



The Government of the Republic Zambia

United Nations Development Programme

Global Environment Facility

Lake Tanganyika Integrated Management Programme – Zambia Component
(Catchment management through sedimentation control)
PIMS 1941

Brief Description

The Zambian component of the ADF/GEF –supported Lake Tanganyika Integrated Management Programme focuses on sedimentation control, which is within the framework of priorities of the sub-regional Strategic Action Programme (SAP). In the SAP, the control of sediment inflows from the steep mountainous terrain bordering Lake Tanganyika in both Mpulungu and Kaputa Districts is seen as one of the most important areas for support. Over-fishing has also been identified as a key issue, and this is being addressed through co-finance and technical cooperation from the African Development Bank, FAO and other partners of the Lake Tanganyika Integrated Management Programme.

Sediment inflows will be reduced through an increase in the area of land brought under sustainable land use, particularly for agriculture and forestry. Emphasis will be on institutional strengthening with support to community participation in agriculture, forestry, and soil-erosion prevention.

Best practice and innovation, as well as regional coordination and dissemination of lessons will be assured by linking the project to ICRAF's training and demonstration programmes as a regional activity.

Table of contents

SECTION I	Brief Narrative	4
Part I	Situation Analysis	
	I.1 Key Development – Environment Issues	4
	I.2 Existing institutional framework	5
Part II	Strategy	
	II.1 At sub-regional and national levels	6
	II.2 At project level	7
	II.3 Relevance to certain conventions	9
	Part III Management arrangements	
	III.1 Implementing partner	10
	III.2 Implementing agency	10
	III.3 National Coordination Unit	10
	III.4 Links with various Government Line Ministries	11
	III.5 Project’s office accommodation arrangements	11
Part IV	Monitoring, evaluation and audit	
	IV.1 Monitoring	12
	IV.2 Evaluation	13
	IV.3 Audit	13
Part V	EPAC’s Endorsement of the project	13
Part VI	Legal Context	14
SECTION II	Results and Resources Framework	14
SECTION III	Provisional Multi-year Work Plan	14
SECTION IV	Other Agreements	14
ANNEXES		
1	Results and Resources Framework	14
2	Provisional Multi-year Work Plan	18
3	Total Budget and Workplan	21
4	(a) Provisional Terms of Reference for the National Project Steering Committee	22

	(b) Provisional Terms of Reference for the Project Manager	23
	(c) Provisional Terms of Reference for the Revolving Fund Administration Officer	25
	(d) Provisional Terms of Reference for the Agricultural Officer	27
	(e) Provisional Terms of Reference for the Administration Assistant	28
	(f) Provisional Terms of Reference for the Accounting and Procurement Officer	29
	(g) Provisional Terms of Reference for the Project Implementation Unit	30
5	Project Organisational Chart	31
6	Terms of Reference for the DDCC	32
7	GEF-approved Project Document	33
	SIGNATURE PAGE	63

Section 1: Brief Narrative¹

Part 1 Situation Analysis

I.1 Key development - environment issues

With more than 2,000 species of plants and animals recorded in its basin, Lake Tanganyika has a relatively rich and complex biodiversity. Over 500 of these species are endemic to the Lake's ecosystem. With this level of endemism, the Lake has great global value. Apart from this globally important endowment, Lake Tanganyika is essential to the overall survival of the rapidly growing population of 7-10 million people that live in the common basin of Burundi, D.R. Congo, Tanzania and Zambia. For these people, the lake serves as: (i) a source of fish for food and income, particularly in the open waters of the lake where vast numbers of fish species occur, (ii) a water highway, (iii) a supply source for domestic and industrial water, and (iv) a receptacle for domestic and industrial effluents. About 300,000 people live on the Zambian side of the Lake's basin.

However, the integrity of this rich natural resource endowment is being threatened. In its *sedimentation special study* for the lake basin, the previous GEF-supported project identified the following 4 key threats across all the 4 riparian countries (Zambia, Tanzania, DRC and Burundi) albeit at varying degrees of intensity:

- Unsustainable fishing through over-fishing and through use of harmful fishing gears and practices;
- Increasing sedimentation and siltation;
- Water pollution; and
- Habitat destruction

As a result, the Lake's ecosystem is experiencing loss of biodiversity and a deterioration of water quality. At country level, addressing these trans-boundary environmental threats effectively in the 4 riparian countries has been hampered by lack of resources, ineffective institutional coordination, lack of appropriate regulations for the Lake and poor enforcement of existing regulations. In recent years, these countries have recognized the need for close cooperation in the management of the Lake's basin. Accordingly, while each of the 4 countries intends to address the issues on the basis of a particular prioritisation, this will be done within a common sub-regional framework of collaboration and coordination. Based on this approach, Zambia, Tanzania and the DR Congo have identified sedimentation as the immediate issue to be addressed while Burundi intends to address the pollution issue through sound wastewater management. Generally, these countries will collaborate in the creation, development and management of lake resources.

From the Zambian side, sedimentation into the lake has been caused principally by poor catchment management characterised by environmentally unsustainable utilisation of land and forestry resources of the lake basin. These unsustainable practices have been contributing very

¹ For details refer to GEF-approved project proposal attached as Annex 7. In fact, it is an integral part of this document.

significantly to soil erosion which not only degrades agricultural land but also forms a part of the sediment load carried by rivers downstream to the lake, thereby increasing the deterioration of the environmental quality of the Lake's ecosystem, particularly the fauna. In fact, studies under the previous GEF-supported project (1995-2000) established that 5 rivers in the Zambian catchments together deposited into the Lake between 0.082 tones and 1,500 tones per day.

The underlying causes of poor management practices for land, forestry and fisheries resources of the lake basin include poverty characterised by the following factors:

- **Limited range of livelihood options:**

Mpulungu and Kaputa Districts mainly depend on subsistence agriculture and fishing. Poor people continue to rely on these livelihood systems even though productivity is low due to land degradation and use of unsustainable fishing practices. This continued reliance implies that poor people either lack adequate access to capital and credit to diversify into other livelihood systems or do not have required skills to engage into alternative productive enterprises. Furthermore, given the persistent gender imbalances against women in the country generally, it is women that have been much more adversely affected by these resource constraints in this situation. The situation of women is further exacerbated by the impact of HIV/AIDS, which brings added burdens on women in terms of nursing the sick and caring for the orphans.

- **Limited enforcement of regulations:**

In a number of cases, appropriate regulatory/legal frameworks for sound management of environmental resources are in place but enforcement is rendered ineffective due to lack of adequate financial, human and material resources needed by Government's technical services and structures in forestry, wildlife, water, agriculture and other natural resources sector. Consequently, natural resources continue to be managed in unsustainable ways thereby exacerbating poverty

I.2 Existing institutional framework for environmental management

The institutional framework within which the Zambian component of the sub-regional project will be implemented is essentially at two levels: national and district/community. At national level, 5 ministries are particularly relevant and these are: MACO, MTENR, MLGH, Lands Ministry, MCDSS, and MEWD. Most of these line ministries have a presence in the districts of Mpulungu and Kaputa where this project will be sited. The two districts in particular also have a number of local committees for managing natural resources and these include: Community Resource Boards under Zambia Wildlife Authority (ZAWA); Stratum Committees under the Fisheries Department; Village Conservation Development Committees; Area Conservation Development Committees; and Village Forestry and Natural Resources Committees.

The major cooperating partners currently supporting development activities in the two districts include FAO for fisheries research, NORAD for district development planning, the AfDB for water infrastructure, DCI for social services including HIV-AIDS and water supply, and UNDP for HIV/AIDS through the District AIDS Task Forces under the DDCCs as well as for biodiversity conservation in the Mweru wa Ntipa ecosystem which covers parts of both

Northern and Luapula Provinces. With reference to this project (in its sub-regional context), several cooperating partners were approached to help address the identified issues such as catchment management/sediment, over-fishing control, habitat protection, and local development (agriculture, health centres, education feeder roads etc). The over-fishing problem and the bulk of local development will be addressed with the financial and technical support of the African Development Bank, the FAO and other partners, while UNDP/GEF will assist in addressing the sedimentation problem as well as some aspects of local development such as support to alternative livelihood systems including income generating activities.

Part II Strategy

II. 1 At national and sub-regional levels

Within the country's national development frameworks such as the Transitional National Development Plan and the National Environmental Action Plan as well as taking into account the MDG framework, Zambia is committed to ensuring environmental sustainability by setting aside a representative of all ecosystems. Lake Tanganyika is one special ecosystem which the Government is committed to conserve and to this effect has chosen to address the issue of sedimentation in the lake basin. This decision was made after lengthy and broad-based stakeholder consultations at both national and local levels.

The decision to focus on sedimentation control is also fully consistent with the sub-regional Strategic Action Programme (SAP) prepared with GEF support and adopted by the 4 countries in 1999. In the main, the key priorities articulated in the SAP are: *sustainable fishing practices, sedimentation control, pollution control and habitat protection*. Within this strategic framework, each country may address any or all of these conservation priorities, depending on its own prioritization at the local level. However, in order to ensure consistent and coordinated approach to addressing the SAP priorities, the 4 countries have signed/ratified a convention as a legal instrument that sets out the rights and duties of the State Parties and establishes institutional structures for effective and sustainable implementation of the SAP for the Lake Basin.

It is expected that through the implementation of the convention and the SAP, the riparian countries will coordinate and harmonise their control of utilisation of the lake basin's resources more effectively than is the case presently. For instance, in the fisheries sector, this could include coordination of regulatory activities like seasonal banning of fisheries, control of access to spawning areas, and regulation of fishing gears and practices.

Considering that sedimentation is created when eroded soil is deposited into rivers/streams, the focus in addressing sedimentation will necessarily be directed at the principal causes of soil erosion, namely erosion-prone traditional farming practices and unsustainable harvesting of forests that make the land surface prone to soil erosion by laying it bare of the protective vegetative cover. This will require a collaborative and participatory approach among the stakeholders in the project area. At government level, some of the key stakeholders that will be called upon to help address the sedimentation problem are the Ministry of Agriculture and Cooperatives (for environmentally friendly farming practices), the Ministry of Local

Government and Housing (for local governance issues/advocacy, including district/area development planning issues), the Department of Forestry (for deforestation and reforestation issues), the Gender-in-Development Division (for gender relationships in agriculture, forestry and other livelihood systems at local levels), Department of Water Affairs (for water sedimentation monitoring systems), ZAWA (for wildlife/environmental conservation issues), Ministry of Lands (for land use/administration), Ministry of Communications and Transport (for Marine Transport environmental issues), National AIDS Council (for coordination of HIV/AIDS activities) the private sector (for issues of private sector development-environment issues), Environmental Council of Zambia (as a regulatory body for environmental protection).

Based on the respective policies and mandates, specific roles to be played by each of these key stakeholders will be articulated at the project's inception workshop and subsequently at the project's work annual work programming meetings. Two examples are provided below to illustrate the expected roles that may be played by these sectoral institutions based on their respective mandates.

(a) MACO: One policy objective of the Ministry is to maintain and improve the existing agricultural resource base to raise agricultural productivity through promotion of sustainable land-use practices for agricultural production among all categories of farmers in the country. The ministry will thus be expected to provide technical skills in conservation and other farming practices that promote environmental conservation while increasing agricultural productivity in the proposed project area. Apart from fishing, the target districts of Mpulungu and Kaputa are highly dependent on subsistence agriculture but this is based on traditional practices that tend to promote deforestation and soil erosion that in turn cause sedimentation.

(b) Forestry Department: Within its national role of promoting sustainable management of forest ecosystems and land use systems that ensure the protection of catchments such as headwaters, rivers and watershed resources, the Forestry Department at the local level in Mpulungu will be expected to participate in the formulation and implementation of measures that reduce deforestation and promote commercial woodlots and agro-forestry in the communities in the proposed project area.

At the local level, the Office of the District Commissioner will ensure the proper coordination of various strategic partnerships through the Mpulungu DDCC, which is an inter-sectoral committee comprising: all line ministries present in the district, relevant NGOs and private sector representatives. The DDCC is chaired by the District Commissioner while the District Planning Unit serves as the secretariat. Notwithstanding the financial, material and human constraints that the DDCCs and the offices of District Commissioners face, they are the only government agencies responsible for the critically important role of coordinating development initiatives in all economic and social sectors at the district level. However, in the case of this project, the day-to-day implementation work will be assigned to a full-time Project Implementation Unit (PIU) working together with respective line ministries staff who will provide specific inputs or skills as a part of their portfolio in government.

II.2 At project level

As already alluded to above, this project will address sedimentation in the Lake's inflowing rivers by devising and implementing cross-sectoral measures that help limit soil erosion and seek to halt and reverse deforestation. In addressing soil erosion and deforestation, the project will identify and promote, through a broad-based participatory approach, some traditional practices that are not only central to the livelihoods of the communities but are also environmentally sound or at least hold out a potential for environmental soundness if improved upon by infusing other tested conservation farming techniques. In the latter case, skills training will be provided to bring sustainable enhancements to the traditional practices in the communities. Subject to the results of further community consultations (such as through rapid participatory appraisals) during project implementation, skills training could be centred on the following thematic areas:

- (i) natural resource management practices that increase productivity while promoting resource conservation. The focus could be on agriculture, agro-forestry, community forests and woodlots. The aim of this could be to reduce sedimentation through reduced soil erosion as a result of a progressive reduction in the destruction of vegetative cover and/or a progressive increase in reforestation relative to deforestation rate.
- (ii) entrepreneurial skills for establishment of productive alternative income generating activities to reduce pressures on land resources. Under land pressure, there can rapid and unsustainable conversion forest land into other uses that exacerbate soil erosion and, therefore, soil erosion.
- (iii) local governance structures for sustainable natural resource management whereby local communities understand the value of conserving natural resources for both present and future generations. There must be effective local institutional and legal frameworks within which local environmental conservation decisions are popularly established and fairly enforced.

To ensure the use of best practice in catchment management, the project in Zambia (along with Tanzania and DRC catchment components) will use the International Centre for Agro-Forestry (ICRAF) in Nairobi to provide training, demonstration, learning experiences and their dissemination within the region.

Piloting

The project will start with 4 pilot areas located at various sites in catchment range of the lake from Mpulungu to Kaputa district. Based on stakeholder consultations in the focal districts, the following 4 sites have been chosen in Mpulungu and Kaputa:

- (a) Mpulungu
 - Lunzua River Catchment and Chituta Bay Area;
 - Kasakalawe Bay Area;
 - Munjela/ Nsumbu National Park

(b) Kaputa

- Chisala River Catchment and Munjela-Tondwa Game Management Area.

The expectation by the end of the project is that there will be sustained reductions in sedimentation rates at project demonstration sites, which lead to improved biodiversity habitats due to:

- Rising up-take by farmers of improved and sustainable agricultural practices that will be replicable throughout the Zambian portion of the Lake Tanganyika basin
- A decrease in deforestation resulting from more effective community-based natural resource management serving as a demonstrative model for the Lake catchments.
- The development and piloting of cross-sectoral institutions at community and district levels, as well as linkages and relationships between community, local and national levels that successfully support participatory forms of natural resource management.
- The lessons and precedents set will enable similar initiatives in the Lake basin to be started, with potential for replication on a wider national scale.

Gender and HIV/AIDS

Although there were no gender- disaggregated data at the time of project design, a budgetary provision has been made to do more work in this area and allow for gender awareness campaigns to ensure mainstreaming of gender variables at early stages of project implementation.

Similarly, a budgetary provision has been made for contributing to the existing HIV/AIDS awareness campaigns and mainstreaming efforts. As a coastal town that serves as a harbour, Mpulungu has a lot of human traffic and this makes it vulnerable to HIV transmission

II.3 Relevance to selected conventions on conservation of biological water resources

In addition, the 4 riparian countries are signatories to important international environmental conventions on biological diversity and the wetlands. In 1991, Zambia ratified the Ramsar Convention an international treaty focusing on conservation of wetlands of international importance. As a follow-up to the ratification of the Convention, Zambia produced a National Wetland Status Report in 1994 that highlights the values, threats development and conservation issues of the Zambia's wetlands. A National Wetland Strategy and Action Plan was developed in 1999. This was followed by the development of a National Policy on Wetlands in 2001. This project has the potential to make a positive contribution to the Ramsar objectives as it aims to empower riparian communities in Zambia to plan and manage land and water resources in the Lake Tanganyika catchments.

Following the ratification of the CBD (which is concerned with conservation of biodiversity, sustainable use of all its components and the fair and equitable sharing of the benefits accruing out of the utilisation of the genetic resources), Zambia developed a National Biodiversity Strategy and Action Plan (NBSAP) in 1999. The NBSAP outlined Zambia's vision, mission and guiding principles for the implementation of the Convention. This project, which aims to reduce

erosion and sediment input into the Zambian waters of Lake Tanganyika, will contribute directly to the conservation of this globally important biodiversity hotspot and the sustainable use of biological resources, in line with Zambia's commitment to the CBD. The NBSAP stresses the global and national value of Lake Tanganyika. Furthermore, by addressing the issue of soil erosion for sedimentation control, the project will be contributing to the objectives of the Convention to Combat Desertification that addresses issues of land degradation among others.

Part III Management Arrangements

III.1 Implementing Partner (formerly Execution Agency): This project will be implemented through the National Execution (NEX) modality. The MTENR, being the focal point for all-environmental and natural resources management issues in the country, will be the main implementing partner through the Department of Environment and Natural Resources Management (ENRM Dept). The ENRM Dept will be responsible for the overall performance of the project towards the planned outputs through coordination and guidance. The MTENR execution responsibility will also cover the ADF-supported fisheries component for which a separate implementation unit will be set up in Mpulungu. In this regard, the MTENR will ensure that the implementation of these two (GEF and ADF) components be coordinated as effectively as possible at both national and district levels.

III.2 Implementing Agency: The day-to-day supervision of the Project Implementation Unit in Mpulungu will be carried out by the DDCC through the Office of the District Commissioner (DC). The DC's office will be the entry point for monitoring the project by the MTENR and UNDP. To clarify execution, coordination and implementation roles, funding arrangements and responsibilities, a memorandum of understanding (MOU) will be drawn up between the MTENR and the Office of the DC. This MOU will provide the detailed terms of reference for the Project Implementation Unit (PIU)

III.3 PIU: This will be responsible for the day-to-day implementation of the project, including among other tasks, the maintenance of a special bank account for the management of funds disbursed from the UNDP/GEF grant and reporting on the use of the funds disbursed. The Unit will comprise:

- 1 Project Manager (72wm);
- 3 Technical Officers
 - (a) Agricultural officer (24wm)
 - (b) Agro-Forestry and Conservation Officer (36wm)
 - (c) Revolving Fund Administration Officer (24wm)
- 1 Accountant/procurement Officer (36wm);
- 1 Administration Assistant (72wm);
- 1 Driver (72wm).

All these officers will be recruited from the open market in a competitive manner as agreed during stakeholder consultations on implementation arrangements for the project. The Project

Manager (PM) will be the head of the PIU, answerable to the MTENR and the Office of the District Commissioner as the chair of the DDCC and head of government at district level. The phase-out of posts is expected to commence after the 2nd year of the project, giving increasing responsibilities to non-project personnel in local institutions (government ministries, departments, agencies, etc) for the phased out project posts.

At the district level, the DDCC (see TORs in Annex 40) will be an important mechanism for ensuring full coordination of the activities of the project. The DDCC will also ensure coordination between this project and the ADF-supported fisheries component. The close coordination between these two components is important since both of them will be serving communities within the same lake basin.

Security services for the office premises will be outsourced/contracted within Mpulungu town as part of operational expenses for the office.

III.4 Links with various government line ministries:

As the Implementing Partner, the MTENR will seek to maintain and enhance the existing collaboration with several other government ministries and agencies at both national and district levels in the day-to-day implementation of this project. These include: Environmental Council of Zambia (ECZ), Zambia Wildlife Authority (ZAWA), the Ministry of Agriculture and Cooperatives (MACO), the Ministry of Energy and Water Development (MEWD) and relevant non-governmental organizations. These institutions will be called upon to support the MTENR in the execution of the project at various levels, including membership to steering committees. These agencies together with skills in research centres will form a National Advisory Task Force for the project, under the auspices of the NBSC (see IV.1 below).

Similarly, the PIU will seek to facilitate and support the mandated institutions to perform better through improved capacity. To facilitate this collaboration and ensure sustainability after external support, the project provides for institutional capacity building as a key sub-component. It will build strong operational linkages to line officers for agriculture, water development, forestry, local governance, District AIDS Task Forces and community development. After the mid-term review, the PIU will develop an exit strategy, giving greater operational responsibility to the line officers as already mentioned in III.3 above.

III.5 Project's office accommodation arrangement

The operational base of the project will be Mpulungu, with an outreach site in Kaputa District. In Mpulungu, the project's office accommodation will be arranged as follows:

(a) Rented premises: Due to shortage of office accommodation within the government system in Mpulungu, the project will be accommodated in rented offices for at least 1 year. This will be arranged through the office of the DC for Mpulungu.

(b) Own office block: After the first year, it is intended that the project shift into its own office accommodation. The ADF component provides for construction of an office block to

accommodate both this component and the ADF-supported one. Government has already provided a plot for this purpose. An MOU will be arranged with ADF and the Department of Fisheries for the provision of offices.

PART IV: Monitoring, evaluation and audit

IV.1 Monitoring

Project steering committees: In its monitoring function as the coordination and implementing partner for the project, the MTENR will be supported by the following steering committees:

(a) National level: The existing National Biodiversity Steering Committee- **NBSC** (also referred as the National Project Steering Committee -**NPSC**) will review semi-annual progress towards the project's outputs. The NBSC meetings will be chaired by the MTENR. Towards the end of the project, the Committee will prepare a report synthesizing lessons learned and how these could be scaled up and replicated more widely. It will also serve as the channel for the absorption of the projects results into mainstream government programmes and policies through the MTENR. See Annex 4 for the Terms of reference for the NBSC/NPSC.

(b) District level: To ensure ownership and integration of project activities and results into the mainstream of district development plans, the project will work through the existing DDCC whose membership is drawn from all the government ministries and other development agencies at the district level. The PIU will be linked to the NBSC/NPSC through the local level project coordination committee, i.e., the Lake Tanganyika Catchments Conservation Committee (LTCCC) created as a sub-committee of the Mpulungu DDCC. The PIU will be a member of the DDCC. As a subcommittee of the DDCC, the LTCCC will be responsible for periodically monitoring the project's progress towards the intended outputs and outcomes. This Committee will report to the NBSC/NPSC on the achievement of outputs using the **Key Performance Indicators** (KPIs) agreed to at the Project's Inception Meeting. The Committee will ensure coordination among the larger components of the Lake Tanganyika Project, as well as among the sectoral partners within the UNDP-GEF components (i.e., agriculture, forest, water, and community development). The DDCC will review the project activities at least every quarter.

(c) PIU: The PIU will be responsible for tracking implementation progress and project milestones. It will prepare Quarterly and Annual Progress Reports on project implementation under the guidance of the NBSC through the local LTCCC throughout the duration of the project. An additional report will be prepared three months prior to the mid-term review, which will assess overall progress in project implementation and make recommendations for adaptive management.

(d) Community level: Within the Government's decentralisation programme, the Village and Area Development Committees under the traditional leadership will serve as a forum for the coordination incorporation of project activities as integral parts of the village and area level development efforts driven by the communities. In addition, these committees will be responsible for mobilisation of community planning, implementation, monitoring and policy advocacy for community driven conservation and livelihood diversification in the project sites.

They will also report to and be represented in the LTCCC. Depending on the issue at end, the Village and Area Development Committees may solicit the inputs of other natural resources committees such as the community resources boards.

Stakeholder representatives through project implementation workshops will review the Key Performance Indicators annually. The outputs of these workshops will serve as a basis for monitoring and evaluating project impact.

(e) Linking the Zambian component to the Regional Component

In addition, the PIU will report the quarterly and annual progress of the Zambian Component to the Regional Project HQ in Bujumbura, Burundi through the MTENR. This will serve as an input into the Quarterly and Annual Progress Reports that will be compiled and consolidated into one single report for all the 4 riparian countries by the Regional Project HQ in Bujumbura. As a part of the Lake Tanganyika Management Authority, the Regional HQ (Secretariat) may pass directives to the PIU through the Zambian Government (MTENR) regarding national reporting and any related issues.

IV.2 Evaluation

The Project will be subject to a mid-term and terminal evaluation. In addition, a Final Report will be prepared and submitted by the PIU through the Implementing Partner (MTENR) to UNDP/GEF before the scheduled end of the Project.

IV.3 Audit

The Office of the Auditor- General of the Republic of Zambia will provide UNDP with certified periodic financial statements, and an annual financial and performance audit of the project according to established procedures, set out in the UNDP programming and Finance Manuals. The Audit will be conducted by a legally recognized auditor of the Government or by a commercial auditor engaged by Government.

V EPAC's Endorsement of the project

As per procedure, the project was reviewed by an Expanded Projects Appraisal Committee (EPAC) on 28th July 2005. Clarifications were sought on project implementation and coordination, sustainability of results, participation of stakeholders during formulation of the project and the need for more clarity on the statement of problems to be addressed and the linkages between project activities, outputs and outcomes. After these issues were clarified or agreed for incorporation into the final document, the EPAC endorsed the project and also advised that the project document should be finalised expeditiously as the proposal had been on the drawing board for a long time. For more details, see the attached EPAC Minutes.

Part VI Legal Context

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement (SBAA) between the Government of Zambia and the UNDP, signed by the parties on 14 October 1983. A copy can be obtained from UNDP or the Government of the Republic of Zambia (Ministry of Foreign Affairs) for use related to this project. The host country-implementing agency shall, for the purpose of the Standard Basic Assistance Agreement, refer to the government cooperating agency described in that Agreement.

UNDP acts in this project as Implementing Agency of the Global Environment Facility (GEF), and all rights and privileges pertaining to the UNDP as per the terms of the SBAA shall be executed *mutatis mutandis* to GEF.

The UNDP Resident Representative in Zambia is authorized to effect in writing the following types of revisions to this project document, provided s/he has verified the agreement thereto of the UNDP GEF unit and is assured that the other signatories of the project document have no objections to the proposed changes:

- (a) Revisions of, or addition to, any of the annexes to the Project Document;
- (b) Revisions which do not involve significant changes in the immediate objectives, outputs or activities of the project, but are caused by the rearrangement of inputs already agreed to or by the cost increases due to inflation;
- (c) Mandatory annual revisions which re-phase the delivery of agreed project inputs, or reflect increased expert (or other) costs due to inflation, or take into account agency expenditure flexibility, and
- (d) Inclusion of additional annexes and attachments only as set out here in this Project Document.

Section II: Results and Resource Framework (see Annex 1)

Section III: Provisional multi-year budget (see Annex 3)

Section IV: Other Agreements

Through its Operational Focal Point, the Zambian Government has endorsed this project in a letter to UNDP GEF dated 18th August 2004.

Annex 1 for Section II of text: Results and Resources Framework

Intended Outcome	Lake Tanganyika's biological and other natural resources protected and sustainably utilised; thereby contributing to the “ <i>Global environmental concerns and commitments integrated in national development planning and policies</i> ”, which is the higher-level outcome stipulated in UNDP's Strategic Results Framework (SRF).		
Outcome indicators	Reducing levels of siltation into the lake resulting from improved management of the Lake's catchments through sustainable use of agricultural and forest resources.		
Applicable MYFF Line (in UNDP)	National strategies for sustainable development for integrating of economic, social and environmental issues adopted		
Partnership strategy	UNDP/GEF supported project will forge strategic linkages with joint or parallel interventions in the lake's basin supported by AfDB (for water infrastructure, fisheries and other local development initiatives); DCI (for social services including HIV-AIDS and water supply), WEF (community infrastructure and micro-finance and IGAs); FAO (technical support for fisheries research), NORAD (for district development planning) and IUCN (technical support for monitoring and evaluation consolidated at sub-regional level). The DDCC is expected to play a strategic role in enhancing these linkages through regular coordination meetings for key development partners in the basin.		
Project title	Lake Tanganyika Integrated Management Programme – Zambia Component (Catchment management through sedimentation control)		
Project Award ID	To be allocated when the project is approved		
Intended outputs	Output targets 2008 - 2011	Indicative activities	Responsible party
1 Sustainable natural resource use practices established /adopted	(i) At least 50% of households in target areas practicing improved, erosion-reducing, land use practices by year 3 and 80% by year 4; (ii) 50% of the population engaging in improved practices by year 3 and 80% by year 4; (iii) Rate of discharge into the Lake reduced by 50% in year 4.	1.1 On-farm demonstrations and training on mitigation measures for land degradation and sedimentation as well as measures for sustainable low input agriculture.	PIU thru Agric Officer with relevant line ministry staff
		1.3 Communities training in sustainable forest management systems, including controlled early burning, formulation of by-laws and promotion of community-based law enforcement mechanisms.	PIU thru the Agro-Forestry and Conservation Officer with relevant line ministry staff
		1.4 On site demonstrations and communities training in woodlots production at farm level.	PIU thru the Agro-Forestry and Conservation Officer with relevant line ministry staff
		1.5 Communities and community resource rangers training in forest management using selected forest supply areas through a Joint Forest Management (JFM) framework	
		1.6 Establishment and implementation of water quality monitoring and reporting system	PIU thru short-term assignments to MEWD and ECZ staff

2. Alternative Income Generating Activities (IGA) researched, piloted and adopted.	(a) 30 percentage rise in household income arising from alternative IGAs.	2.1 Establishment of the IGA start-up revolving fund with \$200,000 under the Lake Tanganyika Catchment Conservation Committee (CCC) of the Mpulungu DDCC) that could possibly be linked with the one to be established under the AfDB for the fisheries component.	PIU thru the Revolving Fund Administration Officer with relevant line ministry staff
		2.2 Communities training in value-adding processing such as grain milling, fruit processing, cassava chipping, sugarcane juice extraction and oil expelling. All this without damaging the environment	PIU thru the Revolving Fund Administration Officer with relevant line ministry staff
		2.3 Establishment of community-based commercial woodlots	PIU thru the Revolving Fund Administration Officer with relevant line ministry staff
		2.4 Communities training in bee-keeping and product development.	PIU thru the Revolving Fund Administration Officer with relevant line ministry staff
		2.5 Expansion and development of processing and trading of non-traditional forest products.	PIU thru the Revolving Fund Administration Officer with relevant line ministry staff
		2.6 Communities training in improved small scale irrigation.	PIU thru the Agric Officer
		2.7 Communities training in business management.	PIU thru the Revolving Fund Administration Officer with relevant line ministry staff
3 Awareness of stakeholders of the importance of sustainable natural resource management raised.	Awareness programmes undertaken in all project sites on sustainable natural resource management	3.1 Awareness programmes for (Government/Community) co-management of natural resources.	PIU thru the Agro-Forestry and Conservation Officer with relevant line ministry staff
		3.2 Leadership skills training undertaken for community leaders to help promote natural resource management campaigns.	PIU thru the Agro-Forestry and Conservation Officer with relevant line ministry staff
4	Community Conservation Committees established and operationalised in all	4.1. Capacity strengthened for local NRM institutions in target areas.	PIU thru short-term assignment of MLGH staff

Capacity of local governance structures for sustainable natural resource management enhanced	project sites.	4.2 Development of by-laws and enforcement mechanisms for the target areas.	PIU thru short-term assignment to MLGH staff
		4.3 Advocacy for political support of community-based natural resource management	PIU thru short-term assignment to MLGH staff
5 Project efficiently and effectively managed, monitored and evaluated.	Suitable Project staff in place for efficient and effective management of the project.	5.1 Project staff recruitment	MTENR with the support of the NBSC/NPSC and the LTCC
		5.2 Establishment of management information system (MIS) for project implementation/monitoring.	PIU thru short-term experts
		5.3 Site-specific baseline surveys to establish data and information for monitoring and evaluation activities.	PIU thru short-term experts.
		5.4 Annual Work plans and Budgets (AWPB).	PIU staff in consultation with the DDCC
		5.5 Mid-term review and end of project evaluation.	MTENR thru short-term experts

Note: Professional officers under the PIU will be recruited to perform specific roles to achieve respective outputs of the project while working closely with relevant line staff and civil society organizations to facilitate and support the mandated institutions to perform better through improved capacity.

Annex 2: Provisional Multi-year Work Plan

Outputs	Activities	Lead Entity	2008		2009		2010		2011	
			I	II	I	II	I	II	I	II
			1 Project efficiently and effectively managed, monitored and evaluated	1.1 Establish new PSC or assign the existing NBSC to support MTENR in monitoring/overseeing project implementation, including sub-committees as required.	MTENR	x				
	1.2 Establish PIU (office accommodation, standard operating procedures etc) and recruit PIU staff.	MTENR, NBSC	x							
	1.3 Establish new or assign one of the existing sub-national Project Steering Committees under the Mpulungu DDCC for periodic reviews of the project progress at district level .	NPSC, DDCC	x							
	1.4 Prepare Project Inception Report and have an Inception Workshop conducted.	PIU	x							
	1.5 Conduct PIU staff orientation w/shop on the project management / implementation roles	MTENR, NPSC	x	x						
	1.6 Procure computer/office equipment and vehicles	MTENR and PIU	x	x						
	1.7 Hold annual and quarterly progress review meetings for national and district level steering committees	MTENR and PIU	x	x	x	x	x	x	x	x
	1.9 Conduct project monitoring visits	PIU	x	x	x	x	x	x	x	x
	1.8 Prepare & implement Annual Work Plans and Budgets (AWPB).	PIU	x	x	x	x	x	x	x	x
	1.9 Develop a management information system for the project.	PIU with short term experts	x							
	1.10 Undertake site-specific baseline surveys to establish data and information for monitoring and evaluation activities.	PIU with short term experts	x							
	1.12 Plan and conduct a Mid-Term Review and Terminal Evaluation of the project	PIU with short term experts						x		

2 Alternative income generating activities (IGAs) developed	2.1 Establish and manage a sustainable IGA start-up revolving fund	PIU with short term experts		x	x	x	x	x	x	x
	2.2 Train and support communities in value-adding processing	PIU with short term experts		x		x		x		x
	2.3 Establishment of community-based commercial woodlots and train communities in woodlot management	PIU with short term experts	x		x		x		x	
	2.4 Promote beekeeping and support product processing	PIU with short term experts		x		x		x		x
	2.5 Develop and expand NTFP processing and trading developed and expanded	PIU with short term experts	x		x		x		x	
	2.6 Establish sustainable small-scale irrigation systems	PIU with short term experts		x		x		x		x
	2.7 Train communities on business management	PIU with short term experts	x		x		x		x	
3 Awareness of stakeholders on the importance of sustainable natural resource management raised	3.1 Undertake awareness programmes for co-management of natural resources	PIU with short term experts		x		x		x		x
	3.2 Undertake leadership training for community leaders undertaken to help promote natural resource management campaigns in the communities.	PIU with short term experts	x		x		x		x	
	3.3 Train communities on environmental management.	PIU with short term experts		x		x		x		x

4 Capacity of local governance structures for sustainable natural resource management enhanced	4.1 Train local NRM institutions on sustainable natural resources management.	PIU with short term experts	x		x		x		x	
	4.2 Development and dissemination of enforcement mechanisms through training workshops	PIU with short term experts		x		x		x		x
	4.3 Undertake advocacy campaigns for political support of community-based natural resource management.	PIU with short term experts	x		x		x		x	
	4.4 Undertake gender awareness campaigns			x		x		x		x
	4.5 Undertake HIV/AIDS awareness campaigns									
5 Sustainable natural resource use practices established	5.1 Establish demonstrations on mitigation measures against land degradation.	PIU with short term experts	x		x		x		x	
	5.2 Establish demonstrations on sustainable low input agriculture.	PIU with short term experts		x		x		x		x
	5.3 Develop and disseminate sustainable forest management systems for adoption	PIU with short term experts	x		x		x		x	
	5.4 Establish water quality monitoring and reporting systems for the catchment areas of the Lake.	PIU with short term experts	x	x	x	x	x	x	x	x

Annex 3 (for Section III in text): TOTAL BUDGET AND ANNUAL WORKPLAN

Award ID: 00042111

Award Title: PIMS1941 – IW- FSP- Lake Tanganyika – Zambia Component

Project ID: 00048202

Project Title: Lake Tanganyika Integrated Management Programme – Zambia Component

Implementing Partner/Executing Agency: Ministry of Tourism, Environment and Natural Resources

Activities / Outcomes	Resp. Party	Fund Code	Donor Code	Budget Code	Budget description	Year 1	Year 2	Year 3	Year 4	TOTAL	Budget Note
Outcome 1: Reducing levels of siltation into the lake resulting from improved management of the Lake's catchments through sustainable use of agricultural and forest resources	Govt of Zambia	62000	GEF	71200	International Consultant	5,000	5,000	5,000	5,000	20,000	1
				71300	Local Consultant	40,000	60,000	68,000	40,000	208,000	2
				71400	Locally recruited PMU staff	85,000	85,000	85,000	85,000	340,000	3
				71600	Travel	31,000	33,000	33,000	33,000	130,000	4
				72800	IT Equipment	6,000	0	0	0	6,000	5
				72100	Contractual Services Companies	110,000	120,000	110,000	100,000	440,000	6
					Learning	35,000	50,000	50,000	45,000	180,000	7
				72200	Equipment and Furniture	27,000	0	0	0	27,000	8
				72300	Materials & Goods	0	200,000	300,000	50,000	550,000	9
				72400	Communication and AV Equipment	4,000	0	0	0	4,000	10
				72500	Supplies	3,000	5,000	5,000	5,000	18,000	11
				72600	Grants	0	70,000	70,000	60,000	200,000	12
				73400	Rental & Maint of Other Equip	20,000	15,000	15,000	15,000	65,000	13
				74200	AV & Printing Production Costs	7,000	10,000	11,000	12,000	40,000	14
74500	Miscellaneous	2,000	2,000	2,000	2,000	8,000					
				Sub-total OUTCOME 1					2,236,000		
Project Management	Govt of Zambia	62000	GEF	71200	International Consultant	0	13,000	0	13,000	26,000	15
				71400	Locally recruited PMU staff	15,000	15,000	15,000	15,000	60,000	16
				72200	Equipment and Furniture	6,000	0	0	0	6,000	17
				72500	Supplies	2,000	2,000	2,000	2,000	8,000	18
				72800	IT Equipment	6,000	0	0	0	6,000	19
				73100	Rental&Maintenance-Premises	16,000	16,000	16,000	16,000	64,000	20
				73200	Premises Alterations	10,000	0	0	0	10,000	21

				74100	Professional Services	5,000	5,000	5,000	5,000	20,000	22
				74500	Miscellaneous	1,000	1,000	1,000	1,000	4,000	
					Sub-total Project Management					204,000	
					TOTAL GEF	436,000	707,000	793,000	504,000	2,440,000	

**Budget
Note:**

- 1 Adaptation Specialist
- 2 See the activity note for details
- 3 PMU inputs (85%)
- 4 Travel to & from LUSAKA (Plus 1,200 km) -Workshops & Consultations; also includes National PSC and PM travel to Regional PSC
- 5 Laptop, printer and other necessary computer related accessories for Project Manager
- 6 Consulting firms for outputs 1&2 & workshops venue hiring
- 7 consultation, training, awareness raising workshops
- 8 Project Car
- 9 Tree seedlings, etc.
- 10 TV, VCR/DVD, ppt projector for awareness raising
- 11 papers, etc for workshop
- 12 For Income Generating Activities Start-up revolving fund (Output 2)
- 13 Car maintenance (Petrol, insurance, radio subscription, check-up, etc.)
- 14 for dissemination materials
- 15 for MTE and TE
- 16 PMU inputs (15%)
- 17 Office machinery
- 18 papers, etc for project management
- 19 computers for Admin and Finance Assistants
- 20 Utilities, Security, etc. Rent is covered by the Govt.
- 21 Office Renovation
- 22 for NEX audits

Annex 4 (a): Provisional Terms of Reference for the National Project Steering Committee

A National Project Steering Committee (NPSC), as a **subcommittee of the NBSC**, will guide the implementation of the **Zambian component of the Lake Tanganyika Integrated Management Project**. The NPSC chairperson will be appointed by the Ministry of Tourism, Environment and Natural Resources. He/she will be an independent, senior and technically qualified individual.

The NPSC will be responsible to the Ministry of Tourism, Environment and Natural Resources. Its specific functions shall include the following:

- Assist the MTENR in identifying suitably qualified persons to appoint to the position of National Coordinator and other Project Staff in the PIU.
- Review periodically the progress of the project and provide timely feedback to help keep the project on course, including review and approval of all major outputs;
- Review the PIU's progress reports that have to be sent to the Regional Office in Bujumbura as an input in the consolidated Regional Progress Report for the 4 riparian countries as one group.
- Facilitate mobilisation of resources, especially from cooperating national and international partners.

Annex 4 (b): Provisional Terms of Reference for the Project Manager (60 wm)

The Project Manager (**PM**) will serve as head of the PIU. In this capacity, the PM will be responsible for the overall implementation of the project activities under the direction of the relevant subcommittee of the DDCC in Mpulungu through the office of the District Commissioner. On a day-to-day basis, the PM shall be supervised by the Office of the District Commissioner who is the chairman of the DDCC and head of government at district level.

A Key responsibilities of the PM will include:

- (i) Managing and coordinating day-to-day project activities, including the coordination of inputs from the project's technical officers and short-term experts.
- (ii) Producing all required Quarterly and Annual Progress and Financial Reports as well as quarterly and annual work plans / budgets, the Project Inception Report and the Project Terminal Report. This task includes preparation and submission of progress reports to the Regional Project HQ in Bujumbura through the MTENR as an input into the Regional Report, using such formats as shall be prescribed from time to time by the Regional Office.
- (iii) Preparing reports on the Project Steering Committee meetings, and acting as Secretariat for the Project Steering Committee activities under the direction of the Project Steering Committee Chairperson.
- (iv) Following up on all project issues with the line government ministries and NGOs related to the project.
- (v) Facilitating inter-country linkage and collaboration among the riparian PIUs;
- (vi) Following up on issues raised by the Project Steering Committee.

(B) In addition, the PM will perform the following technical functions:

He/she will initiate and facilitate the planning, implementation and management of environmental protection and conservation activities of the project across the project's key sectors in the Lake Basin. Working closely with relevant line ministry staff and relevant members of the PIU, the PM will have the following specific responsibilities:

Tasks

- (i) Study and analyse the different environmental parameters prevailing in Lake Tanganyika Basin such as watershed management requirements towards the preparation of the of an environmental and social management plan;
- (ii) Establish and implement water quality monitoring and reporting system in the catchment area in consultation with relevant line ministries, departments or agencies;

- (iii) Establish and implement sustainable mechanisms for co-management of natural resources (land use, water, forestry, etc) for communities in the catchment area;
- (iv) Conduct a training needs assessment, formulate and implement a training programme that might cover the following thematic areas as necessary: (a) community-based commercial woodlots, (b) capacity development for local NRM institutions, (c) advocacy for political support for community-based natural resource management, (d) Conduct training in sustainable forest management systems, including controlled early burning, formulation of by-laws and promotion of community-based law enforcement mechanisms for communities, (e) woodlots production at farm level, (f) forest management using selected forest supply areas through a Joint Forest Management (JFM) framework;
- (v) Develop by -laws and enforcement mechanisms for the communities;
- (vi) Ensure conservation, sustainable use and equitable distribution of benefits derived from management of forestry and other biological resources in the Lake Tanganyika basin;
- (vii) Enhance the capacity of the staff at district level and local communities in activities that will protect the Lake Tanganyika biodiversity;
- (viii) Develop and implement measures to reduce the pollution loads in the catchments;
- (ix) Follow up on environmental and social impact mitigation measures;
- (x) Assist communities in establishment of community forests after the training;
- (xi) Carry out information and sensitisation programmes on good environmental practices especially the control of various types of pollution and sedimentation;
- (xii) Establish environmental monitoring and evaluation systems;
- (xiii) Make periodic work plans and budgets, financial and technical reports

Qualifications

- Zambian national with fluency in English.
- A master's degree in areas relevant to environmental and development. Professional qualifications in agro-forestry/forestry will be preferred.
- Good knowledge of global and national environmental issues, especially those relating to catchment management;
- A minimum of 5 years of working experience in the area relevant to the project and demonstrating ability in managing the donor-supported projects.
- Good understanding of the environmental issues in the Lake Tanganyika Basin will be an added advantage;
- Demonstrating a good and strong leadership and coordination ability as well as teamwork spirit.

Duration: 12 months renewable annually over the duration of the project

Annex 4 (c): Provisional Terms of Reference for the Revolving Fund Administration Officer (24 wm)

Under the general guidance and supervision of the PM, the Revolving Fund Administration Officer (**RFAO**) will initiate and facilitate the planning, implementation and management of socio-economic activities of the project, including the management of the revolving fund scheme to be established under the project for communities in the target areas.

Working closely with relevant line ministry staff and relevant members of the PIU, the RFAO's key responsibilities will include the following:

- 1 Analyse the social and economic situation of the Lake Tanganyika Basin communities (economic activities, water use, demographic aspects, health, education, etc). This includes conducting site-specific baseline surveys to establish or validate the baseline information and data;
- 2 Identify alternative income-generating activities that will reduce the pressure on the Lake Tanganyika biodiversity. This includes an analysis of the micro-finance requirements of the population in all the key economic sectors (agriculture, fisheries, forestry, processing, trading, etc) of the Basin;
- 3 In close consultation and collaboration the Mpulungu DDCC, establish the IGA start-up revolving fund with \$200,000 under the project for micro-enterprises;
- 4 Conduct training programmes in (a) leadership training for community leaders, (b) business management for communities, including in value-adding processing such as grain milling, fruit processing, cassava chipping, sugarcane juice extraction and oil expelling;
- 5 Assess the marketing channels, demand and supply for fish, fish products post-harvest loss estimation, and means of its reduction,
- 6 Promote product development and value-adding processing of Non-traditional forest products including beekeeping.
- 7 Assess evaluate IGA proposals for technical feasibility and financial viability and recommendations for consideration under the project.
- 8 Monitor the implementation of IGA micro-projects to ensure recovery of micro-credits advanced and production of planned results for the micro-enterprises;
- 9 Learning from successful revolving funds in other projects and localities, prepare and implement a sustainable exit strategy for UNDP's support to the Revolving Fund under this project;
- 10 Maintain systematic records of the operations of the revolving fund.

- 11 Make periodic work plans and budgets as well as financial and technical reports.

Qualifications

- Zambian national with fluency in English.
- A master's degree in sociology/rural economics.
- A minimum of 5 years of post-qualification experience in the sustainable rural micro-credit management in Zambia.
- Good understanding of the village/rural enterprises in riparian settings in Zambia generally and the project area in particular.
- Computer literacy with knowledge of at least MS Excel and MS word;
- Experience in implementation of donor-supported projects.

Duration: 12 months renewable annually over 24 months period.

Annex 4 (d): Provisional Terms of Reference for the Agricultural Officer (24 wm)

Under the general guidance and supervision of the Project Manager, the Agricultural Officer will initiate and facilitate the planning, implementation and management of agricultural activities of the project in the Lake Basin.

Working closely with relevant line ministry staff