop species and varieties livestock breeds (through sustainable and productive use), and equally important for long term sustainability, improved capacity to meet household needs (food security, water, energy, income) and improved well-being (reduced drudgery and vulnerability to drought/flood/famine).

Sustainable land and agro-ecosystems management (SLaM) will have been mainstreamed into community, district and national planning and budgeting processes in accordance with national food security, poverty reduction and environmental goals, strategies and action plans (PRSP, NAP, NBSAP, agriculture including livestock and food security) and will be integrated with basin-wide water resources management strategies. Harmonised intersectoral policies, regulations and bye-laws will be developed and harmonised approaches applied across the region, discouraging practices leading to land degradation and biodiversity loss and providing incentives for sustainable land and agro-ecosystem management across the basin. Enhanced investment in improved land and ecosystems management in the basin and restored ecosystem structure and functioning will be generating long term benefits from local to global levels, including reversing land degradation processes, conservation of biodiversity especially agricultural biodiversity, and sustained ecosystem services - water regulation, carbon storage, nutrient cycling and mitigating the effects of climate change.

The incremental costs and benefits of the full project are presented in Table 2 below. The total incremental costs of the GEF Alternative amounts to an estimated US$30.8 million of which US$6,363,700 (21% of the total cost) represents the amount requested from GEF to fund the full project. Co-funding of the 79% balance (US$24.5 million) will be provided from the four participating countries, direct collaboration with regional programmes, local beneficiaries (communities, farmers and herders), FAO, and additional donor support.

ANNEX 1: TABLE 1 - INCREMENTAL COST ANALYSES FOR KAGERA RIVER BASIN TAMP - GLOBAL SCALE

Scale	Baseline B	Alternative A	Increment A-B
Global	Global threats currently exist due to complex interrelations between land use and ecosystem structure and processes: • Land degradation with loss of productive land area (severely degraded land too costly to restore) and reduced productive capacity (soil biological chemical physical properties; capacity to support vegetation) which are vital to meet demands of expanding global and urban populations. • Loss of (agro)biodiversity as a result of changes in land use, including: deforestation (forest areas and trees in landscape; transformation of pasture/range and wetlands into cropping; intensification of land use; fragmentation of habitats. • Deforestation and land degradation, leading to reduced rainwater retention (runoff, soil moisture), erosion and downstream siltation, affecting the hydrological regime and functions of wetlands and impacting on terrestrial systems (productivity, risk of drought/desertification) and on aquatic systems (quality and quantity of precious water resources and international waters). • Effects of changing vegetation cover and hydrological regime on carbon sequestration (below and above ground) and climate variability and change (increasing soil temperatures, prolonged dry spells, intense rains and flood risk).	Global threats addressed more effectively through: • International cooperation among countries sharing the transboundary Kagera river basin to deal with issues of land degradation, (agro)biodiversity loss/threats and their effects on productive potential, carbon sequestration, hydrological regime, shared water resources (main inflow to Lake Victoria; part of larger Nile basin), and interactions with climate change. • Increased awareness/understanding at international level, especially within Africa, of factors affecting land degradation and biodiversity in key agro-ecosystems, their consequences and ways and means to address them through cross-border collaboration to address related transboundary issues and provision of an enabling environment for viable, sustainable, integrated resource management and diversified (crop-tree-livestock systems that meet food security, poverty reduction and environmental goals. • Reversal of land degradation and biodiversity loss, notably agrobiodiversity (including associated beneficial/wild species and habitats), catalysed through increased awareness of resource/ ecosystem values/potentials, in particular, of vital ecological functions and opportunities/options for improved management of land resources and agro-ecosystems. • Demonstrating how sustainable resources management generates livelihood and economic opportunities-reduced costs (road repair, water supply/quality), diverse market opportunities, improved wellbeing (reduced drudgery and risk of drought/flood/famine)	Global benefits derived: • Reduced threat to habitat destruction, fragmentation, land degradation and associated loss of biodiversity. • Reduced threat to loss of indigenous crop species and varieties and livestock species and breeds, including indigenous domesticated species and useful wild species • Increased carbon sequestration in soils and vegetation in crop land, pasture/range, forest and wetlands • Basin-wide project coordination mechanism established and effective in disseminating information and providing an enabling environment; leading to wide adoption of better land use systems and management practices within the basin and wider region.

ANNEX 1: TABLE 2 - INCREMENTAL COST ANALYSES FOR KAGERA RIVER BASIN TAMP – SUBREGIONAL SCALE

Capital Costs	**Baseline-B** **(Situation without project)**	**Alternative A** **(situation with project)**	**Increment A-B** **GEF and Co-funding**
Outcome 1: Transboundary coordination, information sharing and monitoring and evaluation mechanisms **1.1** Basin-wide coordination mechanism **1.2** Basin-wide knowledge management system **1.3** M & E and financial and progress reporting **1.4** Project management structures operational and effective.	Limited attention to improving agricultural land resources management and related livelihoods (pastoral/cropping) in river basin approaches that are largely driven by the water sector (NBI-NELSAP, LVEMP) Transboundary problems not well addressed by current land, agriculture and environment inter-ventions due to lack of cross-border mechanisms. Constraints include: inadequate dialogue among stakeholders; conflicts in resource use and management, poor coordination among sectors; lack of mechanisms to compile, analyse and share knowledge/information at agro-ecosystems level; diverse approaches by range of actors. Division of responsibility among countries, district, communities and individuals for land resources leading to piecemeal actions and lack of harmonised strategy to address over-exploitation of resources, land degradation, loss of biodiversity and risks to long term potential of the basin to support the growing population and reduce vulnerability (food insecurity; markets, climate change). **Governments: $1,563,000** **Donor programmes; regional (NELSAP/ LVEMP; FAO-Africover etc.) $1,944,760** **and national (RSSP;ASDP;PMA) $821,221** **sub-total: $2,765,981** **Total: $ $4,328,981**	Mechanisms for transboundary coordination and cooperation, information sharing, monitoring and evaluation of trends and progress improving effectiveness of efforts by Kagera basin countries for sustainable land and agro-ecosystem management and restoration of degraded lands. • Regional dialogue and cooperation (to address basin wide and transboundary issues) and strategic planning • Sharing and analysis of data and information through user-friendly knowledge management system (GIS, remote sensing and web-based tools) used to guide decisions and for participatory M&E • Upstream downstream benefit sharing in the basin through improved management of resources (reduced erosion, sediment transport and deposition, improved water quality, enhanced river basin ecosystem health) • Coordination among policy and decision makers across sectors and among the Kagera countries for improved management of basin resources, with attention to reducing threats and sharing of benefits (with attention to poor and vulnerable groups) • Increased regional development in participatory agro-ecosystems research and technology transfer **Alternate: $8,412,374**	**GEF $1,766,873** **Co-funding (Governments, projects, beneficiaries) = $2,316,520** **Total: $4,083,393**

Capital Costs	Baseline-B (Situation without project)	Alternative A (situation with project)	Increment A-B GEF and Co-funding
Outcome 2: Enabling policy, planning and legislative conditions in place. **2.1** Sustainable management of land and agro-ecosystems (SLaM) at national and river basin levels and mainstreamed in national development programs. **2.2** Regulatory actions developed and used to promote - or remove existing barriers to - sustainable land and agro-ecosystem management **2.3** A coherent strategic and planning framework	Kagera basin governments are placing greater focus on poverty reduction strategies (improved technology, services, commodity based markets), but there is overall failure to mobilise long-term natural resource/ecosystem management, to address pressures on resources and increasing food insecurity/vulnerability. There is weak adoption of natural resource management policies and regulations for various reasons: poor coordination among sectors, weak enforcement and knowledge at local level, conflicts between user groups in their application, lack of viable alternatives, inadequately integrated in local planning/budget allocation processes. Specific issues include, for example: i) insecure land tenure hindering investment in the land; ii) policies favouring sedentarisation of pastoralists, limiting seasonal migrations for dry season grazing and water - despite their rationale for sustainable use of fragile lands (low carrying capacity) and coping with dry periods/ drought; ii) some land planning support but mainly for demarcation, registration, title deeds; little or no support for planning and improved management of wider community territories/landscapes. **Government and national donor programmes** **$ 5,066,255** **Regional donor programmes $ 1,150,000** **Total $ 6,216,255**	Development and application of harmonised approaches, inter-sectoral policies, regulations, bye-laws from local to district levels, and basin wide as appropriate, that enhance livelihoods while promoting sustainable land and agro-ecosystems management and discouraging practices leading to land degradation and biodiversity loss. This will start with participatory processes to review and improve the regulatory context of target communities, for addressing major threats to resources, constraints to adoption of sustainable practices, and opportunities for generating environmental and livelihood benefits. Successful measures/instruments (security of tenure, planning tools, incentive measures, etc.) mainstreamed into national policies, strategies and actions. **Alternative: $7,912,917**	**GEF $423,342** **Cofunding: $1,273,320** **Total: $1,696,662** (NB harmonisation of policy and planning is covered under component 1, where government funding is weaker)
Outcome 3: Capacity and knowledge for the promotion of and technical support for SLaM in the basin **3.1** Methods and approaches to	Declining ecosystem productivity and functions in the basin is partly due to limited knowledge/ capacity of land users of how they can benefit from improved resources management and of	Enhanced capacity and knowledge at local, district and central levels for technical support and promotion of SLaM in the basin. Methods and approaches to promote the adoption of	**GEF: $1,230,003** **Cofunding: $3,636,520**

Capital Costs	Baseline-B (Situation without project)	Alternative A (situation with project)	Increment A-B GEF and Co-funding
promote the adoption of SLaM developed and tested **3.2** Enhanced quality of services provided to rural communities	policy makers of the costs of degradation not only on productivity but on roads (erosion damage), water resources and loss of future opportunities Low capacity of district technical officers/researchers in facilitating participatory learning processes, building on local knowledge and innovation, and in understanding and promoting integrated ecosystems' approaches. Inadequate linking of technical support for land resources management with business management, credit and savings, beneficiary empowerment. Agricultural support services are biased towards commercial high yielding varieties and exotic breeds) leading to loss of adapted local crop varieties/livestock breeds and limited development of markets for local products. Service providers have limited capacity to address causes (direct and root) of degradation and the constraints faced by farmers and herders: declining productivity, problems of invasive/ weedy species in degraded pastures and crop land, limited use of adapted indigenous tree species in woodlots, crop/ pastoral landscapes. Breakdown of local resource management customs and loss of indigenous knowledge exacerbated by HIV/AIDS, rural exodus and refugee movements and by inadequate recognition of farmer knowledge and innovations Inadequate awareness of implications on livelihoods where natural ecological functions are undermined (hydrological regime, nutrient cycling, pollination, biocontrol of pests and diseases, etc.)	SLaM practices (including pastoral and cropping) and ecosystem approaches identified, developed and tested, through participatory "action-research" in target areas: study plots for learning by doing, demonstrations for introducing new ideas/opportunities, exchange visits with other areas/programmes to share lessons learnt. Improved quality of services to target communities through intersectoral approaches, building on local knowledge/innovations; agro-ecosystems management and awareness of various stakeholders of the multiple socio-economic and environmental benefits that can be generated (e.g. from local crop/tree species and varieties, non-wood forest products; improved pasture; uses of wetland resources; mixed farming). Decreasing reliance on imported goods where local alternatives are cheaper/more readily available and improved capacity to meet household needs (food security, water, energy, income) Empowerment of local communities in decision making and planning for wider resources/landscape/ watershed management and farmer-research collaboration in development of improved, sustainable farming systems Capacity building on provision of incentives for adoption of SLaM and development of markets for locally available products Increased local capacity through action-oriented farmer-driven research, awareness of opportunities and benefits (restoring degraded lands, coping with drought; biodiversity conservation, diversification) and conflict resolution **Alternate $20,312,527**	**Total: $4,866,523**

Capital Costs	Baseline-B (Situation without project)	Alternative A (situation with project)	Increment A-B GEF and Co-funding
	Government and Donor: $14,485,684 **Regional donor : $960,320** **Baseline Total $15,446,004**		
Outcome 4: Improved land and agro-ecosystem management practices implemented and benefiting land users in all agro-ecosystems in the basin. **4.1** Participatory land management plans in targeted communities, micro-catchments and wider land units. **4.2** SLaM practices adopted by farmers and herders in targeted communities and replicated more widely. **4.3** Market opportunities and other cost-benefit sharing mechanisms for the provision of environmental services demonstrated and promoted	Unsustainable agricultural systems and their pressures on land resources (soil, water, biological), on valuable wetlands, riverine forests, and other habitats are resulting in loss of ecosystem structure and function (in arable, range, wetland and forest systems). **Government and Donor $16,705,885** **Regional donor: $1,514,000** **Total $18,219,885**	Improved land use and agro-ecosystem management practices implemented and providing local-global environmental and local socio-economic benefits for the range of agro-ecosystems in the basin. Participatory action oriented land management plans developed and implemented in targeted communities, micro-catchments and wider land units. Improved SLaM practices tested, adapted and successfully adopted by farmers and herders in targeted communities and replicated in other areas. Market opportunities and other cost-benefit sharing mechanisms for the provision of environmental services identified, demonstrated and promoted among land users, including payments for environmental services. **Alternate $36,263,417**	**GEF: $2,360,682** **Cofunding: $15,682,850** **Total: $18,043,532**
Outcome 5: Project management	**Baseline** incorporated in components above as not possible to separate	**Alternate $ 2,182,800**	**GEF: $582,800** **Cofunding $1,600,000** **Total: $ 2,182,800**
Total Capital Costs	**$44,211,125**	**$75,084,035**	**GEF: $6,363,700** **Cofunding: $24,509,210** **Total: $30,872,910**

ANNEX 1 TABLE 3: Regional and National Programmes and Projects Co-funding Sustainable Land and Agro-ecosystem management support to Kagera TAMP (2008-2013)

Origin	Co-funding source	Cofunding amounts	Totals
Burundi	Government - provinces, beneficiaries	860,000	**6,260,000**
	Govt./donor programmes		
	- PRASAB	2,400,000	
	- PABV	3,000,000	
Rwanda	Government - provinces, beneficiaries & Community Development Fund		**6,293,760**
	(MINAGRI, MINATTE)	768,000	
	Govt./donor programmes		
	- IDA/RSSP	1,285,000	
	- AFDB/PAIGELAC and PADAB	2,710,760	
	- IFAD/PRDCIU	1,530,000	
Uganda	Government (MAAIF, MLD) Districts & beneficiaries		**3,707,800**
	Govt./donor programmes	260,800	
	- PMA/NAADS	797,000	
	- FIEFOC	2,150,000	
	- NLPIP	500,000	
Tanzania UR	Government (MAFC, MLD, DOE) Districts of Karagwe and Bukoba and beneficiaries)	418,650	**2,463,050**
	Govt./donor programmes	1,694,400	
	- ASDP/DASIP (MAFC & DAOs)	350,000	
	-Ministry of Livestock Development		
Regional	Regional donor supported programmes:		**4,780,000**
	- CATALIST (Burundi, Rwanda), Netherlands/IFDC	4,000,000	
	- NELSAP TIWRM, Norway	481,000	
	- Devt Economique de Bugesera, Luxembourg	299,000	
FAO		351,000	351,000
ASARECA	Regional research (soil & water management; climate change)	300,000	**300,000**
NGOs	INADES and Africa 2000 Network,	353,600	**353,600**
TOTAL			**24,509,210**

ANNEX 2: PROJECT LOGICAL FRAMEWORK

Kagera Transboundary Agro-Ecosystem Management Project (KAGERA TAMP)

OVERALL GOAL: Adoption of an integrated ecosystems approach for the management of land resources in the Kagera Basin will generate local, national and global benefits including: restoration of degraded lands, carbon sequestration and climate change mitigation, agro-biodiversity conservation and sustainable use, protection of international waters and improved agricultural production, leading to increased food security and improved rural livelihoods.

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
OBJECTIVES The environmental objective is to address the causes of land degradation and restore ecosystem health and functions in the Kagera basin through the introduction of adapted agro-ecosystem management approaches. The development objective is to improve the livelihood opportunities, resilience and food security of rural communities (men, women, children) in the Kagera Basin through adoption of productive and sustainable resource management practices that are technically feasible and socio-economically viable.	Improved land use systems/ management practices for the range of agro-ecological zones in the basin being tested and adapted (by end PY3) for arable and pastoral systems including measures to reduce pressures on wetlands, riverbanks, forests, protected areas. Transformation of 43,700 ha. of land by PY3 and 100,000 ha. by PY5 towards productive and sustainable agricultural ecosystems Potentially 6 percent of today's basin population (some 1 million people) aware of project activities in target communities, micro-catchments, agro-ecological units through demonstrations and outreach...	Without project information from - prior assessments of land degradation and impacts in the river basin. -district development and economic reports SLaM interventions monitored by target districts and mapped by target communities- field surveys Outreach assessed through polls (e.g. market places/schools)	Strong commitment to address land degradation within the context of sustainable development and poverty alleviation programmes in all four beneficiary countries. District offices commit staff and other necessary resources to TAMP implementation Absence of serious environmental events (drought leading to food shortage, flooding), crop and livestock (pests and diseases) shocks in project countries.
Outcomes:			

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
Outcome 1. Transboundary (TB) coordination, information sharing and monitoring and evaluation mechanisms operational and effective in promoting sustainable, productive agro-ecosystems and restoration of degraded lands.	Transboundary agro-ecosystem management programme (TAMP) to reverse land degradation being implemented and monitored by the 4 riverine countries in 21 districts, reviewed by national and regional PSCs, and project activities & achievements widely shared and available (PY5). Best practices for addressing TB land-related constraints through integrated ecosystems and inter-sectoral approaches mainstreamed in planning and development processes, including. NAPs, and pilot actions implemented to address TB issues in 68 communities (PY3) and replicated in 21 districts (PY5). Regular Government budget allocations to transboundary coordination & collaboration in the Kagera basin increased by 10 percent (PY5)	Reports and decisions of district, national, river basin policy and planning mechanisms Project steering committee reports Technical reports and project progress reports Field surveys National and district financial accounts	Participating countries and institutions continue to prioritise project goal to mitigate the causes and negative impacts of land degradation and need for inter-country and inter-sectoral processes for the river basin National and district institutions and partners agree to mainstream sustainable land management into their programmes and activities by adopting integrated and inter-sectoral policies and approaches. Communication and exchange of information unhindered between district, national central and river basin levels Regional collaboration unhindered
Outcome 2 Enabling policy, planning and legislative conditions are in place to support and facilitate the sustainable management of agro-ecosystems and the restoration of degraded land.	Priority policy, legal and transboundary issues identified and agreed at community (68), district (21) and river basin levels for SLaM (end PY2) and resulting in supporting policy decisions, regulatory mechanisms and community bye-laws for improved harmonization and application (PY5). At least 2 policy recommendations per country developed that support national policy-decisions and regulatory mechanisms, and 1 per country that support bye-laws, etc. at district/ community level.	Action plan for the establishment of a supporting policy and legal framework for SLaM across the basin. National and regional workshop reports	Incentive mechanisms and regulatory actions exist National and local governments agree to shift focus from enforcement to provision of an enabling /supportive environment
Outcome 3. Capacity and knowledge are enhanced at all levels for the promotion of – and technical support for –	Trained technical staff and policy makers in 21 districts - supporting SLaM planning and implementation and using project	Project progress reports Reports of staff and other	Local institutions and partners willing ○ to mainstream SLaM into their programmes and activities

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
sustainable management of land and agro-ecosystems in the basin.	information resources in their district and communities (PY5) Community members/local decision makers sensitized on SLaM techniques for pastoral, arable, mixed systems and their on- and off-site impacts and benefits (PYs 1-5) FFS members trained and adopting SLM and promoting upscaling on community territory Training materials on best practices /approaches widely available and SLM demonstrations in place.	stakeholder training workshops Targets being monitored by the project and districts	○ to upgrade the capacity of their staff in sustainable land management. ○ persons trained available for follow up support
Outcome 4. Improved land and agro-ecosystem management practices are implemented and benefiting land users for the range of agro-ecosystems in the basin.	SLM practices implemented by pilot communities (68 by PY3; 200 by PY5)in demonstrations and farmer plots covering a total of 45,000 ha of land (by PY5) and showing: - Effective control of soil erosion (no new visual signs) in all target sites; - 4 target micro-catchments (PY5)identified and sediment loads monitored(subject to identifying sites where SLM interventions can be applied on a significant area of the catchment and hydrological monitoring can be supported by partner Kagera IWRM, NBI-NELSAP and LVEMP projects); - 30 percent increase in vegetation cover (above and below ground biomass) on pilot 23,000 ha arable and 7,500 ha pasture lands where alternatives to slash and burn are applied (PY5) -20 percent increase in soil carbon stores on farmer study plots and sample arable and pasture lands (PY5) inferred on 30,500 ha of	LAMIS data (RS/GIS)including field monitoring of target areas Sample surveys of land degradation, agro-ecological systems analysis and agro-biodiversity in target areas by FFS and technical staff will include LADA-local visual indicators of ▪ soil properties and erosion backed up by soil C sampling; ▪ vegetation/litter cover/bare soil/ extent and effect of burning; ▪ water resources and drought ▪ inter and intra-species and habitat diversity ▪ land productivity under different land use types (inputs/ yields/ other NR products e.g fuel) Household surveys in target communities /districts (comparing 360 sample households/ FFS members and controls ; analysis of	Involvement of local stakeholders and communities unrestricted District planning and development offices and mainstream agriculture and environment programmes supporting TAMP activities (financial and technical) as outlined in co-financing plan Absence of civil strife, major refugee movements or serious environmental events (drought leading to food shortage, flooding), crop and livestock (pests and diseases) shocks in project countries.

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
	land where SLM is practiced/planned. - 10 percent increase in production (crop; livestock; other goods) by trained farmers/ herders contributing to livelihoods (income; food security; reduced vulnerability)	land degradation, poverty; health; food security, vulnerability inter-relations)	
Outcome 5. Project management structures operational and effective	Execution of project activities and delivery of outputs in accordance with workplan and budget Regional PSC and TAC operational Backstopping by FAO and by Government institutions	Project steering committee reports Technical reports and project progress reports	Project management effective and unrestricted Security remains in the region
Outputs			
Output 1.1 A basin-wide coordination mechanism is established to facilitate trans-boundary dialogue, basin-level planning, policy harmonisation and coordination of national/sub-national actions.	Sustainable coordination mechanism for SLaM agreed upon among the 4 countries (eventually as part of wider NBI and EAC mechanisms) and reflected in a memorandum of understanding. Recommendations to harmonise policies, laws and regulations and address transboundary issues in the river basin developed by an ad-hoc basin-wide task force with stakeholders (PY3) and mechanisms in place for their implementation in 21 districts (by PY5). Transboundary SLM action plans in development/ in place with budget allocations and institutional support.	Report on options for basin wide coordination of SLaM National policies and action plans reflect regional collaboration Reports of RPSC meetings Project progress reports Relevant river basin/district reports reflecting collaboration across borders and among TAMP and partner projects (NBI-NELSAP, LVEMP, ...)	Good cooperation among national and local government and river basin institutions and among sectors (water, land, agriculture, environment and forestry, community development) Interest by existing river/lake basin processes to collaborate with land and agriculture
Output 1.2 An efficient basin-wide knowledge management system is established to support information requirements and decision-making processes at all levels.	TAMP knowledge management system established and functioning at all levels (PY2) including: o Kagera environmental monitoring and	EMIS, pilot district GIS and community information centre outputs (regularly updated) Project M & E system	Countries willing to collaborate in integrated information systems and sharing data on regional basis Good communication, information

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
	information system (SLaM-IS) supported by a GIS and RS tools (PY1-5). o Pilot district level GISs developed and operational - 1/country (by PY3). o Community information centres set up and servicing stakeholders in target communities (PY2).	Project progress reports	exchange among countries and partner institutions District offices commit staff and other necessary resources to house / maintain pilot GISs (one in each country) Local stakeholders willing to participate in community information centres
Output 1.3 Project monitoring and evaluation systems supporting TAMP implementation and decision making.	M & E system established and functioning Project management and district partners trained in data collection and participatory M&E (by end PY 1)	regular M&E reports Steering committee reports Project progress reports Mid-term (PY3) and final (PY5) evaluation reports	Communication and exchange of information unhindered
Output 1.4 Kagera TAMP project management structures are operational and effective.	Project management structures set up (PY1) Project staff recruited (PY1) Adequate premises, equipment and support services provided (PY1). Resource mobilisation strategy and co-funding plan regularly updated and shared with partners, in accordance with GEF land degradation requirements (PY1- 5).	Reports of PSC meetings and communications with TAC members Project progress reports Co-financing reports	Concerned ministries of the riparian states continue to cooperate in project implementation Committee members are committed and supportive Local government co-operation effective
Output 2.1 Sustainable management of land and agro-ecosystems (SLAM) mainstreamed in national development policies and programmes, enhancing synergy among sector strategies and across the river basin	SLaM considerations/actions integrated in annual district development plans and budgets (21), - SLM practices/ approaches mainstreamed into river basin and national agriculture and NR sector action plans (e.g. biennial) and a set of results based indicators used to monitor how they contribute to NAPs (4) and NBSAPs (4) (by PY4-5). Successful and diverse experiences of inter-	District development plans National plans reflect SLaM considerations (NAPs, NBSAPs) River basin reports (Kagera, Nile, LVEMP	National and local governments and institutions and partners agree to: o mainstream SLaM into their programmes and activities including NAP/ NBSAP implementation o adopt integrated and inter-sectoral policies and approaches o provide technical and financial support

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
	sectoral processes and systems approaches for SLaM documented annually in 21 districts and the river basin reports and case studies/findings made available for decision making by PSC members (PY4-5)		
Output 2.2 Regulatory actions developed and used to promote - or remove existing barriers to - sustainable land and agro-ecosystem management	Locally adapted bye-laws developed and agreed at community level (24 cases/ country) (PY3) and implemented (PY5) Best practices for effective policy and legal application/enforcement disseminated in the basin (PY 2-5).	Compendium of byelaws and regulations Reports of stakeholder consultations Project progress reports	Districts agree to/support stakeholder consultations to identify policy and legal constraints and opportunities
Output 2.3 A coherent strategic and planning framework developed and implemented (from river basin to district/provincial and community levels) to support SLM efforts by rural communities.	National and local government staff trained in land use planning (at least 42 district level; 64 community level) (PY1-5) Land use policy being effectively applied/ enforced in 68 communities by PY5. Participatory strategies and action plans developed for SLaM in 21 districts across the basin (PY1-3) o improved pasture and rangelands management (at least 15 areas; 7,500ha) o transboundary livestock movements (5 borders) o conservation and sustainable use of wetlands (at least 9 areas; 6,000 ha), o conservation and sustainable use of agro-biodiversity (68 communities) o sustained energy supply (68 communities)	Reports of workshops Reviews of status and trends and opportunities/options for SLaM EMIS maps, analyses and reports District and community action plans Project progress reports	National and district level planning authorities recognize the benefits of SLM strategies District planners agree to improve implementation and monitoring of land use plans for SLaM Local government are willing to embrace SLM and to support improved management for common property resources
Output 3.1 Methods and approaches to promote the adoption of SLM practices and agro-ecosystems (pastoral and cropping) are identified, developed and	Demonstration sites (68) and FFS study plots (136) identified and agreed upon (end PY1), established (end PY2) and FFS study plots	Documentary, educational & training material produced (video films technical and advocacy leaflets,	Local governments agree to participatory extension approaches

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
validated through participatory action-research.	scaled-up x 3 (PY4-5) Training materials developed and used in training in 21 districts Advocacy and training materials disseminated and used in 21 districts and 68 communities (PY3), available from community information centres and districts as and when required in the basin (PY 5)	maps, etc.) Training reports Project progress and technical reports	
Output 3.2 The quality of services provided to rural communities enhanced, particularly through intersectoral approaches that build on local knowledge and innovations for improved agro-ecosystems management	FFS facilitators/extensionists (150); district staff (4 x 21), community leaders (150) and partner NGO staff (42) trained in PLAR /FFS approaches (PY 2+) and best practices for SLaM. Target communities (68) benefiting from improved access to service providers competent in SLaM (planning; intersectoral/ systems approaches) and SLM support - 300 technical staff and 200-250 policy makers (15/districts) trained to support SLaM planning and implementation and using project information resources in their district and communities (PY5) 120,000 community members/local decision makers sensitized on SLaM techniques for pastoral, arable, mixed systems and their on- and off-site impacts and benefits (PYs 1-5)	Field surveys and interviews Training workshop reports District and community reports Project progress reports District polls to assess outreach from SLM demonstrations, information centres, radio, education materials, etc)	Service providers interested and available to support the programme and to benefit from targeted training
Output 4.1 Participatory land management plans are developed and implemented in targeted communities, micro-catchments and wider land units.	100 participatory land use plans and action plans developed (PY2) and being implemented (PY2-4) and replicated x 2 (PY5) o community action plans (68) o micro-catchments (46);	Community / district land use plans and management reports Technical reports GIS / RS outputs Project progress reports	Communities and districts agree to develop and implement improved action plans for SLaM and integrated them with other planning processes

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
	o pasture/ range areas (15); o target wetlands (10); o riverbanks (1000km) Capacity built for implementation and monitoring of community action plans (PY1-5) in 136 communities.	A set of agreed indicators for monitoring SLM action plans e.g. - reduced degradation (burning, erosion, etc.) - improved vegetation cover, soil, water and range quality, resilience to drought - enhanced crop and livestock productivity and effects on livelihoods - increased awareness, information, expertise and institutional support for SLM	
Output 4.2 Improved land use and agro-ecosystem management practices are successfully adopted by farmers and herders in targeted communities and replicated in other areas.	136 communities implementing SLaM (PY5) Wide adoption of improved agricultural systems, management practices including biodiversity conservation by members of 72 farmer/herder groups (PY3) and replicated x 3 (PY5) 1,800 farmers trained and adopting /upscaling SLM through FFS approaches (PY3) and a further 1,800 farmers by PY5 Local-level indicators of benefits of SLaM (income, household food security, reduced risk) confirmed by all target farmer groups and a sample 10 percent of the target population (100,000 persons) (by PY5)	Training reports FFS records GIS / RS maps, analyses and reports Project progress reports	Farmers available to participate in training and interested in applying SLaM
Output 4.3 Market opportunities and other incentive/ benefit sharing mechanisms for the provision of environmental services identified, demonstrated and promoted among land users.	Incentive and benefit sharing mechanisms (monetary; non-monetary) identified and supporting adoption of SLaM and biodiversity conservation, including payments for environmental services (PES), products added-value and marketing in 34 communities (PY 1-5)	Technical Reports Reviews and records of incentive/benefit sharing measures and options and SLM investments	Incentives (e.g. competitions, access to grants etc) encourage farmers to implement SLaM District agriculture programmes and NGOs support diversification and marketing PES (including carbon offset credits)

Summary	Indicators (OVIs)	Means of Verification	Hypotheses / critical assumptions and risks
	Incentive/ support mechanisms reaching vulnerable groups (tenant farmers, youth, HIV/AIDS widows/orphans; female headed households) 15 percent of target population (PY5)	Local surveys on poverty, health, income, vulnerability etc Project progress reports	available to Kagera farmers Lack of major price fluctuations (inputs/ products), inflation, market failures
Output 5. Project management structures operational and effective	Regional project coordinator and national project managers recruited and execution of activities and delivery of outputs in accordance with workplan and budget Regional PSC and TAC operational and providing guidance and decision making Backstopping provided by FAO Lead technical unit and project task force and by Government institutions Constructive recommendations by mid term evaluation to address key problems identified	Technical reports and project progress reports Project steering committee reports Reports of visits and meetings by FAO and Government Report of midterm evaluation	FAO backstopping and in country project staff remain in place for project duration Project technical, financial and personnel management well coordinated

ANNEX 3: RESPONSE TO PROJECT REVIEWS

(from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion, the Convention Secretariat and STAP at PIF)

TRANSBOUNDARY AGRO-ECOSYSTEM MANAGEMENT PROGRAMME FOR THE KAGERA RIVER BASIN (KAGERA TAMP)

a) GEF Council

There were general comments on the TerrAfrica/SIP programme by the June 2007 Council and those comments that are of relevance to specific projects have been addressed in the Kagera project design, notably:

- it provides indicators for results and impacts in terms of global environment and clarifies who conducts various aspects of M&E;
- takes agro-ecosystem and catchment approaches to address holistically the various land use activities- herding, agriculture, forestry, etc. – and concerned actors/beneficiaries since they are interrelated;
- addresses the issue of soil degradation and fertility decline as a priority for increasing cop and livestock productivity, and is addressed through promoting integrated farming systems and management practices that restore plant nutrients and soil health, this will depend on the practices studied and adapted by individual farmer field schools but could include, inter alia, for some farmer contexts and where cost effective use of inorganic fertilizer as a complement to organic fertilizer;
- will determine, in the various ecosystems, the potential effects of climate change (less or more rain; regularity/ reliability of distribution; repeated droughts, etc.) and identify concrete possibilities for climate change adaptation and mitigation;
- will identify and explore inter-country interventions for addressing transboundary natural resources management issues that have been identified (appreciating the difficulty of predicting the results/success as it will depend not just on technical issues but on governance and sovereignty issues).

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b) RESPONSE TO GEF SECRETARIAT REVIEW FOR FULL-SIZED PROJECT SIP-Transboundary Agro-Ecosystem Management Program for the Kagera River Basin (GEFSEC Project ID: 2139)

Questions	Secretariat Comment at PIF/ Work Program Inclusion	FAO Response
1. Is the participating country eligible?	Yes	
2. Has the operational focal point endorsed the project?	Yes, the operational focal points have endorsed the project. Endorsement letters available under separate database # 2139	
3. Which GEF Strategic Objective/ Program does the project fit into?	LD-SP1: Supporting Sustainable Agriculture and Rangeland Management LD-SP3: Investing in New and Innovative Approaches in Sustainable Land Management	
4. Does the Agency have a comparative advantage for the project?	FAO's comparative advantage is described, but as this project is implemented by UNEP as well, UNEPs comparative advantage should also be included.	It has been agreed with UNEP, that FAO will implement and execute the project. However FAO could as appropriate invite/contract UNEP to help in specific tasks.
5. Is the proposed GEF Grant (including the Agency fee) within the resources available for (if appropriate):	No, the proposed GEF grant is higher than agreed. The maximum project grant including PPG is set at 6.365. This should be corrected. The project has to date	The agreed project grant is 7.0M which is comprised of $6,363,700 for the project and the remainder for the fee (10% as Executing

Questions	Secretariat Comment at PIF/ Work Program Inclusion	FAO Response
	received $725.000, which needs to be deduced from the maximum amount. The PDF-B was set to be launched in September 2003 and have a duration of 24 months. Please revise the Table D, so that the sums add up.	agency). This figure is in the TerrAfrica/SIP documentation. Table D has been revised to correct the figures. The PDFB grant $725,000 was under GEF3.
The RAF allocation?		
The focal areas?	yes	
Strategic objectives?	yes	
Strategic program?	yes	
6. Will the project deliver tangible global environ-mental benefits?	A number of outputs that will improve the regional important water bodies (lake Victoria and the Nile) have been identified and is supported through sound argumentation.	
7. Is the global environmental benefit measurable?		
8. Is the project design sound, its framework consistent & sufficiently clear (in particular for the outputs)?	This LD project should include a special element on fire suppression/anti slash/burn campaigns in the four countries. This is needed because the WB and the Lake Victoria project have found atmospheric deposition of ash/phosphorus from vegetation burning is over fertilizing the lake and causing algae blooms / fish kills. No GEF international waters project can handle this problem, only the GEF LD ones. This new component would reflect the integrated approach across GEF areas that were first established in OP 12. The expected outputs identified in the PIF will benefit from being made more quantifiable. By doing so it will be easier to report on the projects successful implementation. Further, it may also in the end be easier to establish the actual impact of the entire SIP program. Output 1.3 under component 1 is hard to understand and to quantify. Please elaborate and be more specific. Please elaborate or specify what (output 2.1) “mainstreaming of SLAM into national development programs and institutions” mean and how this will function as an output. Output 2.2 would benefit if made more quantifiable. The same is valid for output 3.1, 3.2, 4.1, 4.2 and 4.3. In the PIF document, more specific outputs / indicators have been listed in section A. It may be beneficial for the PIF if these are brought in to the Project Framework.	This is a good suggestion. The text has been revised accordingly and the opportunity for increased carbon sequestration from reduced burning also highlighted as a GEB. The project document will have a detailed M&E plan including specific quantifiable indicators. The PIF has been modified to include additional information where feasible at this stage. In line with the SIP results framework, common indicators will be used to measure impact of the kagera project and its contribution to SIP. Common indicators for SIP IR 1-4
9. Is the project consistent	Yes. The proposed project is in	The endorsement letters were sent

Questions	Secretariat Comment at PIF/ Work Program Inclusion	FAO Response
with the recipient country's national priorities and policies?	conformance with the national priorities. It is necessary to see the endorsement letters.	to GEFSEC on 27 September 2006. .
10. Is the project consistent and properly coordinated with other related initiatives in the country or in the region?	The Project will be implemented under SIP/ Terrafrica. The proposed activities support a number of SIP IRs. Section D outlines only a broad intent to coordinate with other GEF projects. Please revise the wording to note that both Burundi and Rwanda are part of the GEF LVEMP II project. More importantly, the section should commit to coordinate with the Lake Victoria Basin Commission which includes all 4 countries of the Kagera Basin and the GEF/World Bank Lake Victoria IW project and the GEF/ IW Nile Basin project. It is important that one of the budgeted outputs reflects on the national coordination in the context of SIP (between the mentioned projects as a minimum). Otherwise it will be hard to evaluate and report on the coordination.	The text has been revised to reflect i) in Output 1.1 the MOU that will be established with LVEMP-II/ Lake Victoria Basin Commission and NBI-NELSAP; ii) the inclusion of Burundi and Rwanda in phase II of LVEMP in Section D; and iii) in Output 2.1 reference is made to national coordination in the context of the SIP (as well as in section C)
11. Is the proposed project likely to be cost-effective?	Possibly. More information needed to assess this, including a measure of the impacts/ outputs. The section focuses mostly on the sustainability of the project.	
12. Has the cost-effectiveness sufficiently been demonstrated in project design?		
13. Is the project structure sufficiently close to what was presented at PIF?		
14. Does the project take into account potential major risks, including the consequences of climate change and includes sufficient risk mitigation measures?	Yes. The project identifies a number of potential risks on regional and national level and illustrates mitigation measures as part of the project design. Potential effects of Climate Change is integrated in the design of the project, as the project is supposed to minimize the impacts of droughts, floods, etc)	
15. Is the value-added of GEF involvement in the project clearly demonstrated through incremental reasoning?	It is not easy to understand what effects the GEF funding will have on the suggested activities compared to a scenario without GEF funding. It may be a good idea to strengthen this section.	This section has been strengthened
16. How would the proposed project outcomes and global environmental benefits be affected if GEF does not invest?		
17. Is the GEF funding level of project management budget appropriate?	No, Even though the PM budget is within the 10 % guideline, it is not proportional to the GEF contribution to the project. Having GEF funds to cover 94.3 % of the PM budget, is not a viable approach.	This has been adjusted
18. Is the GEF funding level		

Questions	Secretariat Comment at PIF/ Work Program Inclusion	FAO Response
of other cost items (consultants, travel, etc.) appropriate?		
19. Is the indicative co-financing adequate for the project?	Yes. The project has leveraged $24.74 M in co-financing. The co-financing is a mix of government contribution, bilateral funding and from other beneficiaries. Table C on indicative co-financing will benefit from checking all the totals. (Government of Uganda adds up to a different amount than indicated). This minor calculation error affects the numbers in the tables listing co-financing	In Table C the Government of Uganda figures have been adjusted to ensure the numbers add up in the Table
20. Are the confirmed co-financing amounts adequate for each project component?		
21. Does the proposal include a budgeted M&E Plan that monitors and measures results with indicators and targets?		
STAP	No comments	

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c) RESPONSE TO THE REVIEW FOR WORK PROGRAM INCLUSION CONDUCTED BY GEF SECRETARIAT ON 30 MARCH 2006

The GEF Review affirms:

- The **country drivenness** of the project and **programme designation and conformity**.
- Regarding **project design**, that the project components adequately address project objectives and expected outputs. That mainstreaming of activities, capacity building initiatives and knowledge management have been adequately incorporated into the project to assure sustainability of project initiated activities beyond the project period.
- In regard to the need for a **replicability plan** and a **stakeholder participation plan,** including budget provision, to be in place at work program entry, that adequate provisions have been made for learning and replication of best practice, and the project has documented adequate consultations in the preparation process.
- The **monitoring and evaluation plan** presented is adequate for determining project performance and impact.

The review further considers that the financing plan and co-funding commitments are adequate and specifies that confirmation of all co-financing commitments will be required at CEO endorsement. In this regard, FAO will duly follow up with partner programmes and donors over the next months and with support by UNEP.

Regarding **institutional coordination and support**, and need to clearly define and document commitments of all collaborators, **Table 1 in Annex 12** in the main Brief has been prepared to better reflect clear functional linkages between ongoing activities and this project. This will be further confirmed at the project launch in consultation with project partners. TAMP aims to complement these various projects and programmes by demonstrating the importance and ways and means to ensure a holistic agro-ecosystems approach that allows land users to match sustained productivity and improved

livelihoods (food security, poverty reduction) with appropriate long term resource management strategies. Through the public involvement plan, TAMP will collaborate with the various projects, agencies and NGOs that provide support in the basin, many that are not mentioned here.

The review requests that the project should also include a **linkage component in the logframe** with funds and an output each year at PIR time to document coordination and collaboration with the 3 IW projects. This has been duly incorporated in **output 1.1 and 1.2** in the project logical framework.

The review notes the need for clearer presentation of the **coordination plan** and identification of roles of all collaborating partners. The GEF Secretariat is particularly concerned about coordination between this project and the **Lake Victoria Environment Management Project (LVEMP)**. In this regard, specific coordination mechanisms will be established with LVEMP (through its Executive Secretariat and country teams) as well as with the **Nile Basin Initiative- Nile Equatorial Lakes Subsidiary Action Programme (NBI-NELSAP)** (through its coordinating unit NEL-CU and project management unit of relevant projects). Both of these programmes are highly complementary with TAMP, as detailed in the GEF brief and in the new **Table 1 in Annex 6** in the Brief on Institutional and Implementation Arrangements. Coordination mechanisms will include, inter alia, resources for project personnel travel and exchanges and for linkages with IW-LEARN website and activities. This should include direct linkages between the Regional Project Steering Committees (for example participation by LVEMP and NBI-NELSAP, as observers, in TAMP PSC), managerial level and technical exchange visits and partnership arrangements for joint planning, coordination, capacity building, database integration and information and knowledge sharing. Close collaboration among these programmes will be extremely beneficial to stakeholders and should optimise resource use and avoid duplication of efforts and/or confusion.

Collaborative arrangements have already been initiated

1) **LVEMP:** During the November 2006 Regional workshop of TAMP PDFB, the LVEMP Executive Secretary welcomed collaboration with TAMP and potential areas are identified as outlined in Table 1, Annex 12, however this was during the bridging phase after completion of LVEMP-1. Firm collaboration will be developed with LVEMP II after project start up.
2) **In the NBI-NELSAP** project portfolio, of particular relevance is the **Kagera Transboundary Integrated water resources management project (TIWRMP)**, which also targets the entire river basin but focuses on water resources, integrated water resources management and water sharing. Collaboration was initiated during the PDFB at an NBI workshop in Kampala, in September 2003, during which concerned institutions reviewed the IWRM draft project document and the proposed TAMP was presented as a partner project. More recently, during the regional Kagera TAMP workshops in November 2005, and a follow-up meeting in February 2006 with the coordinator of NELSAP and IWRM project coordinator, more detailed collaborative arrangements were identified by representatives of both projects and agriculture, environment and water sectors of the 4 countries:
    - Planning and information sharing: If possible TAMP office could be sited in the same building as NBI-NELSAP in Kigali to facilitate day-to day collaboration, and mechanisms will be set up to ensure shared information management including meta-database, GIS and documentation as well as collaborative planning processes and coordination between project teams, PSCs and concerned institutions.
    - Synergetic actions: There are certain areas that are of particular relevance to TAMP, for example awareness raising and training on water resources management should complement TAMP awareness raising and capacity building activities
    - A detailed MOU will be developed and agreed upon during the first 3 months of the project.

It is recognised that for financial sustainability of the **Transboundary agro-ecosystem management programme (TAMP)**, linkages and harmonisation with transboundary investment programmes of LVEMP and NELSAP and effective coordination mechanisms, are expected to ensure continued

funding and sustainability of regional activities, provided that due coordination is also made with mainstream national development programmes and processes. Kagera TAMP is essentially a capacity building project, its success and the wider scaling up and adoption of improved diversified systems and management practices will depend on secure funding by districts, through national and regional agricultural and environmental development programmes supported by the donor community (LVEMP, NELSAP, ASSP and DASIP in Tanzania, RSSP in Rwanda, PMA/NAADS in Uganda etc.). Linkages with relevant national, regional and global projects are further clarified in Annex 12 in the main Brief.

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d) STAP – INDEPENDENT TECHNICAL REVIEW AND RESPONSE OF THE PROJECT TEAM

TRANSBOUNDARY AGRO-ECOSYSTEM MANAGEMENT PROGRAMME FOR THE KAGERA RIVER BASIN (KAGERA TAMP)

UNEP/GEF: Land Degradation, OP#15 with relevance to OP#13 and OP#12

STAP Roster Expert Review

undertaken by

Dr Gunilla Björklund

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1. Overall impression

The Kagera River system is situated in the Nile River basin and flows into Lake Victoria. The Kagera river basin has an area of 59,700 km^2 located in Burundi, Rwanda, Uganda and Tanzania. The basin consists of a wet highland zone in Rwanda and Burundi, a central, incised plateau including parts in Uganda, dryer lowlands and floodplains in Rwanda, Uganda and Tanzania, and a narrow, wet zone by Lake Victoria. The region has a rapidly growing population, causing an increasing pressure on land and freshwater resources due to intensified agriculture practices and livestock activities and to unsustainable land management practices. These activities are threatening not only water, land and land productivity but also its associated biodiversity and the agro-ecosystem functions on which the people's food security and livelihood is depending.

The increasing population pressure and thereby increasing demands of land for food production and for fuel-wood, charcoal, timber and for construction purposes are threats to the forested areas. Deforestation, over-cultivation and overstocking result in soil erosion, soil fertility degradation and nutrient mining. The need to reverse the land degradation trends is recognised among stakeholders, including farmers, communities, districts etc. This has resulted in the initiation of the project.

The root causes to the threats to land, water and agro-ecosystems have been recognised from the fact that land degradation is not a purely local or immediate problem. Limited governmental support and lack of incentives, inadequate policies, laws and regulations, lack of awareness and understanding of land users and local governments for effects of unsustainable practices and impacts of loss of habitats and species have been identified as important root causes where collaborated efforts are needed to develop effective actions. The project document is under item 1.4 discussing these root causes. It is further referring to the TDA that was produced during the PDFB phase of the project. The structure of the discussion under item 1.4 may have gained attempts to respond to the analysis behind the TDA, which (probably) is behind the problem analysis in Annex 4.

The Kagera TAMP project addresses the main weaknesses, which if properly dealt with, should contribute to eliminate, to the extent possible many of the root causes to land degradation in the river

basin. This is expressed in the project's four components, which aim at resulting in the following outcomes: (1) enhanced regional collaboration, information sharing and monitoring; (2) enabling policy, planning and legislative conditions (3) increased stakeholder capacity and knowledge at all levels for promoting integrated agro-ecosystems management; and (4) adoption of improved land use systems and management practices generating improved livelihoods and environmental services. These different components would all together facilitate sustainable management of the agro-ecosystems and reverse the trend of land degradation. Several outputs and activities under these intended outputs specify the work to be implemented.

The project description details the different activities, sometimes too much in detail, which is making the actual structure difficult to follow. The project description, to give useful guidance needs to be more clearly structured. As it is right now, for example under Output 1.1, it is a bit too much a "shopping list". Some of the activities mentioned do seem as well somewhat 'out-of-place'. It is not feasible to negotiate legal aspects, such as 'proposed amendments to policies, laws and regulatory instruments for regional cooperation and conflict resolution' at national-level workshops, for instance. The 'shopping-list'-type of text of the project description appears to be a result of a wide process with a high degree of stakeholder participation, but to serve, as the guidance needed, it needs to be more structured. Further the annexes reflect the Project Logical framework (Annex 2) and the Work Plan (Annex 6: Table 1) are not fully consistent with the main text.

The text in 3.2 describes that TAMP will consist of two main phases where phase (1) should be to establish the Transboundary mechanisms and set up field-based activities in target micro-catchments, while phase (2) will concentrate on scaling-up from the micro-catchments. This is very poorly reflected in the project outputs and activities and is neither visible in Logical framework nor in the Work plan. How are the 'lessons learned' from phase (1) to be used in phase (2)?

The project document provides excellent and very specified background documentation, including in the annexes such as the listing of relevant national policies and legislation. It also shows the different linkages to other ongoing activities and where cooperation or links would be useful. As the list of ongoing activities is so significant, and to some extent repeated in the text, the text would be easier to read if the description of the different programmes was more structured and put in an annex. In the actual text only references should appear.

KEY ISSUES

2. Scientific and technical soundness of the project

The project will, in a participatory approach, seek to identify develop and test methods and approaches to promote the adoption of sustainable land management practices including for different pastoral and cropping agro-ecosystems. This will necessitate a scientific approach, as would a scaling-up from micro-catchments to river basins.

The document is fairly frequently referring to project Monitoring and Evaluation. This will partly be assured by assessing different activities under the project. Such monitoring will both establish baseline conditions in terms of quantifying land cover/land degradation and resulting effects on agro-ecosystems as well as on human livelihoods. This will partly be done with support of the regional GIS/SR centre. The proposed methodology as well as the project approach should ensure for the scientific and technical soundness of the project.

3. Global environmental benefits for the land degradation focal area

The global environmental benefits of the project from the perspective of the land degradation area would include reduced threat to habitat destruction in a transboundary agro-ecosystem framework. The project will further result in reduced threat to loss of indigenous crop species and varieties and livestock species and breeds. As the four countries Burundi, Rwanda, Uganda and Tanzania now all are strongly committed to the project, cooperation towards a Sustainable Land and agro-ecological

Management would result in a wide adoption of better land use systems within the basin and in a wider region. Annex 4: table 3 further describes actions under the TAMP project that will address identified priority transboundary issues, partly resulting in global environmental benefits.

4. The project in relation to GEF goals and guidance, operational strategies, OP 15 and provisions of the UNCCD

The proposed project should be consistent with the objectives of the GEF Operational Program on Sustainable Land Management (OP#15), as it adopts a landscape approach and integrates ecosystems-based concerns with human activities based on land use (agriculture, rangeland, forest /woodland management). The objective of the OP#15 is to "mitigate the causes and negative impacts of land degradation on the structure and functional integrity of ecosystems through sustainable land management practices as a contribution to improving people's livelihoods and economic well-being". The project will also have relevance for the Biodiversity Focal Area, particularly OP#13, Conservation and Sustainable Use of Biodiversity Important to Agriculture, and GEF Strategic Priority BD-2, Mainstreaming Biodiversity in Production Landscapes and Sectors, as well as to OP#12, Integrated Ecosystem Management.

The project will address the GEF Sustainable Land Management Strategic Priority on Targeted Capacity Building (SLM-1) by contributing to improvement of the enabling technological, institutional and policy environments for SLM. It will also support the objectives of SLM-2, Implementation of Innovative and Indigenous Sustainable Land Management Practices.

The project is further in accordance with the provisions of the UN Convention to Combat Desertification (CCD) and its Regional Implementation Annex for Africa.

5. The project's regional approach

The project is developed as a regional project in four cooperating countries. The preparation for the project, including under the PDFB-phase, have ensured for close links to other relevant ongoing projects in the region such as links to Nile Basin Initiative and Nile Equatorial Lakes Subsidiary Action Programme and to other relevant GEF projects in the region.

6. The project's replicability

The project should result in harmonised institutional frameworks for co-operation, collaborative approaches to address transboundary issues, community-based land use and agro-ecosystem management plans and improved technologies (including early warning systems based in the project's regional GIS centre, and empowerment of local communities to sustainable manage and benefit from natural resources. The extent to which the project implementation will minimize political and institutional risks, human capacity risks, natural disaster risks and management and financial risks will determine the degree of the project's replicability.

7. Environmental, socio-economic and financial sustainability of the project

The project's environmental sustainability depends on to which degree it will result in using land resources and agro-ecosystems more effectively, restoring ecosystem functioning and rehabilitating degraded lands, among the key objectives of the project. The socio-economic benefits resulting from improved land use systems and sustained ecosystem functioning, that should result from project implementation would result in socio-economic sustainability. Successful environmental and socio-economic outcomes and mainstreaming activities under the TAMP project into major national development programmes as well as district and community planning processes and successful linkages to other regional programmes, in the Nile River Basin as well as Lake Victoria (NELSAP and LVEMP in particularly) should ensure institutionalisation of regularly support, financial as well as human, from the governments and local community and thus contributing to financial sustainability of the project.

SECONDARY ISSUES

8. Linkages to, in particular, the International Waters, the Biodiversity and the Climate Change focal areas

The project has clear linkages to the Biodiversity focal area, in particularly to the Conservation and Sustainable Use of Biological Diversity Important to Agriculture (OP#13) and to the cross-cutting Integrated Ecosystem Management (OP#12) as indicated above. It has further linkages to the Integrated Land and Water Multiple Focal Area (OP#9) as it will also include activities directed to combat water resource and wetland degradation. Further, some of the activities would also contribute to carbon sequestration, thus to the objectives under the Climate change focal area.

9. Linkages to other programmes and action plans in the region or in the countries

The project has clear linkages to several international, regional and national programmes, including the Nile Basin Initiative – Nile Equatorial Lakes Subsidiary Action Programme (NBI-NELSAP), work on NEPADs Comprehensive Africa Agriculture Development Programme (CAADP), on several other GEF projects such as Nile Transboundary Environmental Action Project (NTEAP) and Lake Victoria Environmental Management Program (LVEMP) etc. Several FAO-project in the region may also benefit from work under the TAMP project as would of course PRS-programmes etc. in the countries themselves.

The Transboundary Integrated Water Resources Management Project of the Kagera River Basin (TIWRM) of NELSAP is a project supported among other donors also by Sida. The TAMP project regards itself as complementary to the TIWRM, an opinion shared by the Swedish partners to that project (personal communication from T. Lilja). Cooperation between the two projects should thus result in mutual benefits.

10. Stakeholder involvement in the project

The project document demonstrates a high degree of stakeholder participation, both during previous phases of the project and in designing and formulating the project. Several of the activities and outputs under the project are designed to be implemented in full participation, including by farmers and herders, who are to be important beneficiaries of the project.

11. Capacity building aspects

Capacity building is the most important aspect under the third component, Outcome 3, where capacity and knowledge to promote sustainable management of land and agro-ecosystems in the basin are to be enhanced. As the participatory approach is so important, part of the capacity building is by empowering local responsibility to build the capacity, which should be encouraged. Capacity should not only be strengthened by the use of written material but also orally, as not all people concerned may be literate.

12. Innovativeness of the project

Even though capacity enhancement and a participatory approach is far from innovative, the strong sense of ownership by the farmers and herders and the community that the project is demonstrated still is not all that usual in such a large project. This, together with the strong commitment to cooperate and link to other relevant regional projects is some of the project's advantages and strengths.

13. Conclusions

The Kagera TAMP project is a well developed project, prepared in a strong participatory approach It is to be grounded in a transboundary coordination, where information sharing, monitoring and evaluation and capacity building towards sustainable land and agro-ecological management will build on a strong

operational structure and mechanism as well as the participation by stakeholders concerned. These aspects are the real strengths of the project.

To make the project documentation somewhat easier to read and to digest, it would, however, need to be more structured. Particularly should parts of the project description be restructured as this sometimes looks like a 'shopping list' where every suggestion from a preparatory group is reflected. Repetition of other organisations to be linked to the project could also be dealt with otherwise as suggested above.

With the commitment of the four countries of the Kagera river basin and the project's ambition to strongly cooperate the likeliness of an outcome that would result in reversing the land degradation tend should be positive. The project is highly recommended.

Uppsala 16 March 2006

Gunilla Björklund

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e) RESPONSE TO STAP REVIEW

We would like to thank the Reviewer for her conclusions that the Kagera TAMP project is a well developed project, prepared in a strong participatory approach and that its strengths include the regional cooperation, transboundary coordination, where information sharing, monitoring and evaluation and capacity building towards sustainable land and agro-ecological management will build on a strong operational structure and mechanism, as well as the participation by stakeholders.

We appreciate the Reviewers comments that support the project justifications of the needs to reverse land degradation and its impacts in the river basin, as recognised by the stakeholders -farmers, communities, districts, and the project analysis of the ways and means to address the threats to land and water resources, ecosystem functions and livelihoods, the root causes (incentives, policies and regulations, improved understanding, etc.) and weaknesses identified, and the need for collaborative efforts to develop effective actions.

The Reviewer further supports the four components of the project which together should facilitate sustainable management of the agro-ecosystems and reverse the trend of land degradation through achieving the following outcomes: (1) enhanced regional collaboration, information sharing and monitoring; (2) enabling policy, planning and legislative conditions (3) increased stakeholder capacity and knowledge at all levels for promoting integrated agro-ecosystems management; and (4) adoption of improved land use systems and management practices generating improved livelihoods and environmental services. The Reviewer also appreciated the high degree of stakeholder participation in the formulation process and the excellent background documentation in the Annexes.

1. Overall impression

Reference is made to the TDA that was produced during the PDFB phase of the project through assessments by national intersectoral teams conducted by means of transects and PRA and wide consultations in the basin. The diagnostic analysis is indeed reflected to some extent in section 1.4 and the problem analysis in Annex 4, however, this brief summary in the project document does not facilitate a more structured or in depth presentation.

We agree with the reviewer that in some cases too much detail of project activities has been provided and that the structure probably too much reflects the participatory process that was used in the project formulation in the regional workshop (Entebbe November 2005). Efforts have been made to restructure and summarise the project description. In particular, as suggested, Output 1.1., has been substantially revised and in some other Outputs, activities have been merged. We agree that it is not

feasible during workshops to "negotiate" or address "proposed amendments to policies, laws and regulatory instruments for regional cooperation and conflict resolution". This was poorly phrased and the revised formulation better expresses the required phased process, whereby, stakeholder consultations and workshop lead to proposals, and subsequently project steering committees make recommendations for due consideration at (inter) ministerial level as appropriate.

Annex 2 presenting the Project Logical Framework and Annex 6, Table 1, the Work Plan, as requested have been revised to be fully consistent with the main text and project description.

The Reviewer requests more clarity on the phasing of the Transboundary Agro-ecosystem Management Programme (TAMP) and to demonstrate how lessons learnt will be used for scaling up. In response this can be more clearly explained by a sequencing of activities rather than distinct phases. This sequencing has been more clearly reflected throughout the document, in project outputs, activities, the Logframe and Workplan.

It is intended that Years 1-3 will focus on establishing transboundary mechanisms and setting up field-based activities in target micro-catchments and selected agro-ecological units (essentially common property resources facing pressures from population pressure and agricultural activities). These initial three years, will focus on testing and adapting methods and approaches (extension, incentive measures, etc.) and validating sustainable land and agro-ecosystem management technologies (SLaM), and thereby demonstrating what can be achieved for the diverse agro-ecological and socio-economic contexts, as well as identifying ways to improve and harmonise policy and legal support and overcome constraints to sustainable management. Subsequently, during Years 4-5, it is envisaged to scale-up from the experiences and lessons learnt through making more widely available training materials, case studies, reaching more farmer groups and providing an enabling environment for wider adoption of SLaM on the ground. As it takes several years to achieve impact in terms of establishing improved institutional mechanisms and bringing about a change from sustainable to unsustainable practices, thus monitoring of results and impacts in terms of livelihoods and environmental benefits and the adaptation and validation of techniques and approaches is a process that will continue during the full project life.

As suggested by the Reviewer we have revised the description of the different ongoing programmes of relevance to TAMP and moved detailed information on linkages and cooperation with other ongoing activities to Annex 12.

KEY ISSUES

2. Scientific and technical soundness of the project

We agree that the project will need a scientific and technically sound approach, for the identification, development and testing of methods and approaches to promote the adoption of sustainable land management practices for diverse pastoral and arable systems and for scaling up and indeed for monitoring performance and impacts. This requires both analysis of the extension/promotional methods and their effectiveness, of the strategies and techniques for better management on-farm and of common property resources and their impacts, as well as, of the needs and costs for scaling up. For this reason, the project will set up a basin-wide environmental monitoring and information system (EMIS) using GIS and RS techniques which will also train and help establish pilot GIS in each country. This centre will work closely with the field activities to monitor results and work closely with intersectoral technical teams in each country (as during the PDFB) and with members of the regional technical advisory committee (RTAC) which will guide the scientific process for monitoring and assessment of methods and approaches and SLaM techniques being tested. The national and regional project steering committees, in their capacity to address technical and policy issues, will play a supportive role in this process and in guiding the scaling up process from selected micro-catchments and land units for wider adoption across the basin.

It is clearly not envisaged in the 5 years of the project that sustainable practices will be applied throughout the entire river basin as this will require much greater investment. The key will be for the GEF project to demonstrate the cost effectiveness and feasibility of scaling up the interventions in terms of livelihood and local-global environmental benefits. As recognised by the Reviewer the Monitoring and Evaluation process will include assessment of the performance of the different project activities, as well as establishing the baseline conditions for quantifying land cover/land degradation and for monitoring effects/impacts of project interventions on agro-ecosystems as well as on human livelihoods. As explained above the project monitoring of progress (technical, financial and institutional) will be complemented by scientific M&E of activities and their results with support of the regional GIS/SR centre. The proposed methodology as well as the project approach should ensure for the scientific and technical soundness of the project.

3. Global environmental benefits for the land degradation focal area

As noted by the Reviewer, with reference to Annex 4, Table 3, the project, through reversing land degradation in the transboundary river basin and its agro-ecosystems, is expected to result in global environmental benefits that include reduced threat to habitat destruction and loss, reduced threat to loss of indigenous crop species and varieties and livestock species and breeds. The project will also demonstrate the importance of diversified pastoral and arable land use systems in terms of the beneficial interactions between components of the agro-ecosystems for maintaining ecosystem functions and services (for example nutrient cycling, hydrological regime, carbon sequestration and biological control of pests and diseases) and their contributions to global environmental benefits. It will also promote the recognition and use of local knowledge and innovation, and its gender differentiation, for the conservation and sustainable use of soil, water and biological resources including biodiversity.

In addition to the strong commitment of the four countries, Burundi, Rwanda, Uganda and Tanzania, to cooperation through this project towards Sustainable Land and Agro-ecosystem Management, as noted by the Reviewer, the close cooperation between agriculture and environment ministries in its implementation is expected to ensure close collaboration with and support at district levels of the mainstream agricultural investment programmes which will be able to contribute to the wider adoption of better land use systems within the basin. Moreover, through mainstreaming the process in the NAPs and other national strategies and programmes, as appropriate (Output 2), this is expected to lead to further support for the wider promotion of SLaM more widely in the region.

4. The project in relation to GEF goals and guidance, operational strategies, OP 15 and provisions of the UNCCD

No issues raised.

5. The project's regional approach

The Reviewer recognised that the project has been developed as a regional project in the four cooperating countries and ensuring close links with other relevant ongoing projects in the region such as links to Nile Basin Initiative and Nile Equatorial Lakes Subsidiary Action Programme and to other relevant GEF projects in the region. In particular, we would like to emphasise the close collaboration and complementarity that is envisaged with the NBI-NELSAP Kagera Transboundary Integrated Water Resources Management Programme, and with the Lake Victoria Environmental Management Programme (LVEMP) which should also enable further scaling up of TAMP lessons and experiences in other countries in the region. Moreover the East African Community (EAC) could provide a useful institutional mechanism for further sustainability of the inter-country collaboration.

6. The project's replicability

No issues raised.

7. Environmental, socio-economic and financial sustainability of the project

No issues raised.

SECONDARY ISSUES

8. Linkages to, in particular, the International Waters, the Biodiversity and the Climate Change focal areas

No issues raised.

9. Linkages to other programmes and action plans in the region or in the countries

No issues raised.

10. Stakeholder involvement in the project

No issues raised.

11. Capacity building aspects

We appreciate the Reviewer's suggestion that capacity building should not only be strengthened by the use of written material but also orally, as not all people concerned may be literate. Indeed the farmer field school (FFS) and participatory-learning-action-research (PLAR) processes which underly the extension approaches of the project, rely on exchange among farmers and innovators, learning by doing through study plots and other adult education principles.

12. Innovativeness of the project

We believe the project is innovative in that it is based on ensuring the application of an integrated ecosystems' approach for the various agro-ecosystems in the basin, which is a concept and strategy well developed in the environmental domain but has been little applied in the agricultural sector. This will require intersectoral teams and processes and a major change in the way that agricultural is addressed (currently through many focused sub-sectors – crop, livestock, soil, water, irrigation, etc) as well as a change in the environment sector from a focus on enforcement of policies and regulations to providing a supportive environment for improved management. Currently incentive measures for the adoption of sustainable land and agro-ecosystem management are not available to farmers and herders and this project intends to demonstrate the need for incentive measures and how they can be provided in a cost-effective way.

13. Conclusions

As noted above the structure of the project has been improved to make the project documentation easier to read and digest.

ANNEX 4: GLOBAL SIGNIFICANCE OF THE KAGERA RIVER BASIN
Kagera Transboundary Agro-Ecosystems Management Project (TAMP)

The Natural Resources of the Kagera River Basin

The Kagera River Basin occupies an area of ca. 59,800 km^2, contributing to the capture and largest river inflow (24%[11] equivalent to some 7.5 km^3 of water per year) into Lake Victoria, the second largest freshwater lake in the world. The Kagera River (ca. 400 km long), the most remote headwater of the White Nile, is formed by two headstreams, which rise in the East Central African highlands (alt. ca. 2,500m) east of the watershed with the Congo basin. The Ruvubu rises just north of Lake Tanganyika in Burundi and the Nyabarongo rises in north-west Rwanda. These two main headstreams converge at Rusumo Falls, close to the Rwanda-Tanzania border, from where the Kagera flows north along the border and then abruptly east through the lowland floodplain in Tanzania and Uganda, before entering Lake Victoria (alt. 1145m) to the south of Sango Bay in Uganda. The Kagera River is estimated to contribute 10% of the outflow from Lake Victoria into the Nile, therefore is important in sustaining the flow of the Nile for the downstream countries (Sudan and Egypt).

The natural resources of the basin - soils, vegetation and landscapes - vary widely with rainfall and altitude giving four main agro-ecological zones. From the watershed with the Congo basin, there is a transition eastwards, including:

- a wet highland zone in Rwanda and Burundi (alt. 1900- 2500m, rainfall 1400-2000mm);
- a central, incised plateaux extending into Uganda (alt. 1500-1900m, rainfall 1000-1400mm);
- the lowlands and floodplains that comprise a drier central corridor (600-1000 mm) shared by Rwanda, Uganda and Tanzania;
- a narrow zone with increasing rainfall eastwards reaching a maximum of over 2000mm on the fringe of Lake Victoria.

The basin lies in the sub-humid agro-ecological zone with a bimodal rainfall, the long rains *(masika*) from late February to May/ June followed by short rains *(vuli)* from late September to early December, providing a growing period of between 90 and 365 days. The main soil types vary with the parent material: extensive schist, sandstone, quartzite or granite and gneissic formations; to intrusive basic rocks and volcanic materials in the highlands; to alluvial and colluvial soils in the marshes and wetlands. Many of the soils are highly weathered and leached resulting in poor inherent fertility.

The basin vegetation includes a complex of forest and woodland, savannah shrub and grasslands, wetlands and large areas used for agriculture by farmers and herders. The diverse ecosystems and the convergence of lowland (mainly western Guinea-Congolian) and highland (eastern afro-montane) species, provide a wide array of habitats for multiple plants, mammals, birds (see Table 1) and reptiles of high global significance. This includes remaining species of mega-fauna in protected areas (and habitats) such as the Akagera National Park, Lake Mburo and the Burigi Game Reserve, as well as the unique tropical biodiversity of the groundwater forests (Minziro, Munene and Rwasina Forest Reserves). It also includes the natural forests (such as Gishwati, Nyungwe and remnants of previously widespread riverine forest, with endemic plant and animal species (including species used in medicine and for wild food and local agroforestry species including *Ficus toningii, Markhamia luttea* and *Eritrina abbissinic).* The extensive swampy forests and grasslands, with dense tall grasses and papyrus, are important ecological components of the floodplain ecosystem of the Kagera River, providing important water flow regulation and buffering functions.

[11] Or 30% of the total Lake Victoria inflow if lake surface rainfall-evaporation is included.

The transboundary area of the Kagera Basin is among the most important areas in Africa in terms of agro-biodiversity and food production. The agricultural systems are characteristic of east and central Africa, notably the dryland agro-pastoral system, based on savannah grasslands rich in indigenous plant and animal species, and the intensive, diversified cereal- and banana-based cropping systems. However, the varying ecologies provide for a range of locally-adapted cropping, livestock and fishing activities and livelihood systems that are strongly influenced by water availability and quality.

This background explains why countries in the region and the world community are concerned with the sustainable conservation of the natural resources of the Kagera Basin.

Threats to Land Resources, Biodiversity and Ecosystem Function

The average annual population growth rates for the period 1999-2015 are estimated at 2.6, 3.1 and 3.9 and 2.9 percent respectively for Rwanda, Tanzania, Uganda and Burundi. The national population density figures for 2002 were Rwanda – 372, Burundi – 250, Uganda – 135, Tanzania – 61 per km^2. The river basin covers most of the surface area of Rwanda (80%) – one of the poorest and most densely populated countries in the world with over 500 inhabitants per km^2 in the cultivable lands. Over 90% of the populations of both Rwanda and Burundi are engaged in small-scale subsistence farming, with extremely small farms and fragmented plots. In Uganda and Tanzania, over 80% and 78% of the populations living in rural areas are engaged in small-scale subsistence agriculture. The 2006 total basin population is estimated to be 16.5 million – this is expected grow to 32.8 million by 2030.

The prime threats to the natural resources and agro-ecosystems of the Kagera basin are due to the various implications of the rapid increase in human population and to environmental change, including:

- overstocking and overgrazing of pastures and rangelands, also excess bush burning;
- continuous cropping, with reductions in fallow and rotations, reduced crop diversity in response to markets (food and forage species/ varieties), repetitive tillage, frequent burning, and soil nutrient mining (lack of nutrient restoration practices);
- encroachment of subsistence cropping into more fragile, drier areas, previously used/reserved for pasture and grazing, also into the wetlands;
- over-exploitation of forests and woodland and unsustainable harvesting (timber, fuelwood, charcoal, brick making, etc.) and;
- communal areas, such as forested highland and riverine areas, grazing lands, riverbanks and cultivated steep slopes, are often particularly affected by overexploitation and degradation.

These changing land use practices have been accompanied by neglect of the importance of agro-biodiversity and the ecological functions to which they contributes. The TDA and other PDF-B activities have highlighted critical losses of agro-biodiversity and associated function in the Kagera basin, specifically:

f) **Reduced diversity of cropping systems:** Replacement of indigenous/local crop varieties by introduced commercial varieties (e.g. nematode and disease resistant varieties of banana, cassava, maize, beans). Loss or neglect of traditional varieties, including crop wild relatives and landraces, such as simsim, millet, sorghum (labour intensive, lack of research), sweet bananas (lack of market, disease), cowpea, sunflower, pigeon pea, Lima and Bambara beans (lack of seed/germplasm, research) cassava and yams (stolen), wild medicinal plants and local fruits and vegetables (e.g. *Solanum nigrum, Rhubus spp., Physalis pervian,* Cape gooseberry - fire, overgrazing and cultivation; Ginger lily - wetland destruction, *Lagenaria sicerat, Coleus plectranthus, Amaranthus viridis, Gynandropsis gynandra*). Decrease in diversity of indigenous tree associations in

banana/coffee farms e.g. *Ficus spp., Borassus aethiopum, Maesopsis eminii,* and mango. Loss of other indigenous species found in cultivated areas (e.g. *Crotolaria jaburnifloria, Leonites nepetaefolia, Acanthus pubescens, Thumbergia alarta* and *Eluophia streptopetala* (internationally protected). Increasing problems of invasive crop weeds (e.g. parasitic Striga and Couch grass).

g) **Changing composition of pastures and rangelands**, with associated loss of biodiversity and habitats, through excess fire and overgrazing with reduced abundance of palatable/ nutritious grasses (such as *Braccharia spp., Setaria spp. and Hyparrhenia spp. and Thephedes triandra*) and legumes (such as *Glycine spp., Desmodium spp., Siratro spp. and Centrocema spp.*) and increased colonisation by thicket with hardy grass species (such as *Imperata cylindrica, Cymbogon spp.* (lemon grass), *Sprobolus spp.* (cats tail) and *Panicum maximum*) and by woody shrubs (such as *Acacia hockii, Combretum spp., Belanites spp.* and *Lantana camara*). In Rwanda *Lantana* has become a serious invasive species.

h) **Replacement of the indigenous livestock breeds** especially the long-horned Ankole cattle (a cross between the indigenous long horned Sanga and the Zébu) by higher producing cross-bred cattle (such as the Pakistan *Sahiwal* Zebu, French Frisonne, Friesian Holstein, European Jersey, as well as trypanotolerant N'dama from West Africa and the *Sukuma* Zebu from Tanzania) and of local races of small ruminants and poultry by introduced races to improve productivity.

i) **Reduced soil biota and biological functions** due to soil degradation and its effects on soil organisms, the soil food web, and its resilience and capacity to recover. It is increasingly recognized that important functions of biological tillage, nutrient cycling, carbon sequestration, infiltration and soil moisture retention are negatively affected through continuous disturbance by hoe and plough cultivation, reduced crop rotations, nutrient mining, loss of organic matter and protective vegetation cover (removal and burning). The effects on soil biodiversity have not been researched in depth in the basin and are not in general recognized by farmers, but studies with farmer field schools (FFS) in Bukoba District (TZ), have shown direct relations between soil biological activity and practices of tillage, organic matter and soil moisture management.

j) **Homogenisation of habitats and risk of loss of crop- and livestock-associated diversity**, such as pollinators (reduced habitat; competition by introduced honey bee species), beneficial predators and biological control mechanisms provided by biodiverse systems. Agricultural encroachment into wetlands, riverine woods and riverbanks and reduced fallow lands reduces the habitat and hence populations of such beneficial species. Moreover, as shown by FFS study plots in the Kagera region in Tanzania reduced plant diversity, rotations and beneficial interactions (pest-predator, plant-soil nutrients, etc.) leads to reduced resistance to diseases and pests e.g. in bananas and maize. Communities have noted decreasing populations of pollinator species (small bees, butterflies, beetles) due to spraying pesticides to kill birds, flies and mosquitoes, forest clearing and loss of flower species, harvesting of honey using fire or toxic chemicals.

Many of the unique habitats and globally important species across the Kagera basin are threatened. Table 1 of this Annex shows the number of threatened species for the countries as a whole (data is not available for the Kagera basin).

Existing local knowledge does not encompass how to cope under such changed circumstances, nor in response to insidious, unprecedented environmental changes / variations due to climate change. [There are also profound changes occurring to the basin's climate, including increased variability (compared to previous patterns), particularly late onset and short duration rainy seasons.] Population pressures, insecurity and the struggle to meet short term needs have compromised the capacity of farming communities to sustain the land resources even though it is in their best interests.

Despite all the above, the Kagera river basin encompasses an immense productive potential for improving livelihoods and reducing poverty.

Causes of Degradation Processes

The causes of the ongoing processes of degradation appear to be numerous and interlinked (see Tables 2 and 3), inter alia:

The **physical and technical** causes are due to the lack of knowledge and uptake of both sound participatory models and agro-ecosystems approaches to the sustainable management and use of natural resources;

The **socio-economic** causes relate to the extreme levels of poverty (few tools, poor housing, small land areas and little disposable income) among the rural subsistence farmers of the Kagera basin. Population pressures, insecurity and the struggle to meet short term needs have compromised the capacity of farming communities to sustain the land resources, even though it is in their best interests.

The **institutional, regulatory and policy** causes relate to widespread institutional deficiencies and low human capacities, which have led to inadequate policies, laws and regulations, insufficient enforcement and poor extension services. Local government land resources planning capacity remains weak (few staff, limited training), sectoral, uncoordinated and ineffective in terms of bringing about a change from unsustainable to sustainable land use and resources management. There has been some development progress, for example in land registration, improved water supplies, environmental protection, crop and livestock production targets, local organisation and access to inputs and services. However, it has also led to confused messages - especially those reaching land users, lack of incentives, inefficiencies and a failure to adopt sustainable farming systems and management practices. The benefits of approaching the transboundary aspects of management of the natural resources and agro-ecosystems of the Kagera basin had, until commencement of work on the TAMP, remained beyond the perception of the four countries.

Table 2 presents the main environmental problems, their technical, socio-economic, institutional and socio-political causes and demonstrates the complexity of the issues facing the Kagera.

Annex 4: Table 1 - Analysis of Main Environmental Problems of the Kagera River Basin

Problems	Symptoms	Technical causes	Socio-economic causes	Institutional causes	Socio-political causes
Land degradation	Low above ground biomass	Extension of cultivation into unsuitable areas Little use of cover crops Repeated bush fires Overgrazing Climate change (late onset and short duration of rains)	High rates of population growth Increasing demand for fuelwood and charcoal Unsuitable agricultural and pastoral practices Increasing numbers of livestock Absence of off-farm opportunities	Traditional structures not adapting to new economic and demographic order Limited competences and traditional sectoral approaches of supporting institutions	Poor co-ordination and implementation of many and various land and agricultural policies
	Declining soil fertility	Reduction in traditional fertility management practises (fallows, rotations, OM cycling) Climate change (higher intensity rainfall leaching nutrients)	Unsustainable agricultural practices – nutrient mining High rates of population growth	Extension services unable to support land users to adapt to changes	Poorly understood and unsuitable agricultural and demographic policies
	Widespread soil erosion	Low plant cover Low soil organic matter (low aggregate stability) Erosion control structures not maintained Climate change (higher intensity rainfall)	Over cultivation Organic matter / manure unavailable Livestock trampling (particularly around watering areas inter alia valley dams, river banks)	Limited agricultural services	Land management policies not effectively implemented

Problems	Symptoms	Technical causes	Socio-economic causes	Institutional causes	Socio-political causes
Water degradation	Drying up of springs	Inadequate recharge – rapid run-off from degraded soils Climate change - reducing volume and duration of rainfall	Land pressure and cultivation of the fringes of wetlands	Lack of structures with experience in water resource management	Lack of appropriate means and a policy for coordinated management of shared waters
	Increased incidence of floods	Rapid run-off from degraded soils	Absence of flood control structures	Lack of structures with experience in water resource management	Lack of appropriate means and a policy for coordinated management of shared waters
	Sediment accumulation in wetlands, watercourses and lakes	Stream and river sediment loads are excessive Periodic very low periods along certain watercourses	Extending crop lands on riverbanks and steep slopes Over-cultivation of croplands Overgrazing of pastures	Poor, sectorally-based support services	Inter-sectoral approaches not adopted by local service providers
	Reduced groundwater storage capacities	Climate change - inadequate recharges (low rainfall) Excessive harvests	Increase in human and livestock population	Lack of efficient structures and mechanisms	Inappropriate water management policy
	Physical, chemical and biological modification to waters	Water pollution: (i) household refuse (ii) industrial waste (iii) chemical and toxic products; and (iv) sludge from industrial mines	Difficulties in investing in environmental waste disposal	Decontamination services not operating	Policies on hygiene and those relating to the environment are not internalized.
Degradation of biological resources	Reduction in presence or disappearance of indigenous wild and crop species (including trees, perennials, annuals, medicinal plants)	Excessive deforestation Concentration on small number of crop species Overgrazing	Land pressure Unsuitable agro-pastoral practices Excess harvest of forest products	Inadequacy of agricultural and forestry services	Environmental laws, policies and by-laws not enforced

Problems	Symptoms	Technical causes	Socio-economic causes	Institutional causes	Socio-political causes
	Destruction of areas of habitats which protect local biodiversity areas	Deforestation Conversion of pasture to small-holder cropping Creation of islands of e.g. gallery forest in a "sea" of agricultural land – loss of connectivity of habitats	Land pressure Unsuitable agro-pastoral practices Excessive harvest of forest products	Inadequacy of agricultural and forestry services	Environmental laws, policies and by-laws not enforced
	Reduction in populations / disappearance of animal (wild and domesticated), fish, bird and reptile species	Destruction of habitats and reduction of food resources Promotion of exotic breeds Poaching Unsuitable fishing techniques and equipment	Land pressure Population pressure Demand for increased yields of milk and meat Growing demand for game, trophies, live animals Excessive hunting and fishing	Ineffectiveness of wildlife, agricultural and environmental management structures – lack of appreciation of benefits of intersectoral approaches Potential of local races not recognised / promoted by agricultural services	Laws, policies and by-laws not well understood by land users Laws, policies and by-laws not effectively implemented
	Modification of the aquatic ecosystem	Modification of water regime Climate change Pollution (agricultural and industrial) of hydrological system	Excessive water harvesting Non-observance of waste regulations in urban, industrial and commercial cropping areas	Poor water management services Limited waste disposal services	Management and improvement policies are not assimilated
	Appearance of new plant species	Introductions	Lack of awareness of the potentially damaging implications of exotic species in river systems		

Annex 4: Table 2 - Analysis of Root Causes, Constraints & Baseline Activities in the Kagera Basin

Major impacts of degradation of natural resources	Intermediate and root causes	Barriers to sustainable land management	Baseline scenario activities
Reduction of plant cover	Human and livestock population pressure on land – decreasing holding size, fragmentation, farm land used for homesteads. Lack of land user/community awareness of methods to improve land management Accelerating deforestation due to growing demand for wood for energy and construction, also land for agriculture	Insufficient awareness and participation of local communities in development actions and natural resources management Lack of non-agricultural employment Land insecurity and landlessness	Technical measures for protecting natural resources are taken in certain areas (e.g. forest reserves and protected areas) but protection not effectively implemented Regulatory measures not widely implemented as negative (fines etc.) Very few agro-processing or non-agricultural alternatives are available in rural areas to reduce pressure on the lands
Low soil fertility	Rapid population growth causing enforced abandon-ment of traditional systems which maintained soil fertility (fallows, rotations, use of manure). Resulting in nutrient mining Cultivation of marginal lands (steep slopes, wetlands, driers pastoral lands), repeated bushfires, overgrazing	Existing traditional or modern systems of land conservation ineffective Ignorance and lack of application to methods and practices favourable to sustainable agriculture Lack of means dedicated to soil conservation and restoration of degraded lands	The agricultural, pastoral and forest extension services poorly resourced, sectoral.
Lowering of the groundwater table and changes to hydrological regimes in watercourses	Exposure of bare ground across the watershed, resulting in formation of hard pans, reduced infiltration and groundwater replenishment Excessive harvesting of surface aquifers Climate change – shortening rainy seasons (resulting in previously perennial streams becoming seasonal) and more frequent high intensity rainfall leading to 'flash floods'	Uncontrolled use of unsuitable soil and water conservation measures Lack of an integrated water management policy.	Ineffective management and protection of upper catchments Proposals to install harmonized systems of data processing, monitoring-evaluation and information dissemination exist but have not been made operational (this aspect is addressed by NELSAP – IWRM project and LVEMP)
Disappearance of some plant, animal and others species	Destruction of habitats Poaching and Commercial pressures Promotion of exotics	Land pressure Non-observance of environmental protection measures	Limited local awareness / available information on the importance and value of biodiversity (especially agro-biodiversity)

Table 3 summarises the causal relationships between the immediate and root causes of land degradation in the Kagera basin. The table assists in understanding the complexity and inter-dependence of the causes and barriers to sustainable land management. The analysis highlights that past and indeed many current activities in the Kagera basin have had only limited impact on land degradation and that there remains an urgent need to intervene to use the engine of agriculture to escape from the vicious cycle of land degradation into the virtuous cycle of sustainable agro-ecosystem management including the activities proposed in TAMP to address the key transboundary issues agreed in the Entebbe PDF-B workshop (Table 4)

Annex 4: Table 3 - Kagera TAMP Actions to Address Identified Priority Transboundary Issues with Global Significance

Transboundary Issue	TAMP Actions
Harmonise laws and regulations	At national level and across the basin, to address the interlinked issues of agriculture, land degradation, biodiversity conservation, carbon sequestration, protection of international waters and sustainable livelihoods and food security.
Promote application of policy/laws	Through local consultation, experience sharing and capacity building for community-driven conflict resolution/management solutions between user groups (herders, farmers, foresters, park wardens). Lessons of GEF Cross-borders project; LVEMP, NELSAP, ASARECA, etc.)
Optimize communications/exchange of information	Among countries and sectors (food security, agriculture, environment) for effective collaboration, coordination and early warning across river basin (joint GIS/RS systems/databases, planning, training, electronic conferencing for committee meetings, stakeholder consultation).
Control and management of Bush fires	Community awareness of negative effects of repetitive burning and potential value/alternative uses of biomass (grasses, crop residues, etc) such as CA/zero grazing, and methods for managing vermin. Laws and by-laws.
Control of Livestock movements, trade and disease transmission	Links and guidance from existing transboundary programmes (PACE; tsetse control, AU-IBAR) to strengthen actions. Assess impact of land use change - loss of pastures, conversion of cattle corridors to ranches, commercial farms and their implications/ impacts on access to grazing/ water in dry season/drought periods.
Control of soil erosion, sedimentation and impacts on rivers, wetlands and flood risk	Improve land management practices (cropping, livestock, forestry) through integrated approaches and local adaptation of conservation agriculture, agroforestry, zero grazing, fodder and rangeland management. Community monitoring/assessment of impacts on runoff, soil erosion, sedimentation, siltation of wetlands, rivers and inland waters, improved productivity and ecosystem function (hydrological regime, nutrient cycling, carbon emissions etc.)
Water resources management (quality and quantity)	Guidance and capacity building on integrated approaches for land, water and biological resources planning and management to reduce soil erosion, sedimentation, pollution (e.g. horticulture; paddy) and improve HEP generation. Coordinated, complementary actions with LVEMP and NELSAPs projects (water allocations, information, resource management, water use efficiency).
Control of Health issues related to water quality	Address human health and well-being issues as part of integrated resources management. Assess effects of land use and wetland protection /management on water quality (e.g. suspended solids that exacerbate bacteria/water-borne diseases (dysentery, typhoid, cholera, bilharzia, malaria).
Control of sources and spread of Water hyacinth	Through expansion of actions of NELSAP and LVEMP to upstream branches of the Kagera (from Lake Victoria) Assess effects in reducing effects: asphyxiation, effects on aquatic life, fish stocks, water quality.
River bank and lakeshore protection and management	Assess situation and develop community driven, coordinated solutions across borders for protection and management, conflict resolution and local regulations.
Wildlife management and control	Assess effects of movement, hunting, harvesting of wildlife species (animal + plant). Develop plans/options to enhance wildlife conservation and community

Transboundary Issue	TAMP Actions
	benefit sharing arrangements across borders (e.g. Akagera national park).
Impact of refugees on land resources and community based management	Assess and identify options to reduce effects/threats to security of refugee movements on sustainability and investment in land resources management, (e.g. Burigi-Akagera boundary areas and Lake Mburo National park).
Charcoal making and sale	Assess extent and implications of cross border wood harvesting and burning for charcoal and propose solutions through community plans and consultation.
Control of Crop pests and diseases movements and outbreaks	Identify and exchange bio-control practices and disease resistant germplasm and promote participatory breeding/propagation approaches among communities in the basin.

ANNEX 5 - PUBLIC INVOLVEMENT PLAN

Kagera Transboundary Agro-Ecosystems Management Project (TAMP)

Introduction

The Kagera River basin extends over 59,800km^2, has a relatively small number of towns and only one city (Kigali, Rwanda). It includes many very densely populated rural areas especially in Rwanda and Burundi and the western part of the basin in Uganda. The total population of the basin is estimated (using projections of the most recent national census data) to be around 16.5 million people (2006) and with current growth trends this will reach over 18 million by 2015. There are very variable densities across the basin (average density persons/km2: 372 in Rwanda, 268 in Burundi, 135 in Uganda, 61 in Tanzania). Rwanda is the most densely populated country in Africa, reaching over 500 persons per km^2 in cultivated areas. The proportion of people living in the rural areas dependent on subsistence farming ranges from over 78% in Tanzania to over 90% in Rwanda and Burundi.

A wide range of stakeholders are involved in the use and management of the natural resources of the Kagera River Basin. The rural peoples, largely the farmers, livestock keepers and herders, are the stakeholders whose livelihoods are most affected by current levels of land degradation across the basin and their futures are dependent on reversing this threatening trend. Other users of land resources, for example for charcoal making, brick making, quarrying and small industries based on agricultural products, such as tanning, will also be involved in the community level planning and decision making processes as they often contribute to land degradation through their activities. Government bodies, local authorities, research and academic bodies, non-governmental and civil society organisations, development projects and the private sector, working in the basin are also stakeholders as they determine the amount and type of support available to rural communities. National decision makers and those with mandates to address transboundary issues, in coordination with other nations, are also stakeholders as they determine the polices, legislation and institutional support in the basin

Typology of Main Stakeholder Groups

The rural communities, made up largely of smallholder arable farmers and livestock keepers, are the predominant managers of the natural resources, they are directly dependent on the natural resources for their livelihoods and will be the direct beneficiaries of the TAMP. They include:

- Farmers: mainly subsistence farmers but practicing a wide range of farming systems from intensive perennial banana-coffee based systems, to annual cereal based systems, to mixed agroforestry and crop-livestock systems.
- Pastoralists/Herders: livestock herding and seasonal migrations to find water and grazing used to be more common, however, due to unfavourable policies, many pastoralists are becoming sedentarised and now growing crops and managing smaller livestock herds. There are still large herds of Ankole cattle, owned by many persons.
- Households relying for their livelihoods on a combination of farming or herding with fishing or forestry activities are included, as their activities directly influence the land and water resources. This includes, for example, those settled near the Kagera River, wetlands and lakeshores, and those managing woodlots or making use of resources from natural forests. It is recognized that the majority of farmers and herders rely to a greater or lesser extent on hunting and gathering of food, fodder, timber, medicinal products and other non-wood forest products, especially those without access to land and those living near wetlands, parks, forest reserves and other protected areas. Fisherfolk, foresters, wood craftsmen, beekeepers, traditional healers and other groups whose activities depend on the management of the natural resources, although not the main target groups will also benefit through integrated community management plans.
- Community level leaders and decision makers with responsibilities for land resources allocations and conflict resolution within and between community territories, for developing and applying

local by-laws and for representing the community /civil society at higher level decision making fora- district, region, national levels;

- Civil society organizations such as farmers groups and associations, water users associations, will be the basis for capacity building in participatory learning and research-action approaches

Women are among the direct project beneficiaries and a major target group as they are largely responsible for many agricultural and resource management activities in addition to their family and household tasks. This includes land preparation and planting, weeding, collecting wood and water for household water and energy needs, watering and feeding stall-fed and small livestock, gathering medicinal plants or wild foods to supplement their diets, and so forth. Moreover, as a result of HIV/AIDS and rural exodus there are many female-headed households that are entirely responsible for farm and livestock management.

In addition to these direct beneficiaries of the Project, there are a number of other stakeholder groups that will be involved to varying degrees:

- National and international NGOs already supporting on-going actions at community levels in natural resources management will be important partners for experience sharing, capacity building and backstopping activities.
- Local and district authorities and government bodies will be strengthened with a view to their implementing cross-sectoral approaches, empowering land users through participatory processes, supporting community action planning, implementation, monitoring and resource mobilisation.
- Researchers from district/regional bodies and, as appropriate, universities will provide technical support for sustainable land management, monitoring of impacts on land degradation, biodiversity, carbon sequestration, etc, and data analysis for decision makers.
- The private sector will be involved for the provision of required inputs, services, financial mechanisms and investment.
- The donor community and projects with complementary objectives and activities will be involved for co-funding of activities.
- Regional organizations will be involved, through the Project Steering Committee, to ensure coordination and harmonization of activities and responsive decision making among the countries sharing the Kagera basin based on experiences and lessons learnt.

This identification of main stakeholders was developed during the PDF-B and confirmed at the full project development workshop (Entebbe, November 2005).

Natural Resources Management and Planning Context

At times, conflicts of interest arise between the different groups of land resource users in the basin. In particular, where grazing areas and crop lands are in proximity, farmers and livestock keepers come into conflict where stock stray into cropped lands or cropping encroaches into previous grazing areas. Traditionally, farmers would allow grazing on crop residues in extensively cropped “rweya” lands in turn for manure, and protocols were respected for seasonal livestock movements for grazing and water. However land shortage, pressures and changing land use are limiting opportunities for such ententes and for maintaining permanent livestock corridors. Rural land users’ needs also conflict with those of other users, for example, commercial quarry operators and small-scale brick-makers, activities which compromise the land potential for productive purposes. Village and road expansion also implies a permanent loss of productive land. Commercial farms, for example, sugar cane plantations and ranches, may occupy land previously used for seasonal grazing, provision of thatch and other products. Communities are also prevented, through regulations, from using resources in protected areas such as forests and national parks, however, alternative sources may not be readily accessible- medicinal plants, firewood, etc. In some case women and youth are marginalised and there are conflicts of interest between gender and age groups as a result of male-dominated decision making processes and control over resources in farming and pastoral households and at community level.

The project is designed to support these rural communities and the individual farmers/herders, men, women and youth, to make choices in their land use and management systems which help resolve conflicts, improve their socio-economic well-being (food security, reduced poverty and labour) and also, through the engine of agriculture, to break out from the vicious cycle of land degradation through opportunities generated from land restoration and sustainable use. This requires a major shift in resource planning and management dimensions, through consideration of commodity-based opportunities for raising farm-household income (maize, bananas, livestock products), the driving force today for land use decisions, alongside and as an integral part of longer term options for generating household and community livelihood benefits and environmental benefits.

When land was not in short supply, traditional land allocation mechanisms and access rights controlled by community leaders, ensured the management and restoration of communal resources. The current land degradation paradigm is driven by land pressures but also by top-down development and sectoral approaches that disempower communities in managing their territories and resources. Such community responsibility and capacity can be regenerated with the support of local government through inter-sectoral approaches that consider the range of resources and options and demonstrate the multiple benefits that can be derived from well functioning land use and agro-ecosystems. Besides sustaining and increasing productivity this includes raising awareness of the benefits of agro-biodiversity, carbon sequestration, climate change mitigation and protection of the international waters of the Kagera River. Communities need to be trained in village land use planning to assess their communal resources and their needs (quality soils, grazing, fuelwood, water, housing materials, medicines, etc), to identify and weigh up the options and make joint decisions for improved resources management that will both meet their immediate needs and generate long term benefits for the community and other stakeholders in the river basin.

In this context, TAMP aims to participate in community development through supporting activities decided upon and undertaken by the communities for improved resources management. The need then arises to accurately identify the different groups making up these communities and understand their decision making processes, and the extent to which these are equitable and gender sensitive, and to ensure the representativeness of community leaders and decision-makers, particularly in selected pilot areas (micro-catchments, communities and larger agro-ecosystems). This will help avoid conflicts of interest or competition within the communities, which could limit the scope of the operations carried out, and will also enable dialogue among the various socioeconomic and cultural groups with a view to improving the active participation and thereby the situation of marginal or disadvantaged groups (landless, youth female headed households, widows, orphans, HIV/AIDs affected households). Such community planning will help avoiding dispersion or duplication of sectoral activities and will instead facilitate long-term integration and coordination of agriculture and environment interventions.

Project Development

Consultation was initiated in 2001 and intensified during the period 2004-6 at regional and national levels by the governments of the three beneficiary countries of the PDFB (Rwanda, Tanzania and Uganda) to determine the main scope of the TAMP and particularly the mechanisms for inter-country co-operation. Burundi only officially joined the project development process in late 2005, but has been kept informed of the process. The Kagera TAMP has been prepared with the technical support of FAOs Land and Water Development Division and guided by the National Project Managers through a process ensuring the active participation of the widest possible range of stakeholders in the basin. This process included:

- the conduct of transects and participatory rural appraisals (PRA) with representatives of target communities in the range of agro-ecosystems and landscapes;
- consultative meetings with local authorities, and representatives of civil society organisations, NGOs, the private sector, as well as donors working in the basin;
- involvement of relevant government bodies, academic and research bodies and partner programmes and projects (land, agriculture, forestry, environment, community development, etc.) in diagnosis of constraints and opportunities and priority setting;

- meetings of the multi-sectoral, national Technical Advisory Committees, representing the various ministries and environmental coordination bodies dialogue, backed up by field visits of TAC members to review land degradation issues on the ground;
- two regional Project Steering Committee meetings among decision makers in the four countries sharing the basin (including Burundi) to agree on the scope and content and the management and coordination mechanisms of the project.

The project team has taken note of the issues raised at all levels and identified requirements for active participation of the multiple stakeholders and successful implementation and project sustainability. Relevant government bodies, NGOs, civil society organisations and projects working in agro-environmental management and socio-economic development in the basin will be involved in project implementation through strategic partnerships based on their comparative strengths. They will contribute to the capacity building of local stakeholders and provision of an enabling environment and opportunities for the adoption of sustainable management practices in the TAMP.

The project preparation process considered the main principles related to participatory management of the agro-ecosystems and natural resources, with the aim of securing the sustainable management and development of the basin. These principles are:

- Inquire about and take into consideration the points of view and interests of various stakeholders, with attention to gender issues and harnessing local expertise and knowledge;
- Support information exchange with different stakeholders and clarify their roles and responsibilities;
- Take into account economic, social and institutional causes and drivers of the identified environmental issues;
- Advocate an holistic and intersectoral vision of problems and the solutions at various scales and in the short and long term;
- Follow an iterative process of identification, integration prioritisation, and re-validation of envisaged activities through dialogue and consensus building.

Consultations were held with concerned ministries and coordinating bodies to discuss findings and priorities at national and transboundary levels, the overall mechanisms of regional cooperation, institutional and technical issues linked to reversing land degradation and improving livelihoods of the rural people in the Kagera River Basin. The resulting in-depth transboundary and in-country diagnosis has been supplemented by relevant information from Burundi.

The countries' commitment to TAMP was affirmed through the involvement of national focal points, who assisted in TACs, PSCs, and through the project formulation workshop (Entebbe, November 2005), which was attended by government representatives, selected experts and projects from each of the TAMP countries, GEF/UNEP and FAO. Meetings were also held with potential donors in the four countries to share project progress and expectations and generate required co-funding support. Final consultations and review of the draft GEF Project Brief was held during the second PSC meeting with all four beneficiary countries in Kigali, on 22nd February, 2006.

PROJECT IMPLEMENTATION

To ensure sustainable management of the basin's natural resources, the full project will continue to apply participatory approaches, as during project development, bringing together all relevant stakeholders and involving them not only as participants but encouraging active participation in its implementation, decision making, monitoring and evaluation. The participation of whole communities (young, old, men, women, land owners, tenants, landless and female and child-headed households) will be encouraged, through awareness raising meetings, dissemination of materials (leaflets, maps etc.) and transparency regarding the main project goals and expectations. Appropriate training (initially in pilot areas, then scaled-up) will be provided to ensure land users understand and have the skills and tools to implement good agro-ecosystem management practices, to protect and improve their soils, manage agro-biodiversity, mitigate the effects of climate change and protect the shared waters of the Kagera River.

Implementation of project activities will be ensured, in particular, by the local communities and their organizations, with the support of the project's technical services and partnerships (government, NGO and private sector), local development processes and authorities (traditional, sectoral and, administrative/ political). A participatory M&E system will be established so that local communities (and civil society in general) are involved in continuous monitoring of activities (progress and impacts). Particular attention will be given to gender issues and the social status of those involved in community/local decision-making processes, as well as to ensure consensual membership of all parties concerned in the project, prior to its start-up. Direct contribution of beneficiary populations, in cash and kind (e.g. use of land for demonstration plots, membership of target groups), constitute a part of the project co-funding.

When project activities begin scaling-up from pilot micro-catchments to wider watershed level, it will be important to ensure all stakeholders are represented in watershed associations that transcend individual villages and in negotiations over large-scale problems. Stakeholder co-operation is more likely if benefits are demonstrable (e.g. crop/livestock yields increasing as a result of improved techniques tested and adapted by Farmer Field Schools (FFS); costs/benefits verified by M&E system; mechanisms introduced at community level to generate payments for environmental services). Equity can also be enhanced if the distribution of costs and benefits is considered fair, acceptable and agreements are enforceable by law or by-law.

At the transboundary level, TAMP will address a range of cross-border issues which impact on the natural resources and livelihoods of the main categories of TAMP beneficiaries (see above) and which were repeatedly brought to the attention of the project preparation team during PDF-B. These were specifically: the control of erosion, water management, management of bush fires, loss of agro-biodiversity, management of livestock movements to reduce pest and disease transmission, control of crop pest and disease outbreaks, the impacts of (return) refugee movements, re-settlements, and illicit exploitation of resources of protected areas. TAMP will work at transboundary level through reviewing, promoting implementation of, and as required, harmonizing by-laws, policies and regulations to improve management of the transboundary ecosystem. In particular, efforts will ensure that policies within (and between) each country are in accord, that land users do not receive conflicting messages and are cognizant of the concerned policies, action plans and regulations and how their application can support rather than hinder their management of resources and livelihoods.

A few cross-border natural resources management issues were raised but will not be directly supported by TAMP as they are the subject of other projects, these include: water hyacinth control, medium and large scale irrigation schemes, management of national parks and protected areas and health issues related to water. Local communities will be helped in obtaining required support for these issues through collaboration with relevant projects and programmes. TAMP will nonetheless contribute to harmonization of the policies and laws on these issues and, through working with farming communities in improving land use/resources management, will reduce pressures on wetlands, protected areas, riverine forests, and will promote benefit sharing arrangements for collaborative management of common property resources.

The focus will be on actions on the ground piloted by TAMP and scaled up through district development processes (agriculture, rural development and environmental planning and resource allocations). For increased awareness raising and upscaling, TAMP will support feedback and information sharing between communities, districts, basin-wide and national policy level through sharing of reviews, project progress reports and recommendations of project committees and through dissemination of information by mass media etc (inter alia radio, video films, materials for schools, youth and adult education, drama, leaflets).

Expected Impacts on Beneficiaries

Primary Beneficiaries: The Project will have a positive impact on the main categories of beneficiaries (see above), particularly strengthening capabilities of local land users to sustainably manage and improve productivity of their agro-ecosystems (i.e. regenerating fertility and resilience of their degraded arable lands and pastures; reducing pressures on wetlands, forests, riverbanks and fragile lands). Land users will

be enabled to realise benefits from their more diverse, better functioning and more productive agro-ecosystems, notably:

- the conservation and sustainable use of much neglected agricultural biodiversity,
- enhanced soil organic matter, biomass and soil vegetative cover and resulting improvements in nutrient recycling, carbon sequestration and maintenance of the hydrological regime,
- reduced vulnerability to climatic vagaries and other shocks (crop failure, sick livestock, due to pests, disease, unreliable rains, risk of drought or floods, etc.),
- improved productivity, reduced drudgery and more equitable sharing of benefits and costs of improved resource use and management..

TAMP will raise the technical capabilities of district staff and service providers (notably technical officers, planners, research, extension but also through improving support provided by private suppliers, artisans, credit agencies, etc.) to support and build capacities of local communities in sustainable management of their agro-ecosystems and territories. This will include inter alia:

- the harmonisation and implementation of action plans and by-laws (etc.),
- inter-sectoral technical support targeting improved land use systems rather than the individual resource components (forest, water ,soil etc),
- methods and support for community land use planning and implementation,
- identifying and catalysing incentives and mechanisms for generating benefits from the environmental services provided by land users (e.g. benefit sharing between land users upstream and water users downstream; carbon offset credits for activities that sequester carbon such as agroforestry and afforestation);
- training and support of farmer groups (FFSs, herders, land and water users associations, etc) for the local testing and adaptation of improved techniques (soil and water conservation, water harvesting, pasture improvement, agroforestry, conservation agriculture using adapted tools and machinery, and so forth) and linking resources management with income generation;
- reducing gender bias and enhancing equity in resources management and decision making, improved access to resources and services, and fair and equitable sharing of benefits (e.g. reducing drudgery for women in tilling and weeding through conservation agriculture, agroforestry, woodlots, water harvesting; womens' involvement in community planning and monitoring, gender equitable training etc.)
- Promoting the use of local / indigenous knowledge and adding value to local products for example, knowledge on the use and management of local domesticated and wild plant species, biocontrol of pests and diseases, animal health, storage and processing

For various reasons (including land tenure / inheritance issues) youth in the Kagera basin are reluctant to become involved in agriculture and either remain idle in rural areas, an untapped resource, or migrate to the urban areas. TAMP aims to catalyse not only their direct involvement in agriculture, but also encourage their entrepreneur potential in related activities (agri-processing, marketing etc.) stemming the rural-urban migration and easing pressure on the land.

Project technical personnel, district staff, NGOs and other partners will benefit from training, equipment and logistic support to allow them to better assist the populations and facilitate community management of natural resources. The governments of concerned countries will benefit from strengthened co-operation, information sharing, experience and technology, as well as the harmonization of approaches, policies and legislation in natural resources management.

More specifically, during the pilot stage of KageraTAMP, representative pilot sites will be selected in all four countries, including micro-catchments, communities and wider agro-ecological units (e.g. wetlands, steeply sloping areas, degraded pasture/rangelands, etc.) where project activities will be focused for the first

two to three years of the project. TAMP will then scale-up activities to increase impact and widen the benefits of the project across the countries and basin, targeting not only hot spots, but also bright spots.

TAMP will work with local communities in each pilot site in order to strengthen local land use planning and management capabilities. It will work through target groups of land users to increase their awareness of the benefits of adopting an agro-ecosystems approach to managing their land resources, to increase productivity and also, where possible, to diversity their sources of income and improve their livelihoods. Local stakeholders living in these communities will benefit from training, technology transfer and capacity-building. Stakeholders will have possibilities to benefit through study tours and local adaptation of techniques and methods used in other areas in Africa. These activities will result in improving natural resources management, building capacities of local organizations and conserving agro-biodiversity.

Secondary Beneficiaries of TAMP include essentially the rural populations beyond the targeted communities. These include users of the shared waters of the Kagera and specifically beneficiaries of the Kagera IWRM project and at wider level, of the large scale Lake Victoria and Nile Basin programmes (LVEMP and NBI-NELSAP). These are major partners in environment and water resources management in the Kagera basin. The rural communities located around Lake Victoria will also benefit from the project through reduced sediment and nutrient load of the Kagera and a better regulated hydrological regime.

Technical personnel of the four beneficiary countries, government institutions and other development partners in the project areas will benefit from training and practice in the application of intersectoral and agro-ecosystems approaches and local level land use planning methods. As a result, these staff will be better equipped to help local land users and assist efforts to reverse land degradation and ensure more sustainable management of their natural resources. Facilitators will be trained in adopting FFSs approaches to assist farmers in identifying and adapting improved land use systems and resource management techniques for wider local implementation.

Research and academic institutions dealing with natural resource management, environmental monitoring and assessment will benefit from the strengthened scientific collaboration between the four countries of the TAMP. Collaboration among institutions will assist cooperative actions with the direct involvement of communities, and will therefore establish solid bases for integrating modern scientific approaches and traditional methods and experiences.

The four collaborating governments and their policy makers will benefit from increased co-operation, information and experience sharing in development (and harmonization) of by-laws, policies, action plans and transfer of technology. Dissemination of lessons-learned from the Kagera TAMP will, in the latter years of the project, be scaled out across the basin and potentially information and lessons learnt could also be made available to beneficiaries in other parts of Africa, through the project website, publications, contributions to meetings and partnership initiatives such as NEPAD and TerrAfrica).

Criteria for Selection of Project Pilot Sites

The involvement of all areas and rural populations in the basin of the four participating countries would raise unrealistic expectations, which could result in dispersing TAMP's resources too thinly to achieve impact within the 5-year time-span of the project. Consequently, it has been agreed that TAMP will select pilot intervention sites using a participatory process and targeting representative communities and catchments. Target districts and agro-ecological areas have been tentatively identified in each country. During initial stakeholder workshops and consultations, the choice of participating pilot communities will be made on the basis of selection criteria to be defined by the project team and approved by stakeholders.

District coverage

Rwanda Through the major administrative reform (early 2006), the 12 provinces in Rwanda have been merged into 4 provinces and the City of Kigali; with major implications on administrative boundaries and responsibilities. There are six (6) proposed target districts for TAMP: Nyagatare, Kayonza,

Kirehe, Bugasera (4) districts in Eastern Province (merger of Umutara, Kibungo and the southern region of Kigali Rural); Kamonyi district (1) in Southern Province (merger of Butare, Gikongoro and Gitarama provinces; Rulindo district (1) in Northern Province (merger of Byumba, Ruhengeri and the northern part of Kigali Rural).

In Tanzania, the project includes the (4) districts of Ngara, Karagwe, Bukoba and Missenye (recently divided from Bukoba) which are all part of the Kagera basin and are integrated administratively in the Kagera Region. These districts are spatially very large compared to the districts/provinces in Rwanda and Burundi.

In Uganda, the Kagera basin includes parts of the districts of Kabale, Ntungamo, Mbarara and Rakai (4) and possibly also Isingoro and Kiruhura (2) which were not included in the PDFB

Burundi: The Kagera basin covers all or part of 11 "Provinces" in Burundi (Bururi, Mwaro, Rutana, Gitega, Muramvya, Karuzi, Kayanza, Ngozi, Muyinga, Cankuzo Kirundo) each of which is subdivided in communes and smaller zones. Prioritiy areas selected for TAMP actions are the four highland and medium altitude provinces of Muramvya, Mwaro, (NW of Kagera basin) Gitega and Karuzi (centre) because of their important tributaries, the Mubarazi, Mushwabure, Waga, Ruvyironza and Ruvubu rivers; and one lowland province, Kirundo, which shares with Rwanda the cross-border Cohoha, Rweru and Gacamirinda lakes. These include a range of ecosystems: highlands of Congo-Nile peak (steep slopes; natural and planted forests); central plateaux (medium altitude, high population density, soil degradation, wetlands ecosystems, agro forestry) and lowlands of the basin of Bugesera (wetlands ecosystems, lakes etc.). Resources management interventions in the provinces will be complemented by central level institutional support (Direction Provinciale de l'Agriculture et de l'Elevage).

Annex 5 Table 1 Proposed coverage and target areas of Kagera TAMP

Level	Burundi	Rwanda	Tanzania	Uganda
1	Country			
2	-	Province (3)	Region (1)	Province (1)
3	Province (5)	District (6)	District (4)	District (6)
4	Commune (10)	Secteur (24/90)	Ward	Sub-county (12)
5	20 community action plans (colline/secteur)	24 community action plans (cellule)	12 village plans by Y2 (64 by Y5)	12 community (parish) action plans
target micro-catchments	10 (5,000 ha)	12 (6,000 ha)	12 (6,000 ha)	12 (6,000 ha)
target pasture/ rangeland (between 500 ha (2,000 households = 12,000 persons) to 10,000 ha per country				
target wetlands, lake fringes/riverbanks 3000 ha - 12,000 ha per country				

Partner institutions

A number of partner networks and institutions have been identified for which collaboration and eventual inclusion of other partners will be further elaborated during the initial months of the project:

Relevant regional technical associations and networks addressing land resources, agriculture and food security will be involved for technical guidance and capacity building activities, especially **ASARECA** (Association for Strengthening Research in East and Central Africa), **ICRAF** (World Centre for Agroforestry) and its affiliated bodies (**RELMA, TSBF**). Other potential partnerships will be made: Links for documentation and data analysis with **WOCAT** (World overview of conservation approaches and technologies); and links for capacity building and information sharing with the **African Conservation Tillage network (ACT)**. Other partner networks include the recently established **Tanzania Lake Victoria land management consortium** (launched with FAO support to enhance coordination and experience sharing among the many actors and organisations working on land management in the region); **INSPIRE** (Integrated soil productivity initiative through research and education) and **UGADEN** (Uganda Agroforestry development Network) and others.

National Partner Organisations and Institutes

The ***National Agricultural Research Organizations*** *(*NARS) through their respective National Agriculture Research Strategies (e.g. Uganda 2000-2010) will collaborate by providing research and development expertise in regard to, land and soil degradation, mining of nutrient resources and deforestation, demonstrating the benefits of better managed land in terms of increases productivity, financial returns and livelihoods, as well as generation of global benefits

Specific ***Agricultural Research and Development Institutes/Centres*** will be involved to strengthen participatory adaptive research methods, tools and training and assist in fine tuning and dissemination of technologies (land use/management practices, income generation) in the relevant agro-ecological zones and assist on monitoring/evaluating results with land users in collaboration with the GIS/RS centre (for example: Kachwekano ARDC Uganda, ARDI Ukiriguru in Mwanza and ARDI Maruku in Bukoba, Tanzania).

In Uganda, the ***National Agricultural Advisory Services (NAADS)*** programme which is now operating in all Kagera basin districts will collaborate to support the provision of services to and empowerment of smallholder farmers and rural artisans, including training and farmer-driven learning experiences for identifying needs, analysing constraints and opportunities enabling farmers to demand and access services from the various research and extension service providers including the private sector. In particular, service providers and NAADS staff from the more experienced districts will be involved (other districts have only just joined the programme). In the other countries the relevant extension and other support services will be closely involved through the target districts. Similar arrangements will be made with extension programmes in the other countries, for example, through ASDP and DASIP in Tanzania, RSSP in Rwanda.

Collaborative arrangement will be established with ***Universities and other bodies*** that undertake research and training in environmental, soil and other land and natural resources management issues as appropriate, with a view to drawing on best available expertise and experiences (e.g. soils/land use units, GIS/RS units for analysis, improved information, monitoring and decision-making), *inter alia*: Makerere University, Kampala; the University of Butare, Rwanda; Institute Géographique de Burundi, (IGEBU) and the Lake Zone Agricultural Research and Training Institute (LZARTI) in Mwanza, Tanzania.

Collaborative arrangements will also be established with relevant ***national and internationa****l NGOs* operating in or nearby the basin such as: Africa 2000 Network (operating in Kabale district and Eastern Uganda with FFS and extension to improve farmer's food security through encouraging sustainable practices); Vi-agroforestry and ICRAF (supporting agroforestry research and development in the region)

ANNEX 6.A: INSTITUTIONAL AND IMPLEMENTATION ARRANGEMENTS

TRANSBOUNDARY AGRO-ECOSYSTEM MANAGEMENT PROGRAMME FOR THE KAGERA RIVER BASIN

1. Nile Basin Operational Structure and Decision-making Bodies

The Kagera River Basin lies within the Nile Basin which has developed a partnership among member states and a joint operational structure.

The Nile Basin Initiative (NBI) is a regional partnership, among the basin states of the Nile (Congo DR, Rwanda, Burundi, Uganda, United Republic of Tanzania, Ethiopia, Sudan, Kenya, Egypt) which provides a forum for cooperative development of the water resources of the Nile River. Its vision is to achieve sustainable socioeconomic development through the equitable utilization of, and benefit from the common Nile Basin water resources.

The NBI-Operational Structure consists of the **Council of Ministers** of Water Affairs of the Nile Basin Countries (Nile-COM), which provides policy guidance and makes decisions on matters relating to the Nile Members; the **Technical Advisory Committee** (Nile-TAC), set up in 1998, which renders technical advice and assistance to the Nile-COM; and the **Nile Basin Initiative Secretariat** (Nile-SEC), which executes decisions and provides administrative and financial services to the Nile-COM and Nile-TAC. The Nile-TAC is made up of one representative from each riparian country and one alternate (18 members); the chair rotates yearly. The **Nile Basin Trust Fund** (NBTF), established in 2003, is administered by the World Bank with support of many donors including Canada, Denmark, Netherlands, Norway, Sweden and the United Kingdom.

The NBI Strategic Action Programme consists of

i) **a Shared Vision Program (SVP),** a basin wide grant funding collaborative action, exchange of information and training, which has seven thematic projects (environment, power trade, agriculture, water resources planning/management, applied training, confidence building/stakeholder involvement and benefit sharing)and for developing investment programmes
ii) **the Eastern Nile Subsidiary Action Program** (ENSAP) includes Egypt, Sudan and Ethiopia; and
iii) **the Nile Equatorial Lakes Subsidiary Action Program** (NELSAP) includes Burundi, Democratic Republic of Congo, Kenya, Rwanda, Tanzania and Uganda, as well as support of downstream Sudan and Egypt. NELSAP is developing joint investment projects aiming to reduce poverty by promoting economic growth and reversing environmental degradation.

2. Kagera TAMP Organisational Structure

The organization of the Kagera TAMP is illustrated in Annex 6.C.

2.1. Donors

The **Global Environment Facility (GEF)** provides incentives and financial support for national and local institutions to promote sustainable land management to reverse land degradation and generate global environmental goals. The Project's regional approach, with GEF support, will make financial resources available to recipient countries, to meet the "incremental costs" of addressing priority transboundary environmental problems in the Kagera Basin and generating global environmental benefits through reversing land degradation, conserving biodiversity, enhancing carbon sequestration and mitigating climate change and contributing to protection of international waters. GEF funds will assist in providing linkages and harmonizing national and local actions with regional environmental objectives and leveraging additional donor and government support.

Co-Funding Partners are an essential partner to the Kagera TAMP. GEF resources are catalytic in nature and additional sources of financing and expertise are essential to achieving the identified project objectives and Kagera TAMP overall goal and specific development and environmental goals in the longer term. Sources of finance represent a mix of government in kind contributions and support through national priorities and programmes, donor support through complementary existing projects/support mechanisms and additional funds, as well as support of FAO as implementing/executing agency. FAO will collaborate with other GEF Implementing Agencies especially the TerrAfrica/SIP partners (especially UNEP, UNDP, IFAD and the World Bank), as appropriate, for sharing lessons learnt.

2.2. Policy and Advisory Bodies

2.2.1 Regional Project Steering Committee (RPSC) – draft Terms of Reference

The RPSC is the policy setting body for the project for the overall Kagera basin and coordination with relevant Lake Victoria and Nile basin processes. It will be composed of up to ten persons, including representatives of environmental coordination bodies and Ministries of Agriculture of the four countrie and FAO. Representatives from NELSAP, LVEMP and donors will be invited to participate as observers, when appropriate. The TAMP National Project Managers (NPM) for each country will attend as observers and act as secretary when the meeting is hosted by their country. Members of the RPSC will be responsible for representing their country / institution at technical and policy/administrative levels. The RPSC will meet or teleconference annually to review and approve the annual workplan and at other times will work through e-mail and as required, teleconference facilities. RPSC meetings will be hosted by one of the project countries (in rotation), facilitated by the Regional Coordinator who will also serve as the Secretary of the RPSC. The RPSC will elaborate and adopt its own TORs on the occasion of the first session.

The RPSC will be responsible for the following specific tasks, *inter alia*:

- Reviewing and approving annual project work plans and budget;
- Assessing progress in the implementation of the project and recommending necessary actions and measures to be taken towards smooth achievement of the project objectives;
- Reviewing TORs for international project posts, contracts and consultants;
- Examining the recommendations of the regional Technical Advisory Committee (TAC)
- Agreeing on criteria for selection of target micro-catchments and other intervention areas and on the number of sites in each country;
- Agreeing on mechanisms for networking, database and website development / maintenance;
- Approving TAMP communication and dissemination mechanisms and partnerships;
- Monitoring inputs of international and national partners, ensuring that project obligations are fulfilled in a timely and co-ordinated fashion;
- Providing guidance to the NPMs and the TAMP Regional project Coordinator.

2.2.2 National Project Steering Committee (NPSC) - draft Terms of Reference

The NPSC (one per country) is the intersectoral policy setting and technical coordination body for the project at national level. (It will take over from the TAC of the PDF-B). It will be composed of up to fifteen members, including representatives from agriculture and environment, district and provincial/regional levels, and NGOs/CSOs representatives. Members of the NPSC will be responsible for representing their country / institution at technical and policy/administrative levels. The NPSC will meet at the start of the project (stakeholder launching workshop), and two other times during the project, if possible through visits to participate in workshops/training on policy, legal and institutional issues. The TAMP National Project Managers (NPM) for each country will attend as secretary. At other times the NPSCs will work through e-mail and as required teleconference facilities, and will

oversee timely implementation and delivery of project outputs and outcomes. NPSC meetings will be held where possible in the beneficiary districts to allow national-district and policy-partner interaction. The TORs for the NPSCs will be reviewed and adopted by the RPSC at its first meeting.

The NPSC will be responsible for the following specific tasks, *inter alia*:

- Facilitate cooperation at policy, technical and local levels through information exchange, the dissemination of documents and reports, liaison and collaboration among concerned programmes and projects and sectors;
- Steer /guide the technical execution of the project taking into account relevant development policies, programmes and interventions, with a focus on inter-sectoral collaboration and liaison for integrated ecosystem management, considering issues of land degradation, biodiversity, carbon sequestration, protection of international waters and other environmental concerns alongside agricultural productivity, food security and poverty alleviation;
- Approve TORS and selection process for national project managers:
- Review and clear project work plans and associated budgets, on a quarterly or six monthly basis, including draft agenda of exchange visits and workshops (training, review);
- Advise on the selection and involvement of specific research and development bodies, agencies and resource persons to draw on the best institutional support and expertise available within the agricultural and environmental sectors;
- Liaise with host bodies and district authorities to ensure that they provide the requisite support to the project team for successful implementation of activities at regional and district levels.

2.2.3 Regional Technical Advisory Committee (RTAC)

The RTAC will be inter-sectoral and will have the mandate to provide independent technical guidance taking into account the views of environment and agriculture sectors, research bodies, local government, key donors and NGOs and civil society organizations. The RTAC will facilitate co-operation at policy, technical, transboundary and local levels. It will review technical reports and outputs of the project, SLAM strategies and demonstrations and provide suggestions for private sector involvement and collaboration with research networks. There will be ten official members of the RTAC (two National Experts per country, two International experts nominated by RPSC). They will include scientific and technical practitioners, researchers, university staff, selected on the basis of their competence in trans-boundary land and natural resources management and with good knowledge of the Kagera agricultural ecosystems and biodiversity. The initial meeting attended by FAO and donor partners, will review and provide advice on initial proposed project sites and interventions and agree on the baseline and monitoring process and collaboration with research. Subsequently the RTAC should largely function through email and telephone to provide technical guidance in coordination with FAO-NRL and the RPC : members will only meet on a needs basis. Any specific RTAC tasks will be developed and updated by the RPSC on the basis of suggestions by national PSCs, NPMs, and Regional Coordinator. FAO and donor partners will attend RTAC meetings to the extent possible. The TORs for the RTAC will be developed at the launching workshop and approved by the RPSC.

3. Project Implementation and Execution Arrangements

The **Food and Agriculture Organization of the United Nations (FAO)**, as Implementing Agency, will be responsible for overall project supervision to ensure consistency with GEF policies and procedures, and will provide guidance on linkages with related FAO and GEF-funded activities. The FAO/GEF co-ordination unit (in TCI) will monitor implementation of activities undertaken during project execution and will be responsible for clearance and submission of progress reports to GEF. The FAO Finance Division will submit financial reports to the GEF Trustee, in accordance to the Financial Procedures Agreement. FAO, in its capacity as Executing Agency, will also provide overall co-ordination and technical and financial management of the Project. FAO will see that the necessary human resources and

equipment inputs are provided in a timely manner to ensure smooth implementation of the project and delivery of project outputs, and timely preparation and clearance of project progress and financial reports.

The **FAO Lead Technical Unit (LTU)**, the Land and Water Division (NRL), will recruit: i) a **Finance and Budget Adviser part time** (14 months total) and ii) a **Human Resources and Procurement Adviser part time** (13.8 months total) to provide support, in consultation with RPC and NPMs as required (equivalent to 1.5 days per month per country including project reporting). The LTU will also recruit a **Secretary /operations clerk** (5 months total or 1 week per country per year) to support the responsible technical officer and help maintain FAO HQ records on project operations, minutes, decisions and recommendations of meetings/workshops.

In consultation with the participating countries, FAO will recruit a **Regional Project Coordinator (RPC),** specialised in integrated natural resources and agro-ecosystems management, to assume overall responsibility for management of the project across the four countries under the close supervision and direct technical and financial authority of FAO. He/she will be selected through a panel (FAO task force members, FAO representation, participating countries and if desired an independent expert from another IA) and will be confirmed in the fixed term position after a probationary period, in accordance with FAO procedures. Detailed TOR are provided in Annex 6.B below.

The RPC will head the **Regional Project Coordinating Unit (RPCU),** and will provide required technical and administrative support, in close consultation with the national project units, stakeholders and partners, to guide the project activities and outputs and ensure effective management of GEF and co-funding resources across the four countries. FAO will also facilitate and ensure the sharing and flow of information and will provide technical support to the project, tapping into the wide expertise and experience from its programmes on land and water planning and management, watershed and river basin management, land tenure, forestry, sustainable development, biodiversity for food and agriculture, enterprise development, legal advice, etc. The **RPCU** will be based in Kigali, Rwanda (as agreed by the RPSC in Entebbe, in November 2005) in suitable offices provided by the government, with adequate space for regional, national and international consultants, GIS/map work and good communication facilities. If possible the project offices will be shared with the NELSAP IWRM Project to ensure complementarily, synergies and joint planning between the two projects.

The RPC will be supported by a **bilingual secretary/clerk part time** with up-to-date communications skills **(12 months** paid by the project and co-funded by the Government). He/she will support the RPC, as required, including coordinating financial and administrative management of the project across the four countries and maintaining records on project operations, minutes, decisions and recommendations of meetings/ workshops. The RPC and NPMs will be supported by part time clerical/secretarial staff and drivers, as required also co-funded by the Governments.

In consultation with the participating countries, FAO will recruit **National Project Managers (NPMs),** in each beneficiary country, selected on the basis of appropriate experience in agro-environmental management and in depth knowledge of the Kagera region. The four NPMs will be recruited fixed term (external or seconded from a relevant technical institution), following selection by a panel (FAO task force members, FAO representation,, participating countries and if desired an independent expert from another IA), and will be confirmed in position after a probationary period, in accordance with FAO procedures. The NPMs will work in close contact and under the technical and financial authority of the LTU (NRL) and the Regional Project Coordinator, and under the guidance of the regional and national PSCs. The NPMs will head the **National Technical Units (NTUs)** and establish close collaboration and working arrangements with an interdisciplinary team composed of members of decentralized public services, NGOs, private sector and other professional associations, to ensure timely conduct of country activities, including contractual arrangements as required. The **NTUs** will be established in each participating country to facilitate the execution of project-supported activities, and will be hosted in a suitable offices allocated by the participating governments, with adequate space for national/international consultants, GIS/map work and good communication facilities. The

NPMs will be supported by temporary clerical staff and drivers as required (to be co-funded with the Government). Detailed TORs are provided in Annex 6.B below.

Under the overall responsibility of the District authorities but with the technical supervision of the NPMs, and as required FAO Lead Technical Unit, **District Project Facilitators (DPFs)** will be selected and designated in each target district to facilitate and support project interventions with local communities, micro-catchments and other agro-ecological units through close consultation with district authorities and wider beneficiary populations. The DPFs will ensure appropriate technical support to local communities/ actors with support of a close-knit interdisciplinary team of interested and competent district officers, extension workers and partners. The work of the DPFs, the involvement of the interdisciplinary team and and SLaM activities in the district, will be agreed upon through a letter of agreement/contract with the district authorities, with an annual workplan and budget that will be revised and updated on a quarterly basis as required. The DPFs will be responsible for ensuring complementarity and avoiding duplication with other actors/projects/ interventions in the district. Draft TORs for the DPFs are provided in Annex 6.B below, to be detailed during formulation of each district contract.

Other international and national consultants will be recruited and institutions contracted, as required and on the basis of comparative advantage for professional competence and sustainability, to conduct policy and legal reviews, provide capacity building in integrated land and agro-ecosystem approaches, support monitoring and evaluation of project performance and local, national and global benefits generated. TOR for the following consultants and contracts will be developed at the start of the project through the regional launching and national stakeholder workshops or regional /national PSCs in consultation with FAO LTU.

International Consultants

- **Land/Agro-ecosystem management /planning consultant** (P4 equivalent, 15 months - 4 months years 1 and 2, 2.5 montsh years 3 and 4 and 2 in year 5) will ensure technical expertise to the project in close consultation with the LTU and project task force members as required, to support timely execution of project activities including partnerships, action planning, SLaM activities, training, incentive measures and inter-sectoral processes management. He/she will primarily provide technical support on SLaM and the achievement of global environmental benefits and will strengthen capacity of the country teams through involvement in training and workshops. He/she will also provide a link to the LTU and country offices during missions to facilitate and overcome problems in project management. He/she will will maintain close liaison with RPC and NPMs, and assist them in reviewing work plans and budgets and progress reports, in preparing technical and workshop reports, exchange visits, training, consultants/contracts, etc.)

- **Land tenure/access-to-resources officer/consultant** (P5 equivalent, 3 months; 4 missions) will provide technical expertise to the project in close consultation with the LTU and project task force members as required, to support land tenure/administration, access to resources and development of bye laws and institutional strengthening for scaling up. He/she will provide technical support for developing required byelaws and ensuring more effective application of existing laws and regulations and find ways to address various land tenure issues arising. This will, include support in establishing a participatory and negotiated community territory /landscape approach as part of community action plans for encouraging investment in managing common property as well as private lands. He/she will strengthen capacity of the country teams through involvement in training and workshops.

- **Participatory natural resources management/M&E consultant** (3 months with 3 missions) will provide support in establishing a baseline for participatory monitoring of project performance and impacts using indicators in project logframe.

- **Sustainable agro-ecosystems incentives & policy consultant** (2 months with 2 missions) will provide support in harmonizing policies across sectors and testing incentive measures for farmers,

herders, communities (PES and non financial rewards - water supply, biodiversity, C-sequestration and restoring degraded lands).

- **Adviser SLM Farmer Field School process (6 months and several missions funded with GEF resources; 6 months or more plus travel to be cofunded as required)** will be recruited in the region and will provide continuous support to all four countries in setting up and guiding FFS on SLaM including organising curriculum development process, training of trainers workshops, allocation of FFS grants and mobilising technical and institutional support as required building on experiences in Kenya, Uganda and Tanzania and elsewhere in East and Southern Africa).

- **International/regional project evaluation consultant** will be recruited to guide the independent **Mid-term Evaluation** (1,2 months) **and Final Evaluation** (1,7 months) in accordance with the log-frame indicators and drawing on the project M&E system.

National consultants (in addition to RPC and NPMs)

- **SLM Baseline consultants** (6 months - 3 in Burundi and one month in each of the other countries) with required expertise will be recruited to conduct required baseline studies in Burundi (3 months as was not included in the PDF) and in selected target land areas in the basin.

- **SLM Trainers and Workshop Facilitators** (10 months) will be recruited as required to support hands-on training and workshops in the basin.

- **FFS Master Trainers** (5,5 months) will be recruited as required to develop and implement the training of trainers for FFS facilitators on SlaM and provide support in curriculum development, hands-on training and workshops.

- **Communications & website consultants** (11 months) will be recruited to provide support in the design and implementation of a project communication strategy, to mobilise buy-in /support by all stakeholders and for development and maintenance of national and regional project websites linked to FAO website.

- **National SLM consultants** with relevant interdisciplinary expertise will be recruited to contribute to the Mid-term evaluation (4 x 0.2 months) and Final Evaluation (4 x 0.3 months)

Contracts

National/international institutions will be selected and contracted to provide the following expertise to the project aiming to ensure timely execution, cost effectiveness and sustainability:

- **GIS/RS Database and Monitoring:** The most competent GIS/RS unit in or nearby the basin will be selected on the basis of bids (equipped, updated, expertise for training, cost-effective proposals etc) and contracted to undertake basin-wide data collation, analyses and distribution of near real-time remote sensing data (i.e. second generation Meteosat) for monitoring the status and trends of natural resources and SLM interventions in target land units. The centre will work under the guidance of the LTU, RPC and NRM/M&E consultant, and make use of and complement relevant natural resource monitoring and early warning systems e.g. by the Nile and Lake Victoria basin programmes. Recognizing structural limitations for scaling up (limited computing capacity and electricity supply in certain parts of the basin), the selected regional body will support the establishment of pilot district-level GISs (Outcome 1, Output 3) providing certain sustainability criteria can be met: close enough to allow regular technical support, reliable electricity, information technology and expertise. The regional unit will, as appropriate, work through subcontracts with established RS centres in each country for access to national information and support in collecting and analysing data from target areas with district staff. The University of Makerere, Uganda, and Tanga Agricultural Research Institute, Tanzania, could continue with this

role as during the PDF-B, however, it is proposed to seek alternatives nearer to the Kagera basin and a suitable institution in Burundi as well as the University of Butare. (To allow flexibility there will be an initial letter of agreement (LOA) for years 1-3 US$25,000; and a further LOA years 3-5 US$25,000).

- **Data/information systems management.** The collection and analysis of data on the ground is critical in order to demonstrate the social, economic and environmental benefits of the various SLM practices at farm and catchment/landscape level. In each country a competent body will be contracted to work with the project team, under the guidance of the RPC and NRM/M&E consultant, to establish a database and information system for participatory monitoring of progress and impacts at community, district and project levels. This will include socioeconomic and biophysical indicators identified with the various stakeholders and, where possible, the information will be geo-referenced for integration in the basin wide GIS. The contracted bodies will help analyse project results and prepare advocacy tools that demonstrate the local, national and global benefits of investing in SLM at a catchment/ landscape level and in the long term. (1 LOA per country each US$16,000).

- **Target studies/monitoring environmental impacts:** Selected representative land units will be identified in each country and cross-border areas for SLM interventions and competent research/ technical institutions will be contracted to work with the NPM and project team under the guidance of the LTU and RPC, to design and conduct target studies on the ground to assess and monitor status and causes (direct and indirect) of resource degradation (land, water, biological resources) and impacts of improved management practices and approaches in a range of land units: crop lands, pasture/ rangeland, wetlands, watersheds, buffer zones to protected areas. Attention will be placed on comparing degrading practices, such as burning, overgrazing, poor crop management and improved SLM practices in terms of resources status, productivity, energy, biodiversity, climate change adaptation and mitigation notably C-sequestration and resilience to drought. WOCAT and LADA[12] tools will be used and adapted as appropriate. The outcomes will include technical reports, and targeted briefs for extension, media and policy makers. (Up to 3 LOAs for a total of US$10,000 per country).

- **Agro-ecosystems/biodiversity management:** Competent research/technical institutions will be contracted to work with the NPM and project team, under the guidance of the LTU and RPC, to assess effects of current and traditional management practices on agricultural biodiversity in crop and livestock based farming systems and to propose and assess improved SLM practices in terms of biodiversity conservation and sustainable use with particular attention to the ecological functions of nutrient cycling, effective water use/hydrological cycle, carbon sequestration and biocontrol of pests and diseases. This will include inter alia, effects of crop specialisation, communal grazing, deforestation, land fragmentation, and improved farm and catchment management with smallholder and commercial farmers. These studies will be linked to the studies above mentioned above but are expected to require additional specialised agricultural biodiversity expertise. Outcomes will include technical reports and targeted briefs for extension, media and policy makers. (Up to 2 LOAs for a total of US$8,000 per country).

- **Monitoring of sustainable livelihood (SL) benefits/impacts.** Contracts will be established with competent bodies to work with the NPM and project team, under the guidance of the LTU and RPC, to provide socioeconomic expertise to the above studies and the overall project M&E process to understand and assess livelihood impacts of current management practices and improved SLM practices and approaches and help ensure participatory processes with the range of stakeholders. These will use available tools and approaches for sustainable livelihoods analysis.

[12] FAO Land and Water Division has been developing and validating tools for assessing and land degradation and SLM practices through LADA - Land Degradation Assessment in Drylands project and WOCAT - World Overview of Conservation Approaches and Technologies partnership.

These could be addenda to the above contacts or stand-alone contracts. (Up to 2 LOAs for a total of US$8,000 per country).

- **District land use planning and SLaM support.** Contracts will be established with each of the 22 beneficiary districts to work with the NPM and project team under the guidance of the LTU and RPC, to provide support in land use planning, policy guidance, awareness raising and coordination of SlaM activities in the district. The contracts will include support for district facilitators and interdisciplinary teams who will be co-funded by the Governments. They will also oversee the setting up of farmer field schools (FFS) and community bank accounts for the transfer of FFS grants directly to farmers groups and the development and support for community action planning. The project will set up SLM funds in each district to be operated as part of these district contracts. Arrangements will be made for part funding, where possible, and subsequent replenishment of the funds for scaling up of proven SLaM activities by the Government through relevant national programmes and budget support by donors. There will be two separate funds per district:

  1) FFS Fund (US$ 720,000 with an average of US$32,727 per district): For the allocation of **Grants for Farmer Field Schools (FFS)** for SLaM activities and associated income generating activities and for **FFS networking** for sharing experiences among the FFS in the Kagera basin and other FFS in the wider region. Building on experience from the Kenya FFS programme, an approval and monitoring mechanism, including selection criteria, will be established to ensure equity and effective use of the funds. The FFS grants will cover the FFS facilitator, ad hoc technical support, inputs for the study plots, graduation and exchange visits.

  2) Community Fund (US$600,000 with an average of US$27,272 per district): For the allocation of **Grants for community/ territorial action plans** in selected land units that will include catchment/landscape management and improved land tenure arrangements (tenure security, bye-laws, etc). These grants will cover inputs for SLM activities and district expertise and exchange visits for experience sharing among communities and to build on experiences of Landcare and other projects in the Kagera countries and wider region in community action planning and improved land tenure.

- **Community/landscape planning, including incentives for SLM adoption and improved land tenure arrangements.** A major challenge for sustainable land management is upscaling from farm to catchment and landscape level so as to ensure not only improvements in productivity but also to generate significant environmental benefits for the local community and contributions to national and global targets. Contracts will be developed with competent NGOs, research networks or private sector bodies (such as Care International, Katoomba expert group, Ecotrust, Africa 2000, etc.) with expertise and experience in community action planning and designing and establishing payments for environmental services (PES) and non-financial rewards for the generation of environmental benefits (water supply, biodiversity conservation, C-sequestration (above and below ground), restoring degraded lands, climate change adaptation). The contracted bodies will work with the NPM and project team, under the guidance of the LTU and RPC, together with beneficiary districts to:

  1) **Design and test appropriate incentive mechanisms** in close collaboration with government authorities and the private sector for the longer term provision of incentives such as improved marketing, labelling and other support services. (Up to 6 LOAs on a regional or national basis for up to $15,000 per contract and an average of US$22,000 per country); and,

  2) **Develop community/ territorial action plans** for implementing SLM across selected catchments and landscapes that include mechanisms for addressing and improving land tenure, access to resources and long term management of common property resources. (Average of 2 LOAs per country for a total of US$20,000).

- **Sustainable pastoral development:** A large share of the basin is used for extensibve livestock production, however, as these are common property resources there is no or minimal investment in the maintenance or improvement of pastures or controlled grazing of livestock and these drier lands face typical pastoral problems of overstocking, absentee herd owners, lack of investment and hence severe degradation. Linkages and appropriate contractual arrangements will be set up with

the holistic managemnt training centre in Zimbabawe and relevant pastoral projects in the region for expertise and training in improved pasture and range management, rotational grazing and improved breeding, feeding and marketing of livestock. Improved marketing of livestock products will be important to incentivate better managemnt of livestock and pastures. Improved pasture development wil also be key for enhanced carbon sequestration across large areas, so specific expertise will be sollicited on monitoring carbon and exploring carbon trading arrangements if possible.

- **SLM technologies training + equipment demonstration.** In many cases the adoption of SLM techniques requires an initial investment in inputs and equipment for farm and community interventions as well as on-hands training and adaptive management for specific contexts. For example, among the cost effective SLM practices already identified: i) the shift to conservation agriculture requires no till tools /equipment for direct seeding and seeds of adapted cover crops; ii) holistic livestock management requires controlled grazing through fencing and increased fodder production; iii) water harvesting for crops, livestock and household use may require investments for water storage and use; iv) woodlots and agroforestry require planting materials and seedling nurseries. Competent bodies/projects will be contracted to work with the NPM and project team under the guidance of the LTU and RPC, to provide specific training and to establish supply services for technical support and equipment. (Average of 3 LOAs for a total of US$37,000 per country according to expertise).

- **On hands training and curriculum development for SLaM.** To ensure sustainability and continuous support, training and curriculum development activities will be contracted to NGOs and training colleges in the region to work with the NPM, project team, under the guidance of the LTU and RPC in close consultation with districts. This will include development of curricula for FFS facilitation, for community action planning and district land use planning, as well as *ad hoc* training of technical and extension staff on specific SLM activities. (1 LOA per country for an average of US$62,500 equivalent to US$15,625 per year).

FAO backstopping missions will be fielded as required drawing on the expertise of the project task force (land and water management, land tenure, crop, livestock and forestry production, environment, extension/training, gender, food security). These will be largely provided through cofunding arrangements.

A regional inception workshop will be organized and held in Kigali, Rwanda, the host of the RCU, to formally launch the project to which representatives of the full-range of regional, national and local stakeholders will be invited to participate including the PSC members who will, at the end of the workshop, review and endorse workshop proposals and recommendations.

National stakeholder workshops (4) and subsequent annual meetings will be held in the four countries to plan each year's activities and provide feedback to the RCU on national and district working arrangements. This will facilitate information sharing and collaborative arrangements with government bodies and other partners in project implementation, development of selection criteria for project sites and partners, and subsequent consideration of workshop/meeting recommendations and adoption of the annual national work plan by the PSC. Meetings will involve the NPM as secretary, representatives of the ministries of agriculture and environmental coordinating body, other national project staff /consultants, and representatives of technical services, NGO, other partners and communities as well as private sector and donor representatives, as required. The first meeting will be held in the town/city hosting the NPU in each country and subsequently in other districts, to the extent possible (logistics, communications).

The participation of local communities in integrated agro-ecosystems management activities, including farmers' associations, and the creation of appropriate local organizational arrangements will be an important element of project implementation. The local organization structure will be designed with and agreed by the local communities, taking into account existing successful schemes both within and outside the project area. Local authorities and representatives of customary authorities will be co-opted to

strengthen support at the community level. Appropriate arrangements will be agreed with local communities upon the start up of the Project, taking into consideration: (i) local development plans; (ii) existing thematic consultative groups for water use/management, land and forest management, livestock management and (iii) available local capacities.

The Project SLM activities are designed to be executed by local community groups, authorities and NGOs, with the support of governmental technical services. The project team will develop criteria to guide national and decentralized technical services, farmers/pastoral associations, NGOs, private sector, etc. who will participate in project execution. Draft TORs and letters of agreement for various activities will be reviewed/ approved by the NTU and RCU and NPSC and RPSC as appropriate under the supervision of the LTU.

The project will provide technical and financial support for organization and consolidation of local community structures that will be involved in project implementation. In particular, the project will promote agro-ecosystems and biodiversity management strategies that build on local/indigenous knowledge and innovations and traditional systems. Community contributions to the implementation of project activities at field level will be made in kind. These contributions will be costed and indicated in the Action Plans or local development plans prepared with and approved by the communities themselves. Linkages will be developed with other national and donor financed natural resource management projects in the area.

Table 1 : Coordination and Complementarity of Kagera TAMP with NBI-NELSAP and LVEMP Projects

Project Title and Countries	Project Description	Possible Complementarity and collaboration with Kagera TAMP	Project Budget and Potential Co-funding
Lake Victoria Environmental Management Programme - Phase I 1997-2005, $77.6million (Uganda $28.1M, Kenya $26.9M, Tanzania $22.6M; World Bank/GEF and IDA) **Bridging phase:** 2006-7 **Phase II** 2008+15 years US$165 million; (World Bank $80M/GEF $30 million, SIDA, NORAD + EU 40M) - Uganda Ministry of Water & Environment - Tanzania, Ministry of Water (MOW) - Burundi ...	**LVEMP-I** focused on knowledge development, R&D, data collection and analysis, policy review, strategy development, and support services for sound management of the Lake Victoria ecosystem. This included fisheries management and research, wetland management and water quality including water hyacinth control, training, community-based micro projects, soil and water conservation, aforestation and land use management. The land management component focused on Rakai district, Uganda (also Mwanza and Mara Tanzania outside the Kagera basin) and mainly addressed soil erosion and agro-chemical monitoring, safe use of chemicals and soil and water conservation. **Bridging phase**: continued certain activities and project offices and the preparation of phase II in Kenya, Uganda and Tanzania **LVEMP-II)** will build on the knowledge base for achieving environmentally and socially sustainable development in the lake basin with a focus on biodiversity conservation, water quality and poverty eradication. Activities will include: support EAC capacity in transboundary environmental management; integration and sustained use of databases; research and capacity building and dissemination of best practices; investment for remedial measures (control of water hyacinth; reducing pollution and eutrophication) and private-public partnerships. - Strengthen governance of water + fisheries resources.	TAMP will build on results of LVEMP-I: soil erosion studies and maps, monitoring/safe use of agro-chemicals, data and analysis, policy/ strategy development, expertise (support services) in land use and wetlands management, catchment afforestation. TAMP will complement LVEMP-II by focusing on promoting sustainable and viable agro-ecosystems. Of particular relevance are LVEMP activities on water quality, ecosystem and wetland management, soil and water conservation, land suitability mapping, rural land use management, catchment afforestation, capacity building, micro-projects. TAMP management will coordinate closely with LVEMP (and EAC and LVB Commission) to ensure information sharing among water, land and agriculture sectors and complementary actions. TAMP component 1: The knowledge management system will be developed with a view to integration/ information sharing with LVEMP (also NELSAP/ other databases/ information systems in the basin). TAMP component 2: in developing its strategic planning framework, the inter-sectoral process (to include LVEMP actors) will ensure synergy with strategies/ plans developed through LVEMP. TAMP will make use of (not duplicate) water resources and hydrological studies. TAMP component 3: LVEMP expertise will be drawn upon to support TAMPs capacity building activities. TAMP component 4: Links will be made with LVEMP for investment at community and catchment	Bridging phase, 2006-mid 2007 (EU- Euro 2.5 million, Japan (in Tanzania US$ 720,000), SIDA and GEF Phase II GEF-US$37mn, IDA-US$48mn; countries US$10mn) Specific co-funding to be elaborated in an MOU when with details elaborated with Environmental Management Officers and Committees at district, ward and village levels as appropriate LVEMP co-funding could support specific activities such 1. EIA study of preventing or controlled burning, IPM , SWC etc. (C sequestration; atmospheric deposits in water, biodiversity, etc) 2. Support to FFS for inputs 3. Joint training/execution of community SLaM projects 4. Use of environmental guidelines and environmental monitoring

- Rwanda....	LVEMP II has plans to extend land management activities in the Kagera region with farmers and local NGOS with which collaboration and cofunding will be sought. **Possible areas for collaboration in Uganda (Rakai district)** 1. Capacity building/awareness of district/ extension staff: pollution prevention (IPM/reduced burning), land husbandry/SWC, catchment management, farm forestry, product value addition and marketing. 2. Ecosystem monitoring - surface+ ground water; atmospheric deposition; GIS (land use, hydrology, biodiversity) and control of non-point sources of pollution in selected sub-catchments (N+P, sediments, agrochemicals) 3. Community support in rehabilitating priority degraded sub-catchments to reduce non-point source pollution - matching grants in SWC and livelihoods improvement 4. Links with private Carbon Finance mechanisms for afforestation/reforestation in areas with secure land tenure 5. IPM to reduce effluents in water resources from flower farms, sugarcane, livestock, tea, coffee (fertilizers; pesticides)	level for improved land and agro-ecosystem management. **Possible areas for collaboration in Tanzania** 1. Applied research on land and wetlands: erosion rates; nutrient losses; wetlands functions and use impacts; integrated soil and water management; guidelines for soil and wetlands rehabilitation; RS/GIS for land suitability studies; water harvesting; agrochemicals management. 2. Agricultural support: access to improved seeds and inputs; farmer training on appropriate technologies and use of agrochemicals; small scale irrigation and water harvesting; explore potential investments: biofuel crops (Jatropha; palm), animal feeds (cotton cake; maize/rice hulls) and vegetable oil production; processing plants (fruit, sweet potato, cassava, millet; poultry/dairy production and processing;. Details of LVEMP –II have just been posted on the GEF website	LVEMP-II will be responsible for water hyacinth control including the Kagera River Basin (not retained as part of NELSAPs or TAMPs portfolio).
NBI-NELSAP Project Title	**NBI-NELSAP Project Description**	**Possible Complementarity and collaboration with Kagera TAMP**	**Project Budget and Potential Co-funding**
NELCOM Priority Area: Watershed Management **Kagera River Basin Integrated Water Resources**	The overall objective is to develop tools and permanent cooperation mechanisms for the joint, sustainable management of water resources in the Kagera River Basin in order to prepare for sustainable development-oriented investments to improve the living conditions of the people and to protect the environment. Specific objectives are:	Both operate across the Kagera basin, but IWRM focuses on water resources and TAMP on land resources management. The two projects are highly complementary and mutually supporting: 1) The IWRM baseline assessment (basin monograph; water allocation/development scenarii) should be integrated with TAMP baseline information with a	Implementation costs US$ 4M). Collaboration and cofunding will be substantial (at least US$836,000, however, as IWRM has just been set up

Management Project (BUR, RWA, TAN, UGA) (NB Though geographically distinct, links could also be made to share lessons experiences with the sister NBI-NELSAP Mara river basin and Malakisi-Malaba-Sio River Basin projects.)	i) establishment of a sustainable framework for joint management of the shared water resources of the Kagera River Basin; ii) development of an investment strategy (long term) and conduct of pre-feasibility studies; iii) building capacity at all levels for sustainable management and development of Kagera River Basin; iv) implementing small-scale (community level) investment projects. Activities include: capacity building of national and basin level water resource management staff with emphasis on transboundary management; community awareness of transboundary implications of water use activities; a communication program on the evolving capacity in the Basin for transboundary investments; rehabilitation and upgrading of the hydrometeorological network across the basin; a water quality survey as a baseline for subsequent investment projects; sharing of water quality data between countries. Some small-scale investment projects (potentially scalable; if possible with transboundary benefits) will be implemented to provide early benefits to communities, build confidence, provide practical experience and lessons in investment.	view to developing an integrated land and water resources information/management system (accessible across sectoral institutions); ii) IWRM small-scale investment scheme may include such issues as biodiversity/ wetlands protection: precise interventions are not identified, but collaboration will avoid overlap/enhance synergy. iii) The institutional set-up of the 2 projects is similar e.g. RPSC, national PMU. Collaboration will ensure that all 4 TAMP components are linked with IWRM: TAMP component 1: to ensure that **integrated land and water resources management** is the basis of the permanent transboundary cooperative framework among countries for sustainable management and development of the Kagera river basin through joint planning and coordination of PSC meetings, sharing of project offices if feasible, data and information sharing, intersectoral linkages. TAMP component 2: to coordinate the policy and legal reviews and subsequent actions; TAMP component 3: to cooperate capacity building activities at all levels (e.g. water resources officers part of TAMP technical advisory teams); TAMP component 4: to link stakeholders SLaM priorities with IWRM long term (e.g. afforestation) and short term (community level) investments and help ensure they also contribute to poverty alleviation, viable agriculture (not just water).	details will be developed and agreed through an MOU during initial months of TAMP.
NELCOM Priority Area: Water Use in Agriculture (WUA) **Enhanced Agriculture Productivity**	The project aims to improve productivity of small scale agriculture and animal industry through a program coordinated across participating countries to improve and develop water use. At regional level it will create a favourable environment for private sector involvement in small -scale irrigation	High relevance to TAMP component 4: • During TAMP implementation, as and when, activities related to small scale irrigation, water harvesting/ conservation, livestock watering are prioritised by stakeholders, links will be made with this NBI-NELSAP project to seek investment support.	WUA 1.1 Preparation cost US$1.2M. Implementation cost US$45M. Period: 5 years Potential investment in

Project (BUR, RWA, TAN, UGA, also DRC, KEN)	development. It will invest in participatory development of water harvesting /conservation techniques, small scale irrigation and livestock management alongside agricultural extension for subsistence low-output farming in each country. The preparation phase included a feasibility study, country baseline surveys and drafting of detailed project documents that are being implemented.	• TAMP will provide technical expertise to ensure such activities are integrated in SLM plans and actions at all levels. • TAMP will make available its knowledge base to assist in the development of this WUA project; in turn WUA could share its baseline surveys.	collaborative activities cannot be estimated until detailed project documents are prepared

Annex 6.B: Table 2 – Kagera TAMP Workplan (with summarised outputs and activities, timing and responsibilities)

KAGERA TAMP OUTPUTS AND ACTIVITIES	BY WHO	Y1		Y2		Y3		Y4		Y5
1.1 Transboundary dialogue, planning, policy harmonisation and coordination										
1.1.1 Four national workshops to develop policy/legal agreements for transboundary cooperation/conflict resolution	NPMs, PSC, FAO, Ministries, Community Representatives									
1.1.2 Institutional mechanisms developed (guidelines, protocols, funding) for dissemination/ use	NPMs, RPC, Districts, FAO, consultants									
1.1.3 Regional workshop and PSC agree on policy/legal interventions and institutional mechanisms, for subsequent ministerial adoption	RPSC, RPC, RTAC, NPMs, FAO, Partners, Ministries									
1.1.4 Public information and awareness-raising on benefits of SLaM across basin and policy, legal and planning, decision making support	RPC, NPMs, PSC, FAO, Districts									
1.1.5 National and transboundary mechanisms for coordinated policy and legal approaches and increased support to communities/districts	RPC, NPMs, RPSC, PSC, Districts, FAO guided by ad-hoc basin-wide policy task force (4p x 1,5mths)									
1.2 Basin-wide knowledge management system established										
1.2.1 Environmental monitoring and information system supported by GIS/RS – central and national units	RPC, RGIS, NPMs, national partners, Districts, FAO									
1.2.2 District level GIS piloted in each country and staff trained	NPMs, Districts, RPC, RGIS, FAO									
1.2.3 District/Community information centres used for local records, updating land use plans, etc	NPMs, Districts, FAO									
1.2.4 Project information and communication system (central and national links)	FAO, RPC, NPMs, Countries									
1.3 M&E, progress and financial reports prepared and used in decision making										
1.3.1 Continuous M&E, trained project beneficiaries, PM&E tools and regular reporting to FAO, GEF, funding partners	RPC, NPMs, FAO, experts									
1.3.2 A mid term (year 3) review and final (year 5) project evaluation, progress and impacts assessed	FAO-LTU and FAO-GEF, GEF, Evaluation Team, RPC, NPMs									
1.3.3 Project M&E system developed with support of a consultant	FAO, RPC, NPMs,									

KAGERA TAMP OUTPUTS AND ACTIVITIES	BY WHO	Y1		Y2		Y3		Y4		Y5
1.3.4 Project staff and partners trained in data collection and reporting	RGIS, NPM, Districts, FAO									
1.4. TAMP project management structures										
1.4.1 Project management structures established	FAO, RPC, NPMs, Countries									
1.4.2 Project staff recruited	FAO, Countries									
1.4.3 Offices available and equipped	Countries, FAO									
1.4.4 Project information sharing/coordination mechanisms in place	FAO, RPSC, NPSCs, RTAC, Ministries, RGIS									
1.4.5 Resource mobilisation strategy/ funding plan developed/updated	FAO-LTU and FAO-GEF, Countries, Partners									
2.1 Sustainable land & agro-ecosystems implemented and mainstreamed (national and basin levels)										
2.1.1 Mechanisms to improve synergy among national action plans/programmes for SLaM implementation across the basin	NPMs, PSC, RTAC, Consultants, FAO									
2.1.2 SLaM piloted, promoted and mainstreamed into NAPs/basin wide processes for restoring degraded lands, ecosystem function, biodiversity and improving agricultural livelihoods	NPMs, GEF Focal points, Districts, Consultants, Ministries									
2.1.3 Inter-sectoral workshops for endorsement of SLaM by ministries and institutions	NPMs, PSCs, RTAC, FAO, ministries									
2.1.4 Knowledge/expertise provided to districts/communities on conventions, national strategies to support implementation	FAO, NPMs, PSCs, DPFs									
2.2 Regulatory actions developed/used to promote SLaM or remove existing barriers										
2.2.1. Community sensitization, training, negotiation contributing to implementation of policies, (by)-laws to address transboundary issues	DPFs, Districts, policy/legal & technical experts									
2.2.2 Monitoring and enhanced conflict resolution capacities and instruments to address cross-border issues	RPC, PSC, NPMs, Districts									
2.2.3 Experiences/lessons shared for wider application of successful regulatory mechanisms and opportunities	NPMs, Districts, Experts, Ministries									
2.3 Coherent strategic planning framework developed and implemented to support SLaM (river basin, district, community levels)										

KAGERA TAMP OUTPUTS AND ACTIVITIES	BY WHO	Y1		Y2		Y3		Y4		Y5
2.3.1 District consultations to review and agree on synergies, actions and intersectoral mechanisms to achieve TAMP goals	NPMs, Districts, FAO									
2.3.2 Status and trends of land degradation on croplands and costed options for SLaM	National Consultant, NPMs, FAO									
2.3.3 Status & trends of pasture/rangelands and costed options for improved livestock /pasture management	National consultant, NPMs, FAO									
2.3.4.Status and trends and balanced options to reduce pressures on wetlands and maintain functioning	National consultant, NPMs, FAO									
2.3.5 District consultations to promote /mainstream conservation, sustainable use of agro-biodiversity and generate livelihood benefits	Contract, NPMs, Districts, FAO									
2.3.6 Review conducted of basin-wide energy issues and options to reduce use of woody biomass	Regional consultant, RPC, NPMs, FAO									
2.3.7. Dialogue on risks and management/control of crop & livestock disease & pest transmission	NPMs, Expert Team,									
2.3.8. District planning and technical officers enabled to develop and implement intersectoral plans and actions and national & local government staff trained in land use planning/policy enforcement	NPMs, Districts, DPFs, FAO Consultants									
2.3.9. Communities & districts supported to implement action plans (improved pasture/range/wetland management, agrobiodiversity conservation, energy supply)	NPMs, PSC, Districts, experts									
3.1 Participatory "action-research" methods/approaches to promote SLAM developed and tested										
3.1.1 District meetings to assess capacities & needs, agree on intervention, methods, approaches	NPMs, Districts, FAO									
3.1.2 Representative pilot micro-catchments selected and intervention areas agreed for demos, study plots and scaling up	NPMs, RTACs, Districts, NARS, FAO									
3.1.3 Knowledge base developed on status and trends (resources; degradation; socioeconomic) through participatory diagnosis and review of interventions in target areas	NPMs, Districts									
3.1.4 Training methods and materials for SLaM (curricula, training	NPMs, consultants, FAO									

KAGERA TAMP OUTPUTS AND ACTIVITIES	BY WHO	Y1		Y2		Y3		Y4		Y5
materials, manuals, TOT sessions etc.)										
3.1.5 Awareness raising literature produced (leaflets, posters, maps) and disseminated to promote wider uptake of SLaM	NPMs, Districts, Ministries, FAO, Consultants									
3.1.6 Extension, scaling up, income generation and marketing strategies for farmer groups/communities (links to savings&credit strategies and investment partners	NPMs, Consultants, Districts, NGOs, Partners, FAO									
3.1.7 Community awareness training workshops on effects of practices on-farm and in generating ecosystem services	NPMs, Districts, Experts									
3.1.8 On farm demonstrations and study plots leading to local adaptation and feedback and building on local innovations	NPMs, districts, NGOs, FAO									
3.2 Quality services and intersectoral approaches provided to communities build on local knowledge and innovations										
3.2.1. Training workshops for service providers/community leaders on agro-ecosystems approaches and benefits of agricultural biodiversity	Experts, NPMs, Districts, FAO									
3.2.2 TOT on PLAR (FFS/JFFLS) approaches for diverse/productive farm-livelihood systems	NPMs, FAO, consultants									
3.2.3 Short courses, study tours, exchange visits conducted for knowledge sharing among service providers/innovators	NPMs, Districts, FAO									
3.2.4 Community/farmer linkages with private sector suppliers and research (inputs; training, tools)	Experts, NPMs, Districts FAO									
3.2.5 Collaboration among research and land user/farmer groups promoting diversified production systems	NPMs, NARS, Districts, NGos									
3.2.6 Awareness raising and community actions identified for effective water use and management including water harvesting	NPMs, Districts, NGOs, experts									
4.1 Participatory land management plans in target communities, micro-catchments, land units										
4.1.1 Training and development of participatory land use plans (community, micro-catchments, AEZ)	NPMs,RGIS, national GIS partners, Experts, Districts, FAO									
4.1.2 Capacity for implementation and monitoring of action plans	NPMs, Districts, Experts									
4.1.3 Review pilot results (PY2) with stakeholders, promote wide	NPMs, Consultants, Districts									

KAGERA TAMP OUTPUTS AND ACTIVITIES	BY WHO	Y1		Y2		Y3		Y4		Y5
application (tools, processes)										
4.2 Improved land use and agro-ecosystem management practices adopted and replicated										
4.2.1. Target communities/land users sensitized on agro-ecosystems approaches and multiple benefits	NPMs, PSC, Districts, Ministries									
4.2.2 Support provided for wide adoption of improved agricultural systems and management practices	NPMs, NARS, Districts , Ministries									
4.2.3 Training/technical support (agro-ecosystems/district) diverse systems/agro-ecological approaches	NPMs, Experts, FAO									
4.2.4 Community inventory/ assessment on status/ threats to agricultural biodiversity & knowledge	NPMs, Districts,\ Experts, FAO									
4.2.5 Land users/farmer groups/communities in micro-catchments benefiting from diversified farms...	Districts, NGOs,									
4.3 Market opportunities/cost-benefit sharing mechanisms for environmental services (PES) identified and in use										
4.3.1 Mechanisms identified/supported for benefit sharing of SLaM (up-downstream, farmer-herder, sustainable harvesting, PES)	RPC, NPMs, Experts, FAO									
4.3.2 Improved farmer/community organization and business management and links between FFS, common interest groups, farmers associations and credit institutions and/or relevant investment projects;										
4.3.3 Review/testing of incentive measures leading to farmer benefits and reduced costs	RPC, NPMs, FAO, Donors, Districts, NGOs, Credit Institutions									
4.3.4 Review of constraints to adoption of diversified systems and needs identified for added value/improved marketing of local products	Experts, NARS, NGos									
5. Project management operational and effective										
Output 5.1: Project management, institutional & admin.structures in place and linked to national/regional decision making structures	RPC, NPMs, PSC, NPSCs									
Output 5.2: Project M&E system and reporting supporting project management and execution.	RPC, NPMs, PSC, NPSCs									

ANNEX 6.C: TERMS OF REFERENCE FOR PROJECT STAFF

1. REGIONAL PROJECT COORDINATOR – DETAILED TERMS OF REFERENCE

INTRODUCTION

Under the overall responsibility and direct supervision of FAO Lead Technical Unit, the regional project coordinator will provide overall leadership, management and technical guidance to ensure the achievement of project objectives and delivery of project outputs across the four countries in close consultation with the national project units, stakeholders and partners. The RPC will head the Regional Project Coordinating Unit (RPCU) and provide required technical and administrative support to guide the project activities and outputs and ensure effective management of GEF and co-funding resources through close communication with FAO, the National Project Managers and designated national focal points for the project. The RPC will report to and be guided by the Regional Project Steering Committee (RPSC) and Regional Technical Advisory Committee (RTAC) to ensure the project achieves its goals and ensure cost effectiveness and sustainability.

SCOPE OF WORK

The primary duties of the Regional Project Coordinator will include:

- Provide technical guidance to the NPMs and their partners, identifying and addressing key issues, harmonizing technical objectives and approaches, formulating guidelines for the participatory identification, demonstration, testing/adaptation and replication of sustainable land and agro-ecosystem management practices in and across the basin;
- Prepare and monitor the annual Work Plans and budget of the overall project, based on proposed annual national work plans and budgets, and adhere to approval processes (this will include liaising with NPMs for timely preparation and implementation of TORs, procurement, monitoring, participation and training plans);
- Identify potential candidates for the Regional TAC, in consultation with NPMs, NPSCs and FAO, and mobilise RTAC members to provide support and review draft contracts/TORs and products (studies; reports, training, etc.)
- Provide overall technical and management guidance to the National Project Managers (NPMs) and National Technical Units in the execution of the project in the participating countries to ensure quality and timeliness of project work;
- Plan the recruitment and supervision of experts/contract institutions as required to undertake tasks of a regional transboundary nature in accordance with annual workplan;
- Ensure effective liaison and maintain good communication with regional partners and other stakeholders including NGOs and Nile and Lake Victoria basin organisations, including mobilizing co-financing with partners and donors;
- Draft contracts with selected partners (MoUs; LOAs), for approval by RPSC and FAO, and supervise work, including contracting of a GIS/RS centre for technical support across the basin for natural resources and land use monitoring, including support to one selected pilot district/country;
- Maintain records, with support of the administrative assistant, on technical and financial aspects of project operation, including monitoring of project activities and their outcomes; as well as minutes, decisions and recommendations of meetings and workshops for support and guidance of PSC members and FAO;
- Organise RPSC meetings, regional workshops and other inter-country activities with guidance of RPSC (to be rotated among the countries as appropriate) including workshops for sharing experiences in thematic areas and exchange visits among stakeholders and project sites, in accordance with the annual work plan;
- Provide suggestions on harmonising strategies, policies and regulatory measures with a view to mainstreaming sustainable land and agro-ecosystems management and agricultural biodiversity conservation and developing synergies among regional and national sectoral plans and policies;

- Disseminate relevant documentation and experiences to the NTUs and partners, building from experiences in other programmes and river basins in the region;
- Prepare timely and quality project progress and implementation reports for submission to FAO (in accordance with reporting procedures;
- Synthesize successful results and prepare and disseminate reports and guidance on best practices and approaches and incentive mechanisms for their wider replication and use.

DURATION, LOCATION AND NATURE OF APPOINTMENT

The appointment will be for 4.5 years in the Regional Project Coordinating Unit in Kigali, Rwanda, subject to probationary period and performance and extendable as necessary to reflect ultimate completion date of the project. The Regional Project Coordinator will work from the RPCU and travel as required in the basin and in the wider region, as well as briefing and debriefing missions to FAO headquarters.

QUALIFICATIONS

The Regional Project Coordinator will be recruited competitively following announcements in regional and international press, and will have the following qualifications:

- At least 15 years working experience in agricultural and environmental management or related fields with recognised technical expertise;
- A Bachelor and a Master's level degree or PhD in natural resources management, agriculture, geography or related field;
- Extensive experience in the management of complex projects at national or regional levels;
- Strong management skills including ability to provide strategic guidance, technical oversight, mentor staff, build strong teams, develop workplans, and manage budgets and project expenditures;
- Good multi-cultural and interpersonal skills will experience in networking with partners at all levels (ministry, donors, private sector, NGOs and local community based organizations);
- Experience working with or in international and donor organizations with implementation of participatory projects;
- Proven written, analytical, presentation and reporting skills and demonstrated computing skills;
- Fluency in spoken and written English, preferably bilingual, but at least working knowledge (spoken and written) of French;
- Experience working in, and preferably originating from, the Nile basin countries or a similar region in Africa

2) NATIONAL PROJECT MANAGERS - DETAILED TERMS OF REFERENCE

INTRODUCTION

Under the overall responsibility and technical and financial supervision of the FAO Lead Technical Unit and Country Representations, the **four National Project Managers (NPMs)** will head the National Project Units (NPUs) in Burundi, Rwanda, Tanzania U.R. and Uganda respectively, with responsibility for management of the project in their own country, in close consultation with stakeholders and partners. The NPMs will provide required technical and administrative support to coordinate and implement project activities at national level as well as linkages to basin-wide project objectives and activities. He/she will ensure effective management of GEF and co-funding resources through close contacts and guidance of FAO and the Regional Project Coordinator. The NPMs will report to and be guided and supported by the National Project Steering Committee (NPSC), and the designated national project focal points (agriculture and environment, based in the capital city), which will provide policy and technical guidance to ensure that the project achieves its goals, as well as cost effectiveness and sustainability.

SCOPE OF WORK

The primary duties of the National Project Managers will include:

- Supervise and coordinate the planning and implementation of the national project activities, providing proposals and liaising with the RPC in developing workplans, procurement, consultancies, recruitment, logistics, budgeting and disbursements.

- Establish close collaboration and working arrangements with an interdisciplinary team composed of experts from decentralized public services, NGOs, private sector and other professional associations, to ensure timely conduct of country activities, including contractual arrangements.
- Within country, liaise with government departments, Nile basin and Lake Victoria staff/projects and other partner organisations and projects, to ensure good coordination and collaboration, including co-funding arrangements;
- Monitor and supervise the execution of national activities, and national components of regional activities in country, ensuring in particular close working relations with national and local authorities, and providing technical support and general supervision of District Project Facilitators (DPFs). Inform the RPC of problems and obstacles that need attention and specific assistance;
- Prepare the terms of reference and identify consultants/institutions to undertake national level assignments in accordance with the approved annual Work Plan, and submit required documentation to the RCU and FAO for approval;
- Monitor and supervise the work of consultants, institutions, government staff and other partners, facilitate meetings and, as far as possible, ensure the timely and responsive delivery of outputs and reports;
- Provide support to the RPC and FAO missions and consultants visiting/engaged in assignments in country, including preparing itineraries, appointments and liaising with the Country Representatives to assist with travel and other logistical arrangements;
- In consultation with the RPC and NPSC determine dates, agendas, budgets and participation for national workshops and exchange visits, and upon approval of these plans by the RPC and FAO, undertake the organization and conduct of the workshops and exchange visits;
- Participate in regional project meetings and workshops and other activities as required;
- Work in close collaboration with the National Focal Point and National Project Steering Committee members providing them with periodical reports on the progress of project activities and issues arising;
- Maintain close contacts with partners and projects, ensuring adequate communication of national activities to the DPFs and all stakeholders including Government, private sector and NGO partners, and invite and encourage multi-stakeholder participation, in particular local groups, in national activities and consultations as appropriate;
- Prepare an annual national Work Plan for submission to the RPC and FAO and updates on a quarterly basis with explanations of any changes. The annual plan will comprise reviews of activities undertaken and/or completed over the last year, as well as proposals for national project activities to be conducted the following year (scope, specifications and timeframe and expected products;
- Convene, as required, thematic sub-groups to provide guidance and revise products/ reports on specific technical, policy and legal issues in consultation with the NPSC;
- Assist in the identification of sustainable integrated land and agro-ecosystem management practices for testing and replication, building on local/indigenous knowledge and innovations and recent research findings, in close collaboration with the DPFs, RPC and FAO. Ensure that equipment, technical assistance and services are provided to beneficiaries efficiently and with timely action;
- In close collaboration with the local authorities, organize training activities at all levels and in accordance with the annual work plans;
- Liaise with government staff and the NPSC to promote an enabling national environmental and regulatory environment that would facilitate mainstreaming sustainable land and agro-ecosystems management and agro-biodiversity conservation into district and sectoral plans and policies;
- In close collaboration with the RPCU and national and district authorities, mobilize funds /resources from other development partners and institutions to complete the financing of the GEF supported Kagera TAMP programme.

DURATION, LOCATION AND NATURE OF APPOINTMENT

The appointment will be for 4.5 years in the National Project Unit as appropriate in: Kigali/Rwanda, Kabale/Uganda, Bujumbura/Burundi or Bukoba/Tanzania, subject to probationary period and performance and extendable as necessary to reflect ultimate completion date of the project. The NPMs

will work from the NPU in his/her country and travel as required in the basin, and in the country and wider region, as required, with a briefing mission to FAO headquarters.

QUALIFICATIONS

The National Project Manager will be recruited competitively following announcements in regional and national press, and will have the following qualifications:

- At least 10 years of working experience in agricultural and environmental management or related fields with recognised technical expertise;
- A Bachelor and a Master's level degree or PhD in natural resources management, agriculture, geography or related field;
- Strong management skills including ability to provide strategic guidance, technical oversight, build strong teams, mentor staff, develop workplans, and manage budgets and project expenditures;
- Good interpersonal skills with experience in networking with partners at all levels (ministry, donors, private sector, NGOs and local community based organizations);
- Experience working with or in international and donor organizations with implementation of participatory projects;
- Demonstrated written, analytical, presentation, reporting and computing skills and familiarity with modern communication systems (internet, worldwide web, email etc);
- Fluency in spoken and written English, bilingual in French or least working knowledge (spoken and written) of French if in Burundi or Rwanda;
- Preferably with experience with work and travel to other Nile basin countries or other parts of Africa.

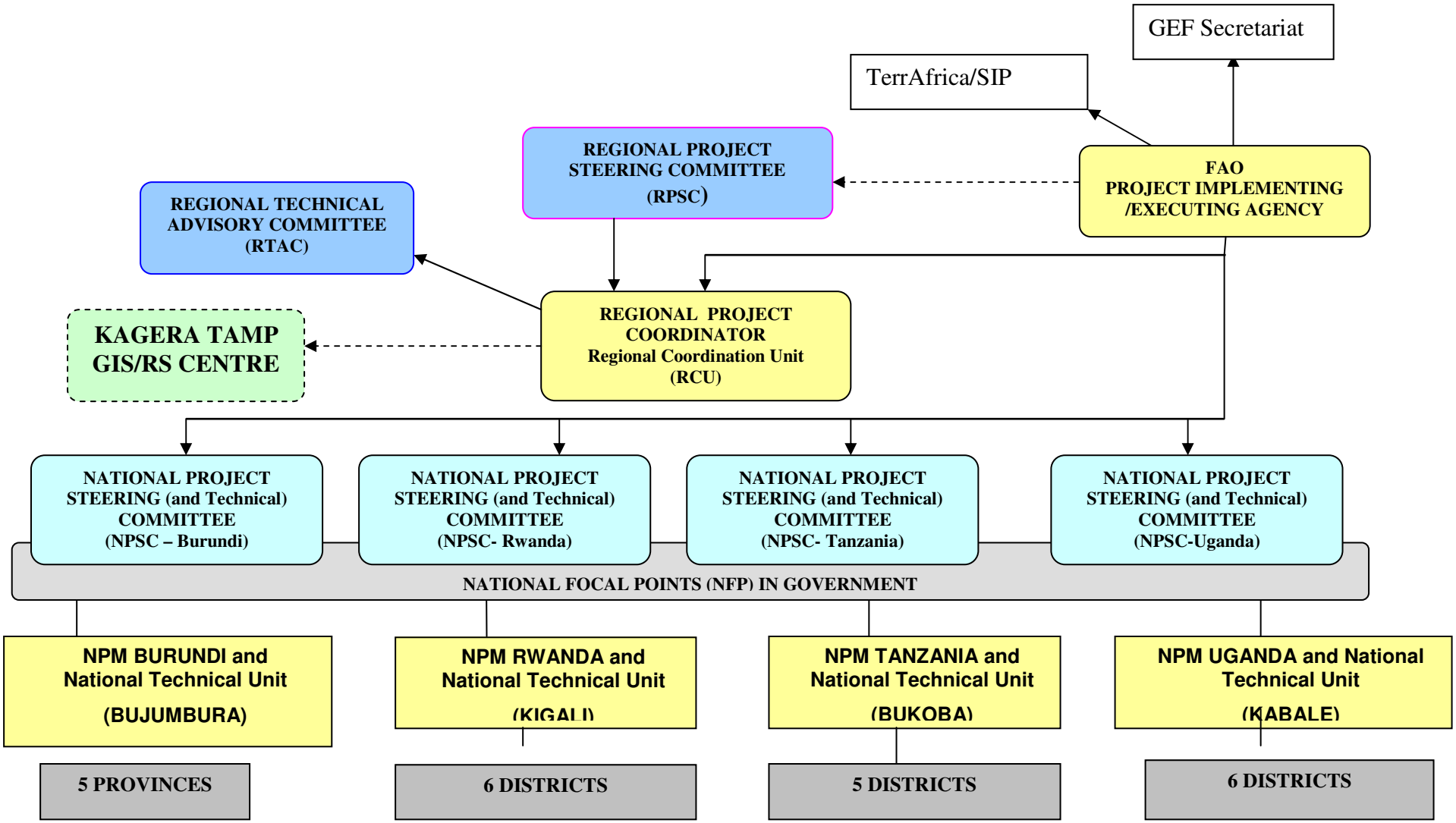
3) DISTRICT PROJECT FACILITATORS - DRAFT TERMS OF REFERENCE

Under the overall responsibility of the District authorities but with the technical supervision of the NPM the District Project Facilitators (DPFs) in each target district will be expected to support project interventions with local communities, micro-catchments and other agro-ecological units through close consultation with district authorities and wider beneficiary populations. The DPFs will ensure appropriate technical support to local communities/ actors by establishing a close-knit interdisciplinary team of interested and competent district officers, extension workers and partners. They will be responsible for ensuring complementarity and avoiding duplication with other actors/projects/ interventions in the district. The involvement of this team will be agreed upon through a Memorandum of Understanding with the district.

The DPFs in close consultation with the NPM and district authorities, will inter alia:

- Ensure that indigenous knowledge and tradition systems are taken into consideration in designing the project's land and agro-ecosystems planning and management activities that will be undertaken with communities in the district;
- Assist target communities in the preparation and implementation of local development plans, monitor their implementation and keep the NPM informed of progress and issues arising;
- Identify and prioritize the targeted populations' support needs in accordance with the project objectives and agreed areas of focus;
- Coordinate project activities at target communities, micro-catchments and agro-ecological zones, and ensure coordination with other ongoing and planned activities, such as those of civil society organisations/associations, government technical services, NGOs, development partners, private operators and other institutes, in the project area; and
- Carry out awareness-raising activities on the project's objectives and activities and to sensitize local communities about the importance of sustainably managing the Kagera basin resources and agro-ecosystems and their biodiversity, with attention to potential positive impacts on livelihoods, incomes and well being, and about the project's objectives and activities.

ANNEX 6.C: ORGANIZATIONAL CHART OF THE GEF TRANSBOUNDARY AGRO-ECOSYSTEM MANAGEMENT PROGRAMME FOR THE KAGERA RIVER BASIN



ANNEX 7: MONITORING AND EVALUATION PLAN

INTRODUCTION

The objective of monitoring and evaluation is to assist all project participants in assessing project performance and impact, with a view to maximizing both. Monitoring is the continuous or periodic review and surveillance by management of the implementation of an activity to ensure that all required actions are proceeding according to plan. Evaluation is a process for determining systematically and objectively the relevance, efficiency, effectiveness and impact of the activities in light of their objectives. Ongoing evaluation is the analysis, during the implementation phase, of continuing relevance, efficiency and effectiveness and the present and likely future outputs, effects and impact.

The project will be evaluated on the basis of execution performance, monitoring of milestones, output delivery, and project impact. The general and specific objectives of the project, its outcomes and outputs and key indicators, as expressed in the Project Logical Framework (Annex 2) and annual Work Plans, form the basis of this M&E plan.

The project's M&E programme will be guided by indicators that represent a summary description of the expected results and impacts. The indicators, as presented in the Project Logframe, should be understood as being adaptable in the sense that they could be subject to revision during the course of project implementation. Reasons for revision could include changing circumstances, a demonstrated inability (either physical or practical) to collect reliable baseline data on an indicator such that change cannot be reliably measured, interim monitoring that indicates that targets are either too high or too low, or more appropriate indicators have been identified.

The project will be monitored and evaluated on the basis of:

- **Project execution**. Monitoring will assess whether the management and supervision of project activities is efficient and seek to improve the efficiencies, when needed, so as to improve the overall effectiveness of project implementation. It is a continuous process, during which information about the execution of activities programmed in the annual work plans will be collected, including the delivery of quality outputs in a timely manner. Such information will facilitate the comparison of accomplished against programmed tasks (according to the annual work plan), with a view to identifying any corrective measures that may be necessary to improve performance. This activity will be the direct responsibility of the Regional Project Coordinator, with advice from the Project Steering Committee and FAO. See ***Table 1*** for the execution performance indicators.
- **Project performance, milestones and delivered outputs.** The project will be monitored closely by the Project Steering Committee and FAO-LTU and FAO-GEF units through semi-annual reports and quarterly implementation reviews. How successful the project is will be evaluated at mid-term (after two years of project execution) and final (at the end of project execution) by external consultants contracted by FAO. See ***Table 3*** for a summary of the project performance indicators.
- **Project impact.** Evaluation of the project's success in achieving its outcomes will be monitored continuously throughout the project through semi-annual project progress reports, annual summary progress reports, and a midterm and final evaluation. The key performance indicators identified in the project logframe will guide the evaluation of project impact. ***Table 2*** presents the key performance indicators. Methods of data collection must strive to ensure that reliable baseline data has been collected/is collected and that impact data are collected regularly throughout project implementation. The performance indicators will be tested and refined, if necessary, and interim indicators and numerical targets with timeframes will be agreed during the inception workshop.

MONITORING OF PROJECT EXECUTION AND PERFORMANCE

Day-to-day monitoring of progress and performance and reporting will be the responsibility of the Regional Project Coordinator (RPC) in close consultation with national project managers (NPMs) and the regional GIS remote sensing centre. The RPC and NPMs will report regularly to members of Regional and National Project Steering Committees, highlighting important issues and constraints for advice and guidance. The RPC will advise the lead technical unit and budget holder [Land and Water Division -NRL] and Technical Cooperation Department, and in turn GEF Secretariat, of any delays or difficulties faced during implementation so that timely support/corrective measures can be provided. FAO, will organize an independent mid-term review and final project evaluation with a team of external consultants to assess the relevance, efficiency, effectiveness, progress and impacts of the project in light of TAMP objectives, inputs and expected outputs. Table 1 below contains a description of the indicators that will be used to measure project performance.

Table 1: Indicators for Evaluating if Project Management Units are Effectively Operational

Indicator	**Means of Verification**[13]
Regional coordination mechanisms and national project management structures established and functioning	Project Inception Report and Semi-annual Project Progress Reports
Semi-annual and annual activity and progress reports are prepared in a timely and satisfactory manner	Arrival of reports to TCI
Semi-annual expenditure reports are prepared in a timely and satisfactory manner	Arrival of reports to TCI
Performance targets, outputs, and outcomes are achieved as specified in the annual work plans.	Semi-annual and Annual progress reports
Deviations from the annual work plans are corrected promptly and appropriately. Requests for deviations from approved budgets (budget revisions) are submitted to and approved by FAO in a timely fashion.	Work plans, timely submission to, and approval by FAO of revised budget
Disbursements are made on a timely basis, and procurement is achieved according to the procurement plan.	Transactions statements and financial reports of FAO
Report on the procurement of non-expendable equipment against the project budget filed in a timely manner	Inventory of Non-Expendable Equipment reports
Project Steering Committee (PSC) is providing guidance on project implementation, monitoring project progress and project impact, and fulfilling its Terms of Reference (TORs)	Minutes of PSC meetings
PSC is providing policy guidance, especially on achievement of project impact.	Minutes of PSC meetings

PROJECT IMPACT

Evaluation of the project's success in achieving its outcomes and desired impact will be monitored continuously throughout the project by the Regional Project Coordinator, LTU and GEF unit /TCI. An independent mid-term review will be carried out at the beginning of Project Year 3 and an independent final evaluation will be carried out just prior to project completion. The key performance indicators identified in the project logframe will guide the evaluation of project impact. ***Table 2*** presents the key

[13] The GEF project task manager will track this in consultation with the global PMU.

performance indicators. Methods of data collection must strive to ensure that reliable baseline data has been /is collected and that impact data are collected regularly throughout project implementation. The performance indicators will be tested and refined, as necessary, and interim indicators and numerical targets with timeframes will be agreed during the inception workshop. FAO will work closely together with the Regional Project Coordinator to complete this task.

Kagera TAMP objectives and impact: The objectives of the 4.5 year project and the project outcomes (components) and planned outputs (expected results) provide the basis for this M&E plan. The environmental objective is to address the causes of land degradation and restore ecosystem health and functions in the Kagera basin through the introduction of adapted agro-ecosystem management approaches. The development objective is to improve the livelihood opportunities, resilience and food security of rural communities (men, women and children) in the Kagera Basin through adoption of more productive and sustainable resource management practices that are technically feasible and socio-economically viable. Major areas identified for impact assessment include: (a) status of land resources and agro-ecosystems; (b) evidence of change in land and agro-ecosystems management practices; (c) improvement in achievement of environmental and livelihood goals – reversing land degradation, biodiversity conservation, carbon sequestration and enhancing crop and livestock productivity, reducing poverty, reducing food insecurity and vulnerability; and (d) strengthened capacities for integrated sustainable land and agro-ecosystem management (SLaM) at different levels and across the river basin.

A minimum data collection is required to enable TAMP project management and stakeholders (field staff/communities/land users/partner institutions) to track at regular time intervals a) the extent to which the SLaM objectives are being achieved (compare planned/versus achieved inputs and outputs) and assess effects of both external factors and internal project operations and b) to assess results and lessons learnt, solutions to keep project on track for decision making process by the management. The databases and monitoring systems established and maintained by the regional and national project management units, as well as the information centres at community level, should help the project decision makers, as and when needed, and the mid term and end of project evaluations, to establish the relationship between objective, outputs and effects (impacts) in regard to the SLM objectives/goal.

During the PDF-B the baseline problem/situational analysis, characterization and evaluation of land management practices and their implications (biophysical and socioeconomic status, spatial and temporal trends) with stakeholders led to the diagnosis and formulation of required interventions. The indicators identified to monitor progress/change are elaborated in the Logical Framework in Annex 2.

Baseline information has been collected by Rwanda, Tanzania and Uganda from the several transects and PRA processes conducted in a range of agro-ecological zones and contexts by an interdisciplinary team of experts with community representatives This is supplemented by information collected through consultations with government, NGOs, projects and other stakeholders. (Burundi has yet to compile such information as it was not one of the participating countries in the PDF-B, although representatives from Burundi participated in some of the regional workshops). In addition, the three PDF countries, through a contracted remote sensing/GIS centre, each set up a preliminary geographic information system (GIS) for its part of the basin with biophysical and socioeconomic data built up from various sources and scales of information. The three digitised datasets and reports (available) and a dataset for Burundi (to be developed during initial months of the project) will be combined and harmonised by the University of Butare which has been selected, following the PDFB, as the most qualified service provider in the Kagera Basin to develop and monitor the basin wide GIS/RS system.

The indicators and baseline will be reviewed, responsibilities actors tentatively identified, and the method of collection and responsible actors agreed at the Inception meeting and first Regional Project Steering Committee meeting.

Table 2. Key performance indicators

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
ENVIRONMENT AND DEVELOPMENT OBJECTIVES The environmental objective is to address the causes of land degradation and restore ecosystem health and functions in the Kagera basin through the introduction of adapted agro-ecosystem management approaches. The development objective is to improve the livelihood opportunities, resilience and food security of rural communities (men, women and children) in the Kagera Basin through adoption of more productive and sustainable resource management practices that are technically feasible and socio-economically viable.	Improved land use systems/ management practices for the range of agro-ecological zones in the basin being tested and adapted (by end PY3) for arable and pastoral systems including measures for reducing pressures on wetlands, riverbanks, forest and protected areas. Transformation of 43,700 ha of land by PY3 and 100,000 ha by PY5 towards more productive and sustainable agricultural ecosystems Potentially 6 percent of today's basin population (some 1 million people) aware of project activities in target communities, micro-catchments, agro-ecological units through demonstrations and outreach..		Without project information from - prior assessments of land degradation and impacts in the river basin. -district development and economic reports SLaM interventions monitored by target districts and mapped by target communities- field surveys Outreach assessed through polls (e.g. market places/schools)
Outcomes			
1. Transboundary coordination, information sharing and monitoring and evaluation mechanisms operational and effective in promoting sustainable, productive agro-ecosystems and restoration of degraded lands.	Transboundary agro-ecosystem management programme to reverse land degradation being implemented and monitored in 21 districts and reviewed by national and regional PSCs and project activities and achievements widely shared and available (PY5). Best practices for addressing transboundary land-related constraints through integrated ecosystems and inter-sectoral approaches mainstreamed in planning and development processes, including NAPs, and pilot actions implemented to address transboundary issues in 68 communities (PY3) and replicated in		Reports and decisions of district, national, river basin policy and planning mechanisms Project steering committee reports Technical reports and project progress reports Field surveys National and district financial accounts

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
	21 districts (PY5). Regular budgetary allocations from Governments to transboundary coordination and collaboration in the Kagera Basin increased by 10 % (PY5)		
2 Enabling policy, planning and legislative conditions are in place to support and facilitate the sustainable management of agro-ecosystems and the restoration of degraded land.	Priority policy, legal and transboundary issues identified and agreed at community (68), district (21) and river basin levels for SLaM (end PY2) and resulting in supporting policy decisions, regulatory mechanisms and community bye-laws for improved harmonization and application (PY5).		Action plan for the establishment of a supporting policy and legal framework for SLaM across the basin. National and regional workshop reports
3. Capacity and knowledge are enhanced at all levels for the promotion of – and technical support for – sustainable management of land and agro-ecosystems in the basin.	Trained technical staff and policy makers in 21 districts - supporting SLaM planning and implementation and using project information resources in their district and communities (PY5) Community members/local decision makers sensitized on SLaM techniques for pastoral, arable, mixed systems and their on- and off-site impacts and benefits (PYs 1-5) FFS members trained and adopting SLM and promoting upscaling on community territory Training materials on best practices /approaches widely available and SLM demonstrations in place.		Project progress reports Reports of staff and other stakeholder training workshops Targets being monitored by the project and districts
4. Improved land and agro-ecosystem management practices are implemented and benefiting land users for the range of agro-ecosystems in the basin.	SLM practices implemented by pilot communities (68 by PY3; 200 by PY5)in demonstrations and farmer plots covering a total of 45,000 ha of land (by PY5) and showing: - Effective control of soil erosion (no new visual signs) in all target sites;		LAMIS data (RS/GIS)including field monitoring of target areas Sample surveys of land degradation, agro-ecological systems analysis and agro-biodiversity in target areas by FFS and technical staff will include LADA-

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
	- 4 target micro-catchments (PY5) identified an sediment loads monitored (subject to identifying sites where SLM interventions can be applied on a significant area of the catchment and hydrological monitoring can be supported by partner Kagera IWRM, NBI-NELSAP and LVEMP projects); - 30 percent increase in vegetation cover (above and below ground biomass) on pilot 23,000 ha arable and 7,500 ha pasture lands where alternatives to slash and burn are applied (PY5) -20 percent increase in soil carbon stores on farmer study plots and sample arable and pasture lands (PY5) inferred on 30,500 ha of land where SLM is practiced/planned. - 10 percent increase in production (crop; livestock; other goods) by trained farmers/ herders contributing to livelihoods (income; food security; reduced vulnerability)		local visual indicators of ▪ soil properties and erosion backed up by soil C sampling; ▪ vegetation/litter cover/bare soil/ extent and effect of burning; ▪ water resources and drought ▪ inter and intra-species and habitat diversity ▪ land productivity under different land use types (inputs/ yields/ other NR products e.g fuel) Household surveys in target communities /districts (comparing 360 sample households/ FFS members and controls ; analysis of land degradation, poverty; health; food security, vulnerability inter-relations)
5. Project management structures operational and effective	Project activities executed and outputs delivered in line with workplan and budget Regional PSC and TAC meetings held and guidance given Support visits executed by FAO and Government institutions and PSC/TAC members		Project progress reports Project M&E sstem
Outputs			
1.1A basin-wide coordination mechanism is established to facilitate trans-boundary dialogue, basin-level planning, policy harmonisation and	Sustainable coordination mechanism for SLaM agreed upon among the 4 countries (eventually as part of wider NBI and EAC mechanisms) and reflected in a		Report on options for basin wide coordination of SLaM National policies and action plans reflect

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
coordination of national/sub-national actions.	memorandum of understanding. Recommendations to harmonise policies, laws and regulations and address transboundary issues in the river basin developed by an ad-hoc basin-wide task force with stakeholders (PY3) and mechanisms in place for their implementation in 21 districts (by PY5). Transboundary SLM action plans in development/ in place with budget allocations and institutional support.		regional collaboration Reports of RPSC meetings Project progress reports Relevant river basin/district reports reflecting collaboration across borders and among TAMP and partner projects (NBI-NELSAP, LVEMP, ...)
1.2 An efficient basin-wide knowledge management system is established to support information requirements and decision-making processes at all levels.	TAMP knowledge management system established and functioning at all levels (PY2) including: o Kagera environmental monitoring and information system (EMIS) supported by a GIS and RS tools and linked with LVEMP and NBI databases as appropriate (PY1-5). o Pilot district level GISs developed and operational - 1/country (by PY3). o Community information centres set up and servicing stakeholders in target communities (PY2). o Membership of networks and selected experts from networks supporting TAMP (IW LEARN, WOCAT, ASARECA).		EMIS, pilot district GIS and community information centre outputs (regularly updated) Project M & E system Project progress reports
1.3 Project monitoring and evaluation systems supporting TAMP implementation and decision making.	M & E system established and functioning Project management and district partners trained in data collection and participatory M&E (by end PY 1)		M&E reports issues in a timely manner Steering committee reports Project progress reports Mid-term (PY3) and final (PY5) evaluation reports

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
1.4 Kagera TAMP project management structures are operational and effective.	Project management structures established (PY1) Project staff recruited (PY1) Adequate premises, equipment and support services provided (PY1). Resource mobilisation strategy and co-financing plan regularly updated and shared with partners, in accordance with GEF land degradation co-funding requirements (PY1-5).		Reports of PSC meetings and communications with TAC members Project progress reports Co-financing reports
2.1 Sustainable management of land and agro-ecosystems (SLAM) mainstreamed in national development policies and programmes, enhancing synergy among sector strategies and across the river basin	SLaM considerations/actions integrated in annual district development plans and budgets (21), - SLM practices/ approaches mainstreamed into river basin and national agriculture and NR sector action plans (e.g. biennial) and a set of results based indicators used to monitor how they contribute to NAPs (4) and NBSAPs (4) (by PY4-5). Successful and diverse experiences of inter-sectoral processes and systems approaches for SLaM documented annually in 21 districts and the river basin reports and case studies/findings made available for decision making by PSC members (PY4-5)		District development plans National plans reflect SLaM considerations (NAPs, NBSAPs) River basin reports (Kagera, Nile, LVEMP
2.2 Regulatory actions developed and used to promote - or remove existing barriers to - sustainable land and agro-ecosystem management	Locally adapted by laws developed and agreed at community level (24 cases/ country) (PY3) and implemented (PY5) Best practices for effective policy and legal application/enforcement disseminated in the basin (PY 2-5).		Compendium of byelaws and regulations Reports of stakeholder consultations Project progress reports

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
2.3 A coherent strategic and planning framework developed and implemented (from river basin to district/provincial and community levels) to support SLM efforts by rural communities.	National and local government staff trained in land use planning (at least 42 district level; 64 community level) (PY1-5) Land use policy being effectively applied/ enforced in 68 communities by PY5. Participatory strategies and action plans developed for SLaM in 21 districts across the basin (PY1-3) o improved pasture and rangelands management (at least 15 areas; 7,500ha) o transboundary livestock movements (5 borders) o conservation and sustainable use of wetlands (at least 9 areas; 6,000 ha), o conservation and sustainable use of agro-biodiversity (68 communities) o sustained energy supply (68 communities)		Reports of workshops Reviews of status and trends and opportunities/options for SLaM EMIS maps, analyses and reports District and community action plans Project progress reports
3.1 Methods and approaches to promote the adoption of SLM practices and agro-ecosystems (pastoral and cropping) are identified, developed and validated through participatory action-research.	Demonstration sites (68) and FFS study plots (136) identified and agreed upon (end PY1), established (end PY2) and FFS study plots scaled-up x 3 (PY4-5) Training materials developed and used in training in 21 districts Advocacy and training materials disseminated and used in 21 districts and 68 communities (PY3), available from community information centres and districts as and when required in the basin (PY 5)		Documentary, educational & training material produced (video films technical and advocacy leaflets, maps, etc.) Training reports Project progress and technical reports
3.2 The quality of services provided to rural communities enhanced, particularly through intersectoral approaches that build on local knowledge and	FFS facilitators/extensionists (150); district staff (4 x 21), community leaders (150) and partner NGO staff (42) trained in PLAR (participatory-learning-action-research)		Field surveys and interviews Training workshop reports

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
innovations for improved agro-ecosystems management	approaches (PY 2+) and best practices for SLaM. Target communities (68) benefiting from improved access to service providers competent in SLaM (planning; intersectoral/ systems approaches) and SLM support - 300 technical staff and 200-250 policy makers (15/districts) trained to support SLaM planning and implementation and using project information resources in their district and communities (PY5) 120,000 community members/local decision makers sensitized on SLaM techniques for pastoral, arable, mixed systems and their on- and off-site impacts and benefits (PYs 1-5)		District and community reports Project progress reports District polls to assess outreach from SLM demonstrations, information centres, radio, education materials, etc)
4.1 Participatory land management plans are developed and implemented in targeted communities, micro-catchments and wider land units.	100 participatory land use plans and action plans developed (PY2) and being implemented (PY2-4) and replicated x 2 (PY5) o community action plans (68) o micro-catchments (46); o pasture/ range areas (15); o target wetlands (10); o riverbanks (1000km) Capacity built for implementation and monitoring of community action plans (PY1-5) in 136 communities.		Community / district land use plans and management reports Technical reports GIS / RS outputs Project progress reports A set of agreed indicators for monitoring SLM action plans e.g. - reduced degradation (burning, erosion, etc.) - improved vegetation cover, soil, water and range quality, resilience to drought - enhanced crop and livestock productivity and effects on livelihoods - increased awareness, information, expertise and institutional support for SLM

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
4.2 Improved land use and agro-ecosystem management practices are successfully adopted by farmers and herders in targeted communities and replicated in other areas.	136 communities implementing SLaM (PY5) Wide adoption of improved agricultural systems and management practices including biodiversity conservation by members of 72 farmer/herder groups (PY3) and replicated x 3 (PY5) 11,800 farmers trained and adopting /upscaling SLM through FFS approaches (PY3) and a further 1,800 farmers by PY5 Local-level indicators of benefits of SLaM (income, household food security, reduced risk) confirmed by all target farmer groups and a sample 10 % of the target population (100,000 persons) (by PY5)		Training reports FFS records GIS / RS maps, analyses and reports Project progress reports
4.3 Market opportunities and other incentive/ benefit sharing mechanisms for the provision of environmental services identified, demonstrated and promoted among land users.	Incentive and benefit sharing mechanisms (monetary; non-monetary) identified and supporting adoption of SLaM and biodiversity conservation, including payments for environmental services (PES), products added-value and marketing in 34 communities (PY 1-5) Incentive/ support mechanisms reaching vulnerable groups (tenant farmers, youth, HIV/AIDS widows/orphans; female headed households) 15% of target population (PY5)		Technical Reports Reviews and records of incentive/benefit sharing measures and options and SLM investments Local surveys on poverty, health, income, vulnerability etc Project progress reports
Output 5.1: Project management, institutional and administrative structures in place and linked to national and regional decision making structures	Regional project coordinator and national project managers in place in offices provided by host government and supported by FAO (HQ, Country reps and regional offices) Activities and products monitored in terms of timeliness, cost effectiveness and		Project progress reports Midterm evaluation report

Objectives and outcomes	Key Performance Indicators	Baseline	Method of Data Collection (including frequency)
	sustainability Regional PSC and TAC operational, linkages made to other national processes and guidance provided Backstopping missions by FAO and Government institutions Mid term evaluation conducted and recommendations implemented Adequate co-funding and human resources to execute project activities		
Output 5.2: Project M&E system and reporting supporting project management and execution.	Continuous monitoring and reporting on project performance Project management and performance review included as part of mid term evaluation		Project progress reports Midterm evaluation report

PROJECT MONITORING REPORTS

The Regional Project Coordinator, in close consultation with the National Focal Points and in collaboration with the FAO Lead Technical Unit and budget holder (NRL), and TCI (GEF Focal Point) will be responsible for the preparation of the following mandatory reports that form part of the monitoring process. The TCI/GEF unit will formally submit the reports to GEF Secretariat.

The timely preparation and submission of the following mandatory reports form an integral part of the monitoring process. All technically cleared reports should be copied to **TC-FPMIS-DataQuality@fao.org** so that they can be uploaded and maintained in the corporate project database under the FAO Field Programme Management Information System (FPMIS).

Monitoring, reporting and evaluation responsibilities are set out in Table 4 and timing and content of the various reports in Table 5. A consolidated M&E Plan and budget can be found in Table 6.

Project Inception Report

The Regional Project Coordinator shall prepare the Project Inception Report in close collaboration with the National Focal Points and FAO. It will include a detailed First Year Annual Work Plan divided into monthly timeframes detailing the activities and progress indicators that would guide implementation during the first year of the project. The Work Plan should include, *inter alia,* dates of specific field visits, national and regional meetings, Regional and National Project Steering Committee and other key decision-making meetings, technical support and review missions, workshops/training sessions to be organized outputs to be produced. The Report will also include the detailed project budget for the first full year of implementation, including any monitoring and evaluation requirements to measure project performance during the year.

The Inception Report will include a detailed narrative on the institutional roles and responsibilities and coordinating action of project partners, progress to date on project establishment and start-up activities, and an update of any changed external conditions that may affect project implementation.

The draft report will be circulated to project partners for review and comments. The final version will be submitted by the FAO/LTU to FAO GEF unit (TCI) and the LTU will ensure that the report is posted on the FAO Field Programme Management Information System (FPMIS).

Quarterly Project Implementation Reports (QPIR)

Quarterly Project Implementation Reports are an internal FAO monitoring tool. QPIRs are prepared by the FAO budget holder (BH) and require the BH to review the project regularly, to compare approved work plans with actual performance, and to take corrective action as required. The QPIR is used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. A copy of the QPIR should be provided to the FAO GEF Unit.

Semi-Annual Project Progress Reports

The Regional Project Coordinator, with inputs from the National Project Managers that will have been prepared with National Focal Points, will prepare every six months a Project Progress Report in English, using the standard FAO format, which is attached as an Annex to the Project Document). The Project Progress report should contain, *inter alia*:

a) an account of actual implementation of project activities compared to those scheduled in the Annual Work Plans, and the achievement of outputs and progress towards achieving the project objectives, based on the project progress and impact indicators as contained in the Project Logical Framework in Annex B, the Project Inception Report and as further defined in Project Year 1;

b) an identification of any problems and constraints (technical, human, financial, etc.) encountered in project implementation and the reasons for these constraints;
c) clear recommendations for corrective actions in addressing key problems resulting in lack of progress in achieving results;
d) lessons learned; and
e) a detailed work plan for the next reporting period.

Project Implementation Review (PIR)

The Project Implementation Review is an annual monitoring process mandated by the GEF. Starting 2006, the GEF Secretariat provides the scope and contents of the PIR. The PIR is an essential management and monitoring tool and will be an important medium for extracting lessons learned from ongoing projects. Once the project has been under implementation for a year, a PIR must be completed by FAO for the year beginning 1 July and ending on 30 June. The PIR should be discussed by the LTU with the Regional Project Steering Committee and submitted to the TCI/GEF unit. The individual PIRs are collected, reviewed and analysed by TCI/GEF by focal area, theme and region for common issues/results and lessons. The focal area PIRs are then discussed in the GEF Interagency Focal Area Task Forces around November each year and consolidated reports by focal area are collated by the GEF Evaluation Office based on Task Force findings.

Technical and Field Reports

The Regional Project Coordinator will commission technical reports in accordance with the annual Work Plan approved by the Regional PSC. The drafts of any such technical reports must be submitted by the RPC and to the FAO LTU and TCI-GEF for review and clearance, prior to finalization and publication. Copies of the technical reports will be distributed to the participating countries and partners, the GEF Secretariat (as appropriate), FAO Representatives and FAO technical officers and librarians concerned in the FAO Subregional Offices and in FAO headquarters, and posted on the FAO FPMIS.

Project Terminal Report

In the concluding months of the project and not later than three months before the end of the project, the Regional Project Coordinator, in close consultation with the National Focal Points, will prepare a draft Terminal Report for review by the Project Steering Committee, participating countries and FAO. The draft report should be made available to the final project evaluation mission. The Terminal Report will assess in a concise manner, the extent to which the project's scheduled activities have been carried out, its outputs produced, progress made towards the achievement of the Development Objective, Global Environmental Objective and Immediate Objectives based on objectively verifiable project progress and impact indicators, institutional structures and coordination arrangements implemented, and lessons learned. It will also present recommendations for any future follow-up action arising out of the project. Upon conclusion of the project, it will be finalised and submitted to the participating countries (National Steering Committees), Regional Project Steering Committee, technical officers in the FAO Sub-regional Offices and in FAO headquarters and posted on the FAO-FPMIS.

INDEPENDENT EVALUATION

Independent mid-term review and final evaluations will be organized by FAO. Given the tripartite nature of the project, they will be conducted in close consultation with the partners (beneficiary countries and FAO) so as to facilitate the ownership of the findings and recommendations. In this respect, FAO will consult the partners on the timing of the mid-term review and final evaluation, terms of reference and evaluation team composition for appropriate competencies and independence.

Mid-term Review

An independent Mid-term Review will be undertaken at the beginning of Project Year 3. The Mid-term Review will determine progress being made towards achievement of outcomes and will identify corrective actions if necessary. It will include an autoevaluation by countries, and an independent reviewer. It will, *inter alia*:

a) review the effectiveness, efficiency and timeliness of project implementation;
b) analyse effectiveness of implementation and partnership arrangements;
c) identify issues requiring decisions and remedial actions;
d) identify lessons learned about project design, implementation and management;
e) highlight technical achievements and lessons learned;
f) analyse which of the activities could be scaled up, and review proposed modalities for remaining years;
g) propose any mid-course corrections and/or adjustments to the Work Plan as necessary.

Terminal Evaluation

An independent final evaluation will take place three months prior to the final Regional Project Steering Committee meeting of the participating countries, and will focus on the same issues as the Mid-term Evaluation. In addition, the final evaluation will review project impact, analyse sustainability of results and whether the project has achieved the immediate objectives, global environmental objectives; and contributed towards the development objectives. It will furthermore provide recommendations for follow-up actions.

Table 3: Monitoring, Reporting and Evaluation Responsibilities

This table summarizes the responsibilities and timing for the preparation of the monitoring and evaluation reports.

FAO GEF Unit	FAO - Lead Technical Unit and Budget Holder	Regional and National Steering Committees	National Focal Points
Monitor the agreed M&E plan and arrange for independent supervisory visits Receive consolidated half-yearly and annual activity, progress and financial reports and copies of all substantive reports, from FAO Engage and prepare terms of reference for independent M&E consultants to conduct the mid-term reviews and final evaluation Facilitate the selective review of the project by STAP and/or GEFSEC Carry out such other monitoring as is determined in collaboration with FAO (Task Force and Management Team)	Establish reporting guidelines for country leaders, and ensure that they meet reporting dates and provide reports of suitable quality Participate fully in Regional Project Steering Committee and to the extent possible in general project meetings, including meetings of the Technical Committee Review and comment on half-yearly and annual activity and progress reports, Regional Coordinator's reports, Technical Committee's reports, and all substantive reports submitted by countries Prepare consolidated half-yearly progress reports and	Provide overall guidance for the project implementation Reviewing and approving the inception report and annual project work plans Receive consolidated half-yearly activity and annual progress reports, and all substantive reports, and provide policy guidance to the project on any matters arising from a reading of these reports Monitor inputs of international and national partners, ensuring that project obligations are fulfilled in a timely and coordinated fashion Assist in developing linkages with other projects, thus	Prepare national level annual work plans Prepare national inputs for incorporation into the semi-annual Project Progress Reports and annual PIR Supply continuing M & E data in a timely manner for the incorporation into the M&E reports and as requested by Project Management Assist FAO in carrying out special reviews Agree impact indicators at national level and ensure

FAO GEF Unit	FAO - Lead Technical Unit and Budget Holder	Regional and National Steering Committees	National Focal Points
	annual summaries, and forward substantive reports, with comments as appropriate, in a timely manner to FAO-GEF Unit Carry out a programme of regular visits to countries to supervise activities, and pay special attention to those countries with serious implementation problems Establish terms of reference for any scientific advisers (or internal STAT teams) to be engaged as consultants to advise on particular areas of expertise, and/or provide specialized training for participants. Receive and evaluate the reports of these advisers, and act on any problems noted within them	ensuring the wider impact of project work	national M&E system provides appropriate information in a timely manner to the regional system

Table 4: Monitoring and evaluation reports

This refers to the six-monthly administrative and financial reporting, with a fixed format to be respected by coordinators at the national and global levels, i.e. from country to FAO. FAO financial rules and procedures will be applied to all reports required under contracts stipulated with entities in the countries.

Report	Format and Content	Timing	Responsibility
Activity and Progress Reports	(Reports will use a standard format to be developed following the FAO Progress Report model)		
Document the completion of planned activities, and describe progress in relation to the annual operating plan Review any problems or decisions with an impact on performance Provide adequate substantive data on methods and outcomes for inclusion in consolidated project half-yearly and annual progress reports Prepare Project Implementation Review (PIR) reports	Person reporting and Date Activity name and accomplishments within each activity this half-year Targets for the next half-year Comment on performance on progress toward project goals, and problems/constraints Report on any unanticipated results and opportunities, and on any checks to project progress Any highlights	Half-yearly Yearly	Country coordinators to FAO (Project Manager) for use as described in Table 3.4 (above) FAO-GEF Unit to GEF Secretariat
Consolidated Half-yearly Progress Reports	Reports will use a standard format to be developed following the FAO Progress Report model)		

Report	Format and Content	Timing	Responsibility
Provide a summary of half-yearly reports of progress, for FAO monitoring and transmission	**Summary of Country Coordinators' reports and participating institutions** Report on progress in each project activity, within each Country and in the project as a whole Activities of scientific advisers and specialized training programmes Summary of problems and proposed action Highlights	Half-yearly, within 30 days of end of each reporting period, but not required where a Consolidated Annual Summary Report is due	FAO (Regional Project Coordinator) with input from National/ regional Coordinators for forwarding to LTU, BH and FAO GEF unit and by FAO GEF unit to GEF Regional Project Coordinator will submit reports to the Regional Project Steering Committee
Consolidated Annual Summary Progress reports	(Reports will use a standard format to be developed following the FAO Progress Report model)		
Presents a consolidated summary review of progress in the project as a whole, in each of its activities and in each output Provides summary review and assessment of progress under each activity set out in the annual workplan, highlighting significant results and progress toward achievement of the overall work programme Provides a general source of information, used in all general project reporting	A consolidated summary of the half-yearly reports, with evaluation Summary of progress and of all project activities Description of progress under each activity and in each output Review of delays and problems, and of action proposed to deal with these Review of plans for the following period, with report on progress under each heading	Yearly, within 45 days of end of the reporting period	FAO (Regional Project Coordinator) in collaboration with National Focal Points Regional Project Coordinator will submit reports to the Project Steering Committee and to FAO/TCI for firther processing and forwarding by the GEF unit to GEF Secretariat.
Financial reports			
Details project expenses and disbursements	Disbursements and expenses in categories, format and documentation as set out by the FAO under the Contracts /Letters of Agreement (LoAs) to be stipulated	Half-yearly	All contracted institutions, to FAO (Project Manager)
Summary financial reports	(Standardized format, see Financial Procedures Agreement)		
Consolidates information on project expenses and disbursements	Receipts, Disbursements and Net Cash position	Half-yearly, within 30 days of end of period	FAO Budget Holder ; BH submits reports to FAO GEF Unit for internal clearance. Financial reports forwarded by the FAO Finance Division to the GEF Trustee in accordance with the Financial Procedures Agreements between FAO and the GEF Trustee.

Table 5: Kagera TAMP Monitoring and Evaluation Plan and Budget

Type of M&E activity	Responsible Parties	Time-frame	Budget US$ *[1]
Regional Inception Workshop	Regional Project Coordinator - RPC National Project Managers -NPMs FAO (NRL, FAO country offices)	Within two months of project start up	35,000
Project Inception Report	RPC with NPMs + FAO	Immediately after workshop	RPC/NPMs no extra cost FAO staff time in kind
Establish/refine outcome- and site- specific indicators (environmental + socioeconomic)	RPC + NPMs International M&E consultant with guidance of FAO	During year 1	10,000 (2,000/country+2,000 river basin level)
Field based impact monitoring	Oversight by RPC and NPMs Monitoring by district facilitators, local implementing agencies FAO guidance	Continually, but annual analysis prior to progress report, PIR and annual work plan preparation	50,000 (2,500/country/year)
Annual impact monitoring and Adaptive management of SLaM practices and Lessons learnt	RPC with NRL/SAF to oversee SLM activities and monitoring in the basin, in coordination with NPMs (responsible for country level activities and monitoring by national teams/contracts)	Annual Review	40,000 (10,000/country-indicative)
Project Implementation Review – FAO internal monitoring tool	Project Team + FAO	Annual	Project team no extra cost FAO in kind
Regional and National Project Steering Committee Meetings	RPC + NPM Participating countries FAO + Main partners/donors	Immediately after inception workshop and at least once a year	50,000 (travel and DSA costs) FAO staff in kind
Quarterly Project Implementation Reports - QPIR compare delivery with approved work plans; take remedial action	FAO Budget Holder TCOM, TCI/GEF	Quarterly	FAO in kind
6 monthly Project Progress Reports	Project team FAO (NRL, SAF, TCI/GEF, TCOM)	June and December	Project team no extra cost FAO in kind
Technical reports- see below*	Project team FAO (NRL, SAF, Project Task Force) Consultants as required	Indicative list of outputs of contracts/ consultancies below	21,000 (review, printing, dissemination of technical outputs)
Supervisory visits to project and field sites	FAO technical missions [14] Government PSC representatives	Yearly or as required	FAO (covered by fee) and GO staff time in kind
Independent Mid-term Review	PBEE –FAO independent evaluation unit) Project team Participating countries FAO-NRL, SAF, TCI/GEF, TCOM	At mid-point of project implementation	39,600
Independent Tripartite Final Evaluation	External Consultant Project team Participating countries FAO (NRL, SAF, PBEE, TCI/GEF, TCOM)	At the end of project implementation	65,000
Lessons learnt	Project team FAO (LTU+ project task force) FAO GEF Unit +TerrAfrica Partners	Yearly	75,000 (av. 3,000 per year for outreach; national and regional experience sharing workshops)
Terminal Report	RPC with support of NPMs FAO	At least one month before end of project	6,000
TOTAL Indicative Cost to GEF project (ex*cludes project team and part of FAO staff time covered by IA fee)*			**US$391,600**

[14] Part of FAO staff time and travel covered by the fee

* Specific technical reports will be developed to guide and monitor project implementation including:
    - Sustainable land and agro-ecosystem management guides/manuals for farmer field schools, selected micro-catchments and landscapes
    - Community planning guide for SLaM - development, implementation and monitoring of community action plans including land tenure and access to resources
    - Incentives and policy for SLaM - including agricultural, environmental and land tenure issues
    - SLM baseline studies, indicators and methods for monitoring by FFS, communities and districts

ANNEX 8: PROJECT BUDGET

ORACLE Budget	ORACLE Report	Description	unit cost US$	w/m /no.	Component 1	Component 2	Component 3	Component 4	Component 5	Total
		Project Personnel- salaries								
		Regional/National professional posts								
5300	5011	Regional Coordinator/Technical Adviser	5,000	54	105,000	20,000	35,000	50,000	60,000	270,000
		National Project Manager /Technical Adviser Burundi	3,000	54	68,947	18,232	34,108	25,713	15,000	162,000
		National Project Manager /Technical Adviser Rwanda	3,000	54	68,947	18,232	34,108	25,713	15,000	162,000
		National Project Manager /Technical Adviser Uganda	3,000	54	68,947	18,232	34,108	25,713	15,000	162,000
		National Project Manager /Technical Adviser Tanzania	3,000	54	68,947	18,232	34,108	25,713	15,000	162,000
		Subtotal Professional salaries:		**270.0**	**380,788**	**92,928**	**171,432**	**152,852**	**120,000**	**918,000**
		International								
		Finance and Budget Adviser (part-time)	12,904	14,0	0	0	0	0	180,656	180,656
		Human Resources & Procurement Adviser (part-time)	12,904	13,8	0	0	0	0	178,589	178,589
				27.8	0	0	0	0	**359,245**	**359,245** 359,245
		Project Personnel- travel								
		Regional Coordinator/Technical Adviser - travel			5,161	721	2,111	4,878	10,250	23,000
		National Coordinators/Technical Adviser Burundi - travel			9,925	1,386	4,059	9,380	7,000	29,750
		National Coordinators/Technical Adviser Rwanda- travel			9,925	1,386	4,059	9,380	7,000	29,750
		National Coordinators/Technical Adviser Uganda - travel			9,925	1,386	4,059	9,380	7,000	29,750
		National Coordinators/Technical Adviser Tanzania - travel			9,925	1,386	4,059	9,380	7,000	29,750
		Subtotal Professional travel:			**44,860**	**6,265**	**18,347**	**42399**	**38,250**	**142,000**
5570	5013	**International Consultants - Honoraraia**								
		Land/Agro-ecosystem management /planning	11,000	14,0	55,000	8,800	44,000	44,000	0	151,800
		Land tenure/access to resources	11,000	4,0	11,000	22,000	5,500	5,500	0	44,000
		Natural resources management - M&E system	10,500	3,0	10,500	5,250	5,250	10,500	0	31,500
		Sustainable agro-ecosystems - incentives & policy	10,500	2,0	10,500	3,500	3,500	3,500	0	21,000
		Adviser SLM Farmer Field School process	6,450	6,0	3,225	3,225	12,900	19,349	0	38,699
		Mid-term evaluation	10,500	1,3	5,250	1,050	2,100	5,250	0	13,650
		Final evaluation	10,500	2,0	8,400	2,100	3,150	7,350	0	21,000
		5542 Subtotal: International Consultants - Honoraria		**32,3**	**103,875**	**45,925**	**76,400**	**95,449**	**0**	**321,649**

ORACLE Budget	ORACLE Report	Description	unit cost US$	w/m /no.	Component 1	Component 2	Component 3	Component 4	Component 5	Total
5570	5021	**International Consultants - Travel**								
		Land/Agro-ecosystem management /planning travel	4,650	9,0 trip	27,782	2,344	5,863	5,861	0	41,850
		Land tenure/access to resources - travel	4,650	4,0	5,460	4,650	3,050	5,440	0	18,600
		Natural resources management- M&E system - travel	4,650	3,0	5,595	2,780	2,288	3,287	0	13,950
		Sustainable agro-systems SLM - incentives & policy travel	6,000	2,0	6,812	1,672	1,968	1,548	0	12,000
		Adviser Farmer Field School process-travel (based in region)			2,020	1,120	5,280	11,580	0	20,000
		Finance & Budget Adviser (part-time) travel			0	0	0	0	0	0
		Human Resources & Procurement Adviser (part-time)			0	0	0	0	0	0
		Mid-term evaluation travel		1,0	9,023	1,260	3,690	8,528	0	22,500
		Final evaluation travel		1,0	14,436	2,016	5,904	13,644	0	36,000
		Inception & final Policy Workshops		2 trips	802	112	328	758	8,000	10,000
		Technical meetings - livestock, range, PES		4 trips	12,218	1,008	2,952	1,822	2,000	20,000
		5684 Subtotal: International Consultants - Travel			**84,148**	**16,962**	**31,323**	**52,468**	**10,000**	**194,900**
5570	5013	**National/Regional Consultants - Honoraria**								
		SLM baseline studies- Burundi & target land areas in basin	3,000	6,0	7,500	1,500	3,000	6,000	0	18,000
		SLM Trainers/ Workshop Coordinators	3,000	10,0	6,000	1,680	12,920	9,400	0	30,000
		FFS Master Trainers	3,000	5,5	500	500	3,500	12,000	0	16,500
		Communications & website preparation/maintenance	3,000	11,0	25,500	1,500	1,500	4,500	0	33,000
		National participants Mid-term evaluation (4)	3,500	0,8	1,000	350	450	1,000	0	2,800
		National participants Final Evaluation (4)	3,500	1,2	1,680	420	840	1,260	0	4,200
		5543 Subtotal: National Consultants - Honoraria		**34,5**	**42,180**	**5,950**	**22,210**	**34,160**	**0**	**104,500**
5570	5013	**National/Regional Consultants - Travel**								
		Regional SLM baseline studies - travel			5,013	700	2,050	4,738	0	12,500
		SLM Trainers/ Workshop Coordinators - travel			20,050	2,800	8,200	18,950	0	50,000
		FFS Master Trainers - travel			5,293	739	2,165	5,003	0	13,200
		Communications & website - travel			1,604	224	656	1,516	0	4,000
		National participants Mid-term evaluation (4)			930	130	380	879	0	2,320
		National participants Final Evaluation (4)			1,315	184	538	1,243	0	3,280
		5685 Subtotal: National Consultants - Travel			**34,205**	**4,777**	**13,989**	**32,329**	**0**	**85,300**

ORACLE Budget	ORACLE Report	Description	unit cost US$	w/m /no.	Component 1	Component 2	Component 3	Component 4	Component 5	Total
5500	5012	**Support Staff**								
		Temporary assistance /casual labour		17,0	35,180	4,913	14,388	33,250	0	95,850
		5337 Subtotal: Support Staff		17,0	**35,180**	**4,913**	**14,388**	**33,250**	**0**	**95,850**
5650	5014	**Contracts (Service Orders/Letters of Agreement)**								
		GIS/RS data analysis & training – regional centre	2 LOA		30,050	2,800	13,200	3,950	0	50,000
		Agro-ecosystems/biodiversity management (crop & livestock based)	8 LOA		12,832	1,792	5,248	12,128	0	32,000
		Target studies/monitoring environmental impacts: pastures, wetlands, energy, C-sequestration, burning, land degradation, biodiversity	12 LOA		16,040	2,240	6,560	15,160	0	40,000
		Monitoring of sustainable livelihood (SL) benefits/impacts	8 LOA		12,832	1,792	5,248	12,128	0	32,000
		Community/landscape planning for SLM and land tenure	8 LOA		10,000	4,480	35,200	30,320	0	80,000
		SLM technologies training + equipment demonstration– conservation agriculture, holistic livestock management, water harvesting	12 LOA		7,440	8,288	60,272	72,000	0	148,000
		Data/information systems management	4 LOA		25,664	3,584	10,496	24,256	0	64,000
		On hands training and curriculum development for SLaM (NGOs, colleges)- continuous support	4 LOA		30,000	14,000	111,250	94,750	0	250,000
		SLM activities with Farmer Field Schools and Networks	grants		30,000	40,320	137,680	512,000	0	720,000
		Community action plans and catchment management and land tenure	grants		40,600	33,600	98,400	427,400	0	600,000
		District land use planning and awareness (support for facilitators and interdisciplinary teams)	22 LOA		28,972	9,632	48,208	85,188	0	172,000
		Design and testing of incentive measures (PES- C-sequestration, water, biodiversity)	6 LOA		54,420	4,984	14,596	15,000	0	89,000
		Sustainable pastoral development			19,729	2387	4,229	4,229	0	30,574
		5571 Subtotal: Sub-contracts (Services)			**318,579**	**129,899**	**550,587**	**1,308,509**	**0**	**2,307,574**
5920	5023	**Group Training**								
		Regional/National: SLM policy/incentive measures			20,050	2,800	8,200	18,950	0	50,000

ORACLE Budget	ORACLE Report	Description	unit cost US$	w/m /no.	Component 1	Component 2	Component 3	Component 4	Component 5	Total
		Data collection & analysis training			9,023	1,260	3,690	8,528	0	22,500
		Training of trainers on participatory SLM learning and adaptive management (FFS/PLAR)			26,466	3,696	10,824	25,014	0	66,000
		Community planning/capacity-building			20,050	2,800	8,200	18,950	0	50,000
		Sensitisation/awareness-creation on policies & laws			17,644	2,464	7,216	16,676	0	44,000
		Capacity-building for land-users (through FFS)			40,100	5,600	16,400	37,900	0	100,000
		Land-user exchange visits			30,075	4,200	12,300	28,425	0	75,000
		Field visits by national technical advisers			8,020	1,120	3,280	7,580	0	20,000
		5905 Subtotal: GroupTraining/ Field Trips			**171,428**	**23,940**	**70,110**	**162,023**	**0**	**427,500**
		Meetings/Workshops (technical and policy)								
5900	5021	Regional inception workshop - incl. PSC members	1,0		20,035	2,960	5,740	6,265	0	35,000
		National inception /stakeholder workshops incl. national PSC	4,0		20,040	2,240	6,560	11,160	0	40,000
		Regional PSC meetings and policy review	2,0		30,000	5,000	7,500	7,500	0	50,000
		Regional TAC meetings with field visits to review /endorse SLaM proposals	2,0		16,040	2,240	6,560	15,160	0	40,000
		National training workshops on policy/legal/planning issues-led by PSC/TAC members	8,0		16,000	4,000	16,000	4,000	0	40,000
		Regional experience sharing/lessons learned workshop	1,0		12,000	2,500	7,500	3,000	0	25,000
		Final SLM policy/Terrafrica/SIP mainstreaming workshop	4,0		14,480	1,120	3,280	1,120	0	20,000
		Drivers/casual labour - travel			2,807	392	1,148	2,653	0	7,000
		5698 (Non-staff Travel) Subtotal: Meetings/Workshops			**131,402**	**20,452**	**54,288**	**50,858**	**0**	**257,000**
6000	5024	**Expendable Equipment**								
		Office supplies & minor equipment			25,584	3,573	10,463	24,180	8,700	72,500
		Spares for major equipment			30,075	4,200	12,300	28,425	0	75,000
		Extension/training materials			2,010	560	3,640	3,790	0	10,000
		5024 Subtotal: Expendable Equipment			**57,669**	**8,333**	**26,403**	**56,395**	**8,700**	**157,500**
6100	5025	**Non-expendable Equipment**								
		Land-management equipment for field activities & monitoring			56,140	7,840	22,960	53,060	0	140,000
		Computers & printers [RPU, RS/GIS, 4 NPUs)		6 sets	4,010	560	1,640	3,790	10,000	20,000

ORACLE Budget	ORACLE Report	Description	unit cost US$	w/m /no.	Component 1	Component 2	Component 3	Component 4	Component 5	Total
		Laptop computers and printers (15 of 22 District information/ monitoring centres		15 sets	7,500	7,500	7,500	7,500	0	30,000
		GPS, Camera, PPT projector, mobile phones etc.		4 sets	18,246	2,548	7,462	17,245	2,500	48,000
		Motorbikes for RPU, NPUs and DFs		20	21,654	3,024	8,856	20,466	6,000	60,000
		4WD vehicles		4	45,684	9,173	20,863	42,080	22,200	140,000
		5025 Subtotal: Non-expendable Equipment			**153,233**	**30,645**	**69,281**	**144,141**	**40,700**	**438,000**
6300	5028	**General Operating Expenses**								
		Printing of extension/training materials			9,143	1,277	3,739	8,641	0	22,800
		Printing reports/publications			13,421	1,176	3,444	2,959	0	21,000
		Media & Communications			10,053	845	8,475	1,721	5,905	26,999
		Database maintenance			23,228	1,568	1,592	11,612	0	28,000
		General operating costs			45,240	10,920	39,000	60,840	0	156,000
		Miscellaneous [including physical & price contingencies]			41,726	10,072	35,971	56,114	0	143,883
		Operation & maintenance – vehicles			36,090	5,040	14,760	34,110	0	90,000
		Operation & maintenance - equipment			10,025	1,400	4,100	9,475	0	25,000
		Sundry expenses			20,401	56	164	10,379	0	1,000
		5028 Subtotal: General Operating Expenses			**209,327**	**32,354**	**111,245**	**195,851**	**5,905**	**554,682**
		GRAND TOTALS			**1,766,873**	**423,342**	**1,230,003**	**2,360,682**	**582,800**	**6,363,700**
Note: from the approved PIF the Fullscale project = $6,363,700 and the 10% Agency Fee = $636,300 Total = $7,000,000										

ANNEX 9: FINANCIAL MANAGEMENT AND REPORTING

Financial Records

FAO shall maintain a separate account in United States dollars for the project showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the project in accordance with its regulations, rules and directives

Financial Reports

FAO shall prepare, for internal project monitoring purposes, six-monthly expenditure accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and, separately, the unliquidated obligations as follows:

1. Details of project expenditures on an activity-by-activity basis, reported in line with project budget codes as set out in the Project Document, as at 30 June and 31 December each year.

2. Final accounts on completion of the project on an activity-by-activity cumulative basis, reported in line with project budget codes as set out in the Project Document

3. A final statement of account in line with FAO Oracle project budget codes, reflecting actual final expenditures under the project, when all obligations have been liquidated.

These financial reports are prepared for review and monitoring by the budget holder of the project and the FAO GEF Coordination Unit.

Financial reports for submission to the donor will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement.

Report on Co-Financing

Within 60 days of the reporting period, FAO project management shall prepare a yearly co-financing report for the project for inclusion in the "project implementation report (PIR).which would include, to the extent possible, the following information:

1. Amount of co-financing realized compared to the amount of co-financing committed to at the time of project approval, and
2. Co-financing reporting by source and by type:
   - Sources include the agency's own co-financing (in-kind and cash), government counterpart commitments (in kind and cash); contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.
   - Types of co-financing. Cash include grants, loans, credits and equity investments. In-kind resources are required to be:
     - dedicated uniquely to the GEF project
     - valued as the lesser of the cost and the market value of the required inputs they provide for the project, and
     - monitored with documentation available for any evaluation or project audit undertaken by FAO.

With regards to reporting on in-kind co-financing provided by government and other institutions, FAO will encourage the partners to provide the information in a timely manner and the information will be made available upon request and without certification to the GEF Secretariat and GEF

Budget Revisions

Semi-annual budget revisions will be prepared in accordance with FAO standard guidelines and procedures.

Responsibility for Cost Overruns

The budget holder is authorized to enter into commitments or incur expenditures up to maximum of 20 per cent over and above the annual amount foreseen in the project budget under any budget sub-line provided the total cost of the annual budget is not exceeded.

Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget subline over and above 20 per cent flexibility should be discussed with the FAO GEF Coordination Unit with a view to ascertaining whether it will involve a major change in project scope or design. If it is deemed to be a minor change, the budget holder shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the project's objectives or scope, a budget revision and justification should be prepared by the Budget Holder for discussion with the GEF Secretariat.

Savings in one budget sub-line may not be applied to overruns of 20 per cent in other sub-lines even if the total cost remains unchanged, unless this is specifically authorized by the FAO GEF Coordination unit upon presentation of the request. In such a case, a revision to the Project Document amending the budget will be prepared by the Budget Holder.

Under no circumstances can expenditures exceed the approved total project budget or be approved beyond the NTE date of the project. **Any over-expenditure is the responsibility of FAO**.

Audit

The project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the governing bodies of the Organization and reporting directly to them, and an internal audit function headed by the Inspector-General who reports directly to the Director-General. Both functions are required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Local audits undertaken by independent accounting firms of imprest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices.

ANNEX 10: LEGAL CONTEXT

Privileges and Immunities

Nothing in this Agreement or in any document relating thereto, shall be construed as constituting a waiver of privileges or immunities of FAO, nor as conferring any privileges or immunities of FAO on any other institution or its personnel.

Settlement of Disputes

The present Agreement shall be governed by general principles of law, to the exclusion of any single national system of law. Any dispute, controversy or claim arising out of or in connection with this Agreement or any breach thereof, shall, unless it is settled by direct negotiation, be settled by arbitration in accordance with the UNCITRAL Arbitration Rules in force on the date when this Agreement takes effect. The parties hereto agree to be bound by any arbitration award rendered in accordance with this Section as the final adjudication of any dispute.

Intellectual Property

All intellectual property rights in the work to be performed under this Agreement shall be vested in FAO, including without limitations, the right to use, publish, translate, sell or distribute, privately or publicly, any item or part of thereof.

Government Obligations

1. The achievement of the objectives set by the project shall be the joint responsibility of each signatory Government and FAO.

2. As part of its contribution to the project, each Government shall agree to make available the requisite number of qualified national personnel and the buildings, training facilities, equipment, transport and other local services necessary for the implementation of the project.

3. Each Government shall assign authority for the project within the country to a Government agency, which shall constitute the focal point for cooperation with FAO in the execution of the project, and which shall exercise that Government's responsibility in this regard.

4. Project equipment, materials and supplies provided out of the project funds shall remain the property of FAO, which shall ensure that such equipment, materials and supplies are at all times available for use of the project and that adequate provision is made for their safe custody, maintenance and insurance until specifically transferred to an appropriate collaborating institution. Vehicles, personal computers, and all other items of non-expendable equipment remain the property of FAO until GEF authorizes their transfer to an appropriate collaborating institution.

5. Subject to any security provisions in force, each Government shall furnish to FAO and to its personnel on the project, if any, such relevant reports, tapes, records and other data as may be required for the execution of the project.

6. The selection of FAO project personnel, of other persons performing services on behalf of FAO in connection with the project, and of trainees, shall be undertaken by FAO, after consultation with each Government. In the interest of rapid project implementation, each Government shall undertake to expedite to the maximum degree possible its procedures for the clearance of FAO personnel and other persons performing services on behalf of FAO and to dispense with, wherever possible, clearance for short-term FAO personnel.

7. Each Government shall apply to FAO, its property, funds and assets, and to its staff, the provisions of the Convention on the Privileges and Immunities of the Specialized Agencies. Except as otherwise agreed by any signatory Government and FAO, each Government shall grant the same privileges and immunities contained in the Convention to all other persons performing services on behalf of FAO in connection with the execution of the project.

8. With a view to the rapid and efficient execution of the project, each Government shall grant to FAO, its staff, and to all other persons performing services on behalf of FAO, the necessary facilities including:

   i) the prompt issuance, free of charge, of any visas or permits required;
   ii) any permits necessary for the importation and, where appropriate, the subsequent exportation, of equipment, materials and supplies required for use in connection with the project and exemption from the payment of all customs duties or other levies or charges relating to such importation or exportation;
   iii) exemption from the payment of any sales or other tax on local purchases of equipment, materials and supplies for use in connection with the project;
   iv) payment of transport costs within the country, including handling, storage, insurance and all other related costs, with respect to equipment, materials or supplies for use in connection with the project;
   v) the most favourable legal rate of exchange;
   vi) assistance to FAO staff, to the extent possible, in obtaining suitable accommodation;
   vii) any permits necessary for the importation of property belonging to and intended for the personal use of FAO staff or of other persons performing services on behalf of FAO, and for the subsequent exportation of such property;
   viii) prompt customs clearance of the equipment, materials, supplies and property referred to in subparagraphs (ii) and (vii) above.

9. Each Government shall deal with any claim which may be brought by third parties against FAO or its staff, or against any person performing services on behalf of FAO, and shall hold them harmless in respect of any claim or liability arising in connection with the project, unless the concerned Government and FAO should agree that the claim or liability arises from gross negligence or wilful misconduct on the part of the individuals mentioned above.

10. The persons performing services on behalf of FAO, referred to in paragraphs 6 to 9, shall include any organization, firm or other entity, which FAO may designate to take part in the execution of the project.

11. The present agreement shall be governed by general principles of law, to the exclusion of any single national system of law.

Project Revisions

The implementing/executing agency is authorized to effect in writing the following types of revisions to the project document, provided it has verified the agreement thereto by GEF in writing:

The following types of revisions may be made to this project document with the approval of the FAO GEF Unit:

- Revision of, or addition to, any of the annexes to the Project Document;
- Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of the inputs already agreed to or by cost increases due to inflation;
- Mandatory annual revisions which re-phase the delivery of agreed project inputs or increased expert or other costs due to inflation or take into account agency expenditure flexibility; and

- Inclusion of additional annexes and attachments only as set out here in this Project Document (with the exception of the Legal Context).

All minor revisions shall be reported in the annual Project Implementation Review (PIR) report that will be submitted by FAO to the GEF Evaluation Office.

Proposed major changes can be effected only with the prior agreement in writing of the FAO GEF Unit and the GEF Secretariat. Major changes are defined as those that include project restructuring that involves a major change in project scope or design, a change in the project's objectives, re-allocation of GEF grant affecting the project's scope or objectives, or any other change that substantially alters the project concept.

ANNEX 11: DETAILS ON GOVERNMENT RESPONSIBILITIES, NATIONAL POLICIES AND RELEVANT DEVELOPMENT PROJECTS

1. Institutional responsibilities

Institutional responsibilities in the area of environmental and natural resources management and agricultural development are shared by a number of ministries and bodies in the four countries. Table 1 indicates the concerned national bodies in each country with mandates in: environment, land, agriculture, livestock, forestry, water resources, protected areas, wetlands.

ANNEX 11: TABLE 1 - Responsibilities of the Main Government Institutions Concerned

Rwanda Bodies/Institutions	Responsibility
Ministry of Land, Environment, Forestry, Water and Mines (MINITERE)	Environment in general, biodiversity, land, land use and land tenure, water, forests and mining
Ministry of Agriculture and Animals Resources (MINAGRI)	Agriculture, livestock and pastures, soil and water conservation and wetlands management.
Ministry of Infrastructures (MININFRA)	Primary role for energy, roads and other heavy infrastructures
Office for Tourism and the Protected Areas (ORTPN) in the Ministry of Commerce, Industry and Tourism (MINICOM)	protected areas management and wildlife including the Akagera National Park
Institut pour les Sciences Agronomiques du Rwanda (ISAR)	Research in best practices
Ministry of Local Government (MINALOC)	Decentralized planning and decision making
Tanzania Bodies/Institutions	**Responsibility**
Division of the Environment (DOE) in the Vice President's Office	Advises on environmental policy formulation, legislation, sensitisation and monitoring and coordinates poverty alleviation and of NGOs and community-based organizations (CBOs)
Ministry of Agriculture, Food Security and Co-operatives (MoAFC)	Promotes efficient and effective services to the agricultural sector in collaboration with all stakeholders through: formulating coordinating, monitoring and evaluating implementation of relevant policies and monitoring crop regulating institutions; providing technical services in extension, irrigation, plant protection, land use, mechanization and information services; promoting and coordinating research and development and investment in the sector; promoting private sector and local government participation in delivery of support services; undertaking crop monitoring and early warning, maintaining strategic food reserves, promoting appropriate post harvest technologies; collaborating with national and international institutions in the agricultural sector. Facilitate development and implementation of co-operatives, developing primary societies and co-operatives and formation of co-operative savings and credit societies.
Ministry of Livestock Development (MoLD)	Promotes and develops policy for the development of well managed livestock resources for social and economic development; supervises, livestock research, extension and veterinary services.
Ministry of Water (MoW)	Coordinates water resources development, rural and urban water supplies, water quality and pollution control, water management and infrastructure, river basin development.
Ministry of Marketing and Cooperatives (MMC)	Facilitation for development and implementation of co-operative and marketing policies; developing primary societies and cooperatives; formation of cooperative savings and credit societies; conducting intra and intra-regional trade market research and surveys; ensuring

	development of human resources; management of projects.
Ministry of Lands and Human Settlements (MLHS)	Coordinates land policy, surveying, valuation and development services, human settlements development, land registration and regional physical planning. National Land Use Planning Commission (NLUPC) is responsible for implementing the 1999 Land Act + Village Land Act
President's Office – Regional Administration and Local Government (PO-RALG)	Co-ordinates and supervises regional development and administration. The Ministry co-ordinates rural and urban development management policy and strategies, co-ordinates Regional Secretariat activities and builds their capacity in institutional development strategies for integrated socio-economic development and financial development of Local Government Authorities. The Ministry also co-ordinates and supervises development planning and sectoral interventions on donor-supported programmes at district and other local levels; issues Ministerial guidelines to Regional Secretariats and Local Government Authorities; strengthens the channel of communication and information flow between national and sub-national levels.
Uganda Bodies/Institutions	**Responsibility**
National Environment Management Agency (NEMA) of the Ministry of Water, Lands and Environment	Supervising, co-ordinating, planning and monitoring of environmental matters. Focal point for the CBD.
the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF)	Coordinates agricultural policies, initiatives and projects; inspection, monitoring and evaluation of agricultural activities of local governments; provision of technical assistance, supervision and training to agricultural advisory service personnel.
Burundi Bodies/Institutions	**Responsibility**
Ministère du territoire, du tourisme et de l'environnement et du tourisme (MINATTE)	Design and implement national policies on environment and regional planning; set up procedures for EIA for projects; popularize national environmental education programme; inventory, study and settlement of new arable lands to implement national policy to combat erosion, in collaboration with MINAGRI; contribute to implementation of conventions/international programmes on protection/management of natural resources and environment; contribute to promotion of tourism, with other Ministries concerned;
Ministère de l'Agriculture et de l'élevage (MINAGRIE)	Agriculture, livestock production, food security, soil conservation and improvement, wetland management; extension, research in best practices, improved seeds etc.
Ministère des Travaux Publics et de l'Equipement (MTPE)	Construction and control of road infrastructure, extraction of clay for brick making, digging of arable lands and overexploitation of wood
Institut des Sciences Agronomiques du Burundi (ISABU)	Research of best practices
Office National du Tourisme (ONT)	Promotion of tourism
Institut national pour l'Environnement et la conservation de la Nature (INECN)	Conservation and management of parks and natural reserves
Institut Géographique du Burundi (IGEBU)	Meteorological stations, cartography, hydrology

2. National Policies and legislation

More detail is provided on the relevant national policies and legislation in Table 2 of this Annex.

ANNEX 11: TABLE 2 - SUMMARY OF RELEVANT NATIONAL POLICIES AND LEGISLATION

NATIONAL DEVELOPMENT STRATEGY	NATIONAL ENVIRONMENT STRATEGY	NATIONAL STRATEGY FOR AGRICULTURE AND LIVESTOCK
RWANDA • Resettlement & reintegration; • Rights of all refugees; • Development of human resources & national economy; • Institutional capacity building; Environment is one of priorities identified by the **Poverty Reduction Strategy (PRS), ****,** and is among the fundamental programmes focusing on agricultural transformation and rural development. **Vision 2020** environment pillar to reduce pressure on NR (land, water, biomass, biodiversity).	**National Environment Policy,** • population, land use and NRM linkages, • reverse environmental pollution & degradation processes • better management/protection of NR & environment • preserve resources for future generations • mainstream gender in the protection of environment. **PRS** - Rational use of wood and alternative sources of energy. **PRS - W**ater supply, rainwater harvesting and use in towns and villages. Environment-friendly water use in socio-economic sectors. Wetland conservation & management Conservation and management of forests and protected areas; Conservation and sustainable use of biodiversity of natural & agro-ecosystems; equitable sharing of benefits derived from biological resources.Environment-friendly agro-pastoral & fishing	**Agriculture strategy:** Input & product markets; Improve SWC management; Develop swamp lands; Farming intensification: inputs & extension; Support farmers groups; Rural credit; Storage & Farm roads **Livestock strategy:** Increase rural incomes; Reduce imports of meat & milk; Restocking areas depleted in war; Reallocate communal pastoral lands to groups/ individuals; Watering points & forage production; Animal health & husbandry programs; Privatisation; Milk collection points; slaughter plants; Markets; Transport; Access to credit; **PRS** accompany agricultural/rural development by environment protection (SWC, reforestation, rational use of wetland, water).
TANZANIA **National Strategy for Growth and Reduction of Poverty (NSGRP,1998)** guiding framework for stakeholders; coordination of policies and strategies for the eradication of poverty caused by poor health services, illiteracy, malnutrition, environmental degradation and high mortality rate. **Tanzania Development Vision 2025** envisages raising the standard of living to those of a typical medium income country (food security, increased income and export earnings) **Rural Development Strategy (RDS)** aims to eradicate poverty through multi-sector interventions (agriculture, roads, water, education, health, and local government reforms),decentral-ization and participatory approaches	**National Environmental Policy (1997) and Laws (2005)** an integrated framework for environment and NRM to promote socioeconomic development while maintaining environmental quality and resource productivity. Land degradation and drought are priority problems. Implemented through the **National Environment Action Plan (1994**), **National Conservation Strategy for Sustainable Development** (draft, 2000), **Forestry Action Plan (1994)** and the **Action Plan arising from the Soil Fertility Initiative (SFI)** in 2000. **Water Resource Management Policy (1999)** management and conservation of water quality, ecosystems and wetlands, public awareness; broad stakeholder participation in planning **National Land Policy (1999)** secure land tenure; optimal use of land resources; broad-based socio-economic development while protecting ecology/ environment. **National Forest Policy (1998)** inter alia to ensure ecosystem stability, water catchments and soil fertility. **Wildlife Policy** conservation of biological resources; include all stakeholders, sustainable use, fair & equitable sharing benefits.	**Agriculture and Livestock Policy (1997)** • Improve well-being of those dependent on agriculture; • Integrated, sustainable use and management of NR (soil, water and vegetation; • New technologies to increase labour and land productivity **The Agricultural Sector Development Strategy** (2001) sets clear targets for growth (5%/year) and poverty reduction objectives of the NSGRP and contributes to the Tanzania Development Vision (TDV, 2025). It focuses on strengthened public-private partnerships and implementing District Agricultural Development Plans (DADPs) supported by policy and institutional arrangements and crosscutting issues.. **MAFS** aims to improve delivery of extension services by reducing extension staff-farmer ratio from 1: 1595 to 1:700 in 2010.

ANNEX 11: TABLE 2 - SUMMARY OF RELEVANT NATIONAL POLICIES AND LEGISLATION

NATIONAL DEVELOPMENT STRATEGY	NATIONAL ENVIRONMENT STRATEGY	NATIONAL STRATEGY FOR AGRICULTURE AND LIVESTOCK
UGANDA The **Constitution of the Republic of Uganda, 1995** entrusts the state with responsibility to protect important natural resources (land, water, wetlands, minerals, oil, fauna, flora). Land belongs to the citizens and vested in them in accordance with the land tenure systems. Other resources are held in trust by government on behalf of the citizens. **National Poverty and Environment Action Plan (PEAP)** and **District Development and Environment Action Planning (DEAP)** strategies address the interlinkages between poverty and environment and links sectors.	**National Environment Management Policy (1995)** implemented through **NEAP** and **N.E. Statute 2000** (umbrella framework): Conservation & restoration of ecosystems, biodiversity; ecological process. Public awareness; local participation in environment actions; Farming systems & land-use practices to conserve/enhance productivity. Sustainable management: of forest & wildlife resources and rangelands (within capacity); of fisheries and other aquatic resources; use of traditional/alternative energy sources. **National Policy for the Conservation and Management of Wetland Resources (1995)** to maintain ecological and socio–economic functions of wetlands for present and future generations; optimal use of resources, minimize unsustainable practices, partial exploitation for economic development. **Wetlands, River Banks and Lake Shores Management, N.E. Regulations (2006)** wise &sustainable use for catchment conservation and flood control. **National Land-use Policy (draft)** to achieve sustainable socio-economic development through optimal land use; addresses a gap in integrated, harmonized land-use planning/ management across sectors and among land users/ stakeholders.	**Plan for Modernisation of Agriculture Policy** to increase production/unit area through research, extension, farmer and market linkages; sustainable use/management of NR. **Food and Nutrition Policy 2003** multi-sector, coordinated process - food security, improved nutrition increased income **Livestock Policy** optimum stocking rates to avoid/ prevent over-grazing and soil compaction; rangelands management. **Cattle Grazing Act Cap 223** and **Prohibition of Grass Burning Decree 5 (1974)** control by sub-county chief /veterinary or agriculture officer.for specific purposes **National Forestry Policy** and **National Forestry and Tree Planting Act (2003)** encourage private & public investment in sustainable forest management (farm forestry, watershed protection, joint management of forest reserves. **National Soils Policy (draft)** to maintain productivity of land /agroecosystems through sound soil management and use; soil research/extension; awareness of impacts of soil erosion. **Access to Genetic Resources & Benefit Sharing, NESI # 30 (2005)** sharing of derived benefits; sustainable use of GR.
BURUNDI **Cadre stratégique intérimaire de relance de la croissance économique et de lutte contre la pauvreté** (2003): quality of social services (health; education); stable macro-economic framework; economic growth -poverty reduction; resettlement/integrate victims of conflict/ disadvantaged groups; fight against HIV/AIDS/STD; women in development; peace,security and good governance. Link NAP, energy and poverty reduction strategies (local/NGO participation in decision making/action plans).	**National Environment Policy (1997**) population, land use, NR linkages; reverse pollution & degradation processes; improve management/preserve resources for future generations; gender in environment protection, protected areas integrity/perennity. **PRS** Rational use of wood; alternative energy sources/HEP**;** water supply, rainwater harvesting and use in towns and villages. Conservation & sustainable use of wetlands, of forests/protected areas, of biodiversity (natural; agro-ecosystems); equitable sharing of benefits derived from GR; sustainable agro-pastoral & fishing **National policy on water resources management (2001)** access to drinking water; wastewater management; use of water for irrigation; rainwater conservation; wetland/hydroly management. Regional cooperation for management of shared water resources. **NAP Land degradation (2003)** land use plan ; watershed management (agro-sylvo-pastoral techniques), climate change mitigation; protect/conserve water resources; prevent natural disasters, regional plans; farm planning).	**National food security policy (2003**) increase/diversify food production; restore soil fertility, SWC, watershed management, tree planting, agroforestry; Participatory dialogue on arable land management/tenure security¶; stabilise food production; communication and marketing (roads/markets) reduce post harvest losses; information on agricultural/rural sector- agric census/forest inventory. **Food security & agricultural development strategy, Horizon 2015 (June 2004); Sector policy to rehabilitate/ revitalise agriculture and 3 year Action Plan 2002-2004):** promote integrated agro-sylvo-pastoral systems; research; zero grazing and improved breeds; participatory extension; access to agricultural inputs; conservation/NRM; crop production ; promote/diversify export crops; processing/ storage; food security and nutrition; support services;. Institutional mechanisms to encourage roles of private sector /NGO in forest management,

ANNEX 12. LINKAGES WITH NATIONAL, REGIONAL AND GLOBAL PROJECTS/PROGRAMMES RELEVANT TO KAGERA TAMP

Table 1 Linkages to National, Regional and Global projects/programmes

Relevant projects/Activities	Relationship with TAMP	Mechanisms
1. The Nile Transboundary Environmental Action Project (NTEAP) developed under the multi-donor Shared Vision Programme (SVP) of the NBI promotes cooperation among the Nile Basin countries in protecting and managing the environment and the Nile River Basin ecosystem. GEF World Bank and UNDP, 2004-2009, US$39M Rwanda, Tanzania, Uganda, Burundi, Congo, D.R., Kenya, Egypt and Sudan (regional unit hosted by Khartoum).	TAMP activities will draw upon expertise of those in ministries, NGOs and local communities trained by NTEAP in environmental management and monitoring and prevention of transboundary erosion and pollution (e.g. though a roster of experts) TAMP project team will liaise with NTEAP to identify opportunities for communities and NGO partners to apply for small grants (US$10,000-25,000/grant) for community-based approaches to land and water conservation to reduce soil erosion, desertification, pollution and control invasive water weeds. In turn, TAMP will make available resulting guidance, know-how and capacities for sustainable land and agro-ecosystem management (SLaM) to be fed into skills development by NTEAP in the region.	Liaison with project management unit (PMU). Sharing of project workplans, training plans and making available policy and technical materials and guidance.
2. Integrated Management of Critical Ecosystems (IMCE) project in Rwanda focuses initially on assisting the Government in the sustainable management of critical marshlands and later community management of watersheds and buffer zones to reduce pressure on protected areas. GEF/WB, full project February 2006, US$4.3mn (of which US$400,000 counterpart funding)	This is a clear complement to TAMP which focuses on agricultural ecosystems and both projects rely on close collaboration between agriculture and environment sectors. Although the geographical coverage differs, linkages can be made for IMCE expertise in status and trends study of wetlands in the Kagera basin and to build on experiences, methods and capacity building from IMCE.	Liaison with PMU. Involvement of IMCE experts in diagnosis of agro-ecosystem - wetlands interactions and capacity building
3. Rehabilitation and Sustainable Land Management Project (PRASAB) in Burundi aims to restore certain degraded lands, develop community and national strategies for sustainable use of natural resources in certain wetlands and swamp areas, promote an integrated approach for watersheds and wetlands management, and emergency support for returnees and internally displaced persons. GEF/WB, 2004-2010, US$40.47M (of which IDA-US$35M, GEF-US$5M, beneficiaries, 0.4M). The project covers all 5 AEZ and 9 provinces,	Collaborative arrangements will be established to ensure the projects are mutually supporting and avoid duplication (e.g. by covering different communes in the 3 shared provinces, sharing expertise and approaches). TAMPs added value will be its capacity to scale up through transboundary collaboration mechanisms with other basin countries, its integrated agro-ecosystem (intersectoral) approaches, conflict resolution and legal awareness/arrangements for improved tenure, land rights and planning at community level, and scaling up of SLaM planning and management techniques and approaches	Liaison by TAMP with PRASABs Inter-provincial management units (IPCMUs) Close coordination and planning in beneficiary districts in the 3 provinces.

Relevant projects/Activities	Relationship with TAMP	Mechanisms
including 3 of TAMP (Kirundo, Muramvya, Mwaro)		
4. Land Use Change Analysis as an Approach to Assessing Biodiversity Loss and Land Degradation (LUCID) was a UNEP/GEF funded targeted research project that generated GIS models and maps of land-use change in some of the concerned districts in Uganda and Tanzania.	Kagera TAMP has used some LUCID information during project formulation and will further use available data and spatial analysis on land-use change analysis, biodiversity and land degradation) in developing its integrated GIS/RS system for the Kagera basin Through district and research staff in Bukoba district, Tanzania, and Rakai district, Uganda, TAMP will also draw upon the methodologies and expertise developed through the completed **East African Cross Borders Biodiversity project**	Liaison of TAMP team with experts that were involved in LUCID and cross-borders projects and information sharing (e.g. through Regional technical advisory committee RTAC)
5. GEF/World Bank project on Novel forms of livestock and wildlife integration adjacent or protected areas in Africa - Tanzania US$4,5M IBRD grant, end September 2005-December 2008), supported by FAO/LEAD and ILRI.	Although not in the Kagera basin, and the forthcoming closure of the project, TAMP envisages to build on this project's experience in participatory land use planning and management (PLUM), and developing action plans and establishing village land use committees (VLUM) and wildlife management areas. This will include benefit sharing mechanisms, increasing returns from integrated wildlife and livestock production systems; and decision support tools to strengthen rational resources access and management. The project will have also generated knowledge on wildlife corridors, traditional grazing systems and grazing hotspots, using existing databases on livestock (ILRI, FAO) and wildlife in Tanzania and recent studies on human welfare.	Liaison in FAO HQ through FAO LEAD (Livestock and environment programme-AGA), and in Tanzania through FAO Representation, ILRI and project staff
6. The FAO Africover Project and Information Products for Nile Basin Water Resources Management project GCP/INT/945/ITA Italy main donor of both projects in collaboration with beneficiary Governments	**i)** The maps of land cover in the four countries from medium resolution satellite imagery, and additional layers (e.g. roads, rivers and water bodies) provide a valuable resource to TAMP although scales and imagery dates differ: Tanzania at 1:200,000 (1997), while Uganda (2001), Rwanda (1999) and Burundi (1999) at 1:100,000. Collaboration with TAMP could include re-mapping to provide a time-series analysis of patterns of changes across the basin from the original Africover and its transformation into land use maps. **ii)** Use of NBI information products on the website (and Nile Google) and linkages with Internet forum on hydro-meteorological network hosted jointly by the FAO Nile basin project with NELSAP Kagera project and the transboundary hydrological monitoring network. **iii)** Use, as required, of persons trained by these projects in GIS, field data acquisition, data processing, quality control and use of data/ information products (physical & socio-economic data) to support policy analysis and decision-making (in collaboration with NBI SVP Water	Africover data and maps and other. NB information products to be made available and expertise shared in their use, and in the development of relevant layers and information products for decision making across the basin.

Relevant projects/Activities	Relationship with TAMP	Mechanisms
	Resources Planning and Management Project and Socio-Economic Development and Benefit Sharing project.) **iv)** use as required of results of basin-wide survey and regional workshops on current and potential rural water use and water productivity in irrigated and rainfed agricultural production in support of sustainable rural livelihoods, including supplementary irrigation, water harvesting for crop production and domestic use (in collaboration with SVP Efficient Water Use for Agricultural Production project and Confidence Building and Stakeholder Involvement project).	
7. Various FAO technical assistance projects on land and water management and food security working through participatory learning–action–research processes, such as Farmer Field Schools **i) Conservation agriculture and sustainable agriculture** (**CA**-SARD) project phase II in Tanzania and Kenya includes activities in Bukoba district, Kagera and other districts and builds on phase I and a pilot project in Eastern Uganda TCP/UGA/3003. **ii) Improvement of Food Security in Cross-border Districts of Burundi, Rwanda and Uganda**, in support of the modernization of agriculture and poverty reduction under the NEPAD framework (in selected joint cross-border districts of Burundi (Ngozi, Kayanza); Rwanda (Nyagarare, Bugesera; Nyaruguru; Byumba, Burera), and Uganda (Kabale, Kisoro), **iii) Special Programme on Food security (SPFS)** building on pilots in Burundi (US$645,000; 2000-2003 in five representative AEZ) and in Tanzania ; and **iv) Human Security Project in Tanzania which** aims to strengthen human security through sustainable human development (household food security and nutritional status, strengthen resilience and livelihoods through the FFS approach) in Ngara and Karagwe districts,	FAO will promote exchange of experiences and provide support for linking SLaM with food security and successful FFS / PLAR processes. **i)** CA is identified as a key technical option in the basin for reversing land degradation, reducing labour and improving livelihoods. However, its scaling up will depend on government and donor support for making available CA tools and equipment and strengthening expertise **ii)** In supporting target communities, farmers and herders, liaison will be established with partners in the regional food security project and national SPFS projects to share experiences from field activities and better reach poor and vulnerable groups. This could include: o more profitable agricultural production systems, increased market access and value-added activities such as: i) expanding markets and strengthening market access opportunities for rural communities; ii) intensifying production and improving quality of selected staple and cash products (mainly crops); iii) improving water resource management; iv) engagement in post-harvest value-added activities. In accordance with COMESA (Common Market of Eastern and Southern Africa) in Burundi, Rwanda and Uganda and regional integration of agricultural development strategies under the NEPAD framework (cross- border districts). o developing viable opportunities for increasing productivity while ensuring sustainable use of agro-biodiversity, e.g. improved processing and marketing of local products from domesticated and wild resources and use of local varieties and breeds. o participatory integrated management of wetlands and valley bottoms to increase agricultural potential and restore watershed productivity (agro-silvopastoral and water management (Burundi).	Project teams and experts will share expertise and materials for training TAMP PMU will organise exchange visits and field days for learning process and collaboration among districts and projects

Relevant projects/Activities	Relationship with TAMP	Mechanisms
Kagera region, both seriously affected by refugees and HIV/AIDS (mid 2006-2008, Japan funds with FAO, UNDP, WFP, UNIDO, UNICEF and GoT).	○ irrigation rehabilitation, intensified production, livelihood promotion and diversification (aquaculture, village kiosk businesses) and, building from FFS, facilitating emergence of Participatory Farmer Groups (PFGs), which form a legal basis around Savings and Credit associations and/or Water Users Associations in irrigated areas (from mainland Tanzania). ○ targeting vulnerable populations (orphans, children, women and men impacted by influx of refugees, poverty and HIV/AIDS), through Junior (JFFLS) and Adult Farmer Field and Life Schools (AFFLS) (HSP).	
8. Support to the Akagera Park and its Vicinity in Rwanda (Office of Tourism and National Parks-ORTPN and DED) (followed the GTZ supported "**Projet de Protection des Ressources Naturelles du Parc National de l'Akagera (PRORENA)**" (phase I completed early 2005) which aimed to strengthen the remaining Akagera park through organisation and management after two thirds of the park was de-gazetted in 1995	This Rwanda project provides an important knowledge base for reducing pressures from agro-ecosystems and identifying needs for biodiversity conservation and long term protection of the park. (This includes support regarding park boundaries, community awareness of the value of the park, income generating activities targeted at park visitors; improved ecological balance of the park).	Liaison by TAMP with concerned national institutions and district partners
9. In Rwanda, the Rural Sector Support Programme (RSSP) is the main agricultural investment nationwide and aims to increase food production and support off-farm income generation in rural areas in all provinces of Rwanda. (World Bank, 2001-2011 US$100 million)	There is a need to mainstream SLaM in national development strategies and programmes and leverage investment of these programmes for TAMP implementation and scaling up of successful experiences across the basin.	RSSP has confirmed support and cofunding for districts in the Kagera basin in Rwanda The project team, TAC and members of RPSC and RTAC to liaise to make this a reality.
10. In Burundi, the Projet de Relance et de Développement du Monde Rural (PRDMR) promotes smallholder agriculture (extension, livestock, seed multiplication, inputs); land management (wetlands, watersheds, agro-silvo-pastoral integration); support to local initiatives (artisans, literacy, micro-finance, agro-processing); and community infrastructure (schools, health centres, water points, rural roads). (FIDA-OPEP, 2000- 2008)	There is a need to mainstream SLaM in national development strategies and programmes and leverage investment of these programmes for TAMP implementation and scaling up of successful experiences across the basin.	Liaison is needed with PRDMR to develop collaborative and co-funding arrangements. (not yet done as Burundi was not beneficiary of PDFB) As above, project teams, TAC and members of RPSC and RTAC should liaise to make this a reality.
11. In Tanzania, the Agricultural Sector	Close collaboration will be established in the 4 Kagera districts with	MoA has confirmed support

Relevant projects/Activities	Relationship with TAMP	Mechanisms
Development Programme (ASDP) multi-donor programme provides investment through District Agricultural Development Plans and at national level supports policy interventions (institutional framework; support services). The **District Agriculture Sector Investment Project (DASIP)** (2006-2012, AfDB) supports preparation and implementation of more effective Village Agriculture Development Plans in 25 districts in NW Tanzania, including Kagera region. The **Participatory Agricultural Development and Empowerment Project (PADEP)** (World Bank, US$ 70.6 million of which IDA $56M) aims to sustainably raise food production, income and assets of participating households/groups through community agricultural development sub-projects (840 villages)	DASIP in farmer capacity building; community planning and investment in agriculture, support to rural micro-finance and marketing. TAMP will work with district planners and DASIP actors in effectively programming and budgeting for SLaM activities and ensuring required ASDP funds are allocated for community actions and district technical support. Liaison will be established with PADEP for sharing of methods and tools and investment support in target districts (empowering communities/ farmers' groups for choice of sustainable, productive technology; sharing costs and hence risk of adoption of improved technologies; enhancing demand for products/services provided by private sector; promoting improved land/crop husbandry practices; supporting district decentralization process; improving infrastructure to improve access to markets).	and co-funding through ASDP and DASIP to districts in the Kagera basin in Tanzania As above, project teams, TAC and members of RPSC and RTAC should liaise to make this a reality.
12. In Uganda, Promoting the Modernisation of Agriculture (PMA) aims at poverty eradication by means of a long term strategy for the transformation of the agricultural sector through multi-sector interventions and a decentralised planning process. It is supported by the **National Agricultural Advisory Services Programme (NAADS)** which aims to establish a demand-driven client- and farmer-led agricultural service delivery system, particularly targeting the poor and women.	The focus of NAADS is on a commodity driven approach for increasing productivity, empowering farmers and building their demand for research and agricultural advisory services. During a recent evaluation, natural resources management was identified as an area requiring specific attention as the short term goals of farmers could lead to increased exploitation and degradation of resources without required investments in restoring natural resources. TAMP will work with NAADS to strengthen support for SlaM and use of FFS approaches	Through MAAIF both PMA and NAADS have been confirmed as cofunders and collaborative partners of TAMP As above the project team, TAC and members of RPSC and RTAC should liaise to make this a reality.
13. In Uganda, **National Livestock Productivity Improvement Project (NLPIP)** aims to increase household incomes through increased livestock productivity and marketing while taking care of environmental concerns of land degradation and overgrazing due to increased animal population and conventional livestock practices. It will minimise possible water and soil pollution, reduce soil erosion and improve water supply, encourage tree and fodder planting and minimise fire burning. (AfDB, US$33.6 million, 2006-2011)	NEMA will work closely with NLPIP to monitor and assess the environmental impacts which will be of use for TAMP. Results of NALEP should be integrated into TAMP and vice versa	Collaboration with technical partners and beneficiaries

Relevant projects/Activities	Relationship with TAMP	Mechanisms
The **HEIFER** project aims to improve livelihoods through provision of heifers to help farmers and rural communities overcome problems of nutrition and increase farmer incomes.		
14. In Uganda **Farm Income Enhancement and Forest Conservation Project (UFIEFCP) is** nationwide and aims to contribute to poverty reduction (improved incomes, rural livelihoods and food security) through sustainable natural resources management and agricultural enterprise development. (AfDB US$51 million, 2006-2011).	Lessons from this project will be integrated into TAMP (NRM, rehabilitating degraded watersheds through communities, forest plantations and capacity building).	This is an important cofunding partner

ANNEX 13: POPULATION AND SOCIAL STATISTICS IN THE KAGERA BASIN

Table 1. Population Distribution in the Kagera River Basin

Countries sharing the Kagera Basin	Land area km^2	% Land Area of Basin	Basin Share of National Population in millions (of total)	Basin Population Projections, in millions (growth rate)		Population Density in Kagera Basin (per km^2)	
			In 2002	In 2015	in 2030	in 2002	in 2015
***Uganda**	5,980	10	0.8 (of 24.4)	1.3 (3.9%)	3.3 (3.9%)	135	221
Tanzania	20,210	34	1.2 (of 34.4)	1.8 (3.1%)	2.9 (3.1%)	61 131**	- 220
Rwanda	20,550	34	7.6 (of 8.6)	10.7 (2.6%)	15.7 (2.6%)	372 <500**	519
Burundi	13,060	22	3.3 (of 6.6)	4.7 (2.9%)	7.3 (2.9%)	250	362
Totals	59,800	100	12.9	18.5	29.2	216	488

* Note TAMP project area proposed to extend to cover all 6 districts in Uganda which include part of the basin, total land area 17,743 km^2, population 2.4 mn. in 2002, projected to reach 3.9 mn. in 2015 and 7.0 mn. in 2030.
** Effective population density (excluding protected areas, etc.)

Table 2 Social Statistics for the Kagera River Basin

Social statistics	Burundi	Rwanda	Tanzania mainland	Uganda
Adult literacy rate (% age 15+) *[1] (School attendance: primary + secondary)	59% (35%)	68%	76%,	68%
Poverty % rural population below national poverty line ($1/day) (average annual)*[2]	36% (1990) ($90)	($220)	38.7% (2001) ($330)	- ($270)
Poverty, % population <$1/day consumption	58.4% (2002)	52% *(2000)	49% (1991)	-
% Undernourished *[3]	68%,	37%	43%	19%
Life expectancy (years)	43.6			
HIV/AIDS infection, adult rates*[4]	6%	5.1%	8.8% (Kagera >10%)	4.1%
Persons living with AIDS *[4]	250 000	250 000	1,600,000	530,000
Estimated number of orphans due to AIDS (lost one or both parents)*[4]	200 000	160 000	980 000	940 000

*[1] UN Human Development Indicators 2002/2003(rates for rural areas are likely to be higher e.g. in Tanzania estimated illiteracy of rural (urban) women 41.2% (19%), men 33.1 % (14.2%)
*[2] World Bank
*[3] World Food Programme
*[4] UNAIDS, 2003 (HIV/AIDS estimates are not always a good indication of scale of the epidemic as much of the data is from antenatal clinics, however access to such services varies greatly between rural and urban areas.[15]

[15] http://hdr.undp.org/docs/reports/national/URT_Tanzania/Tanzania_2002_en.pdf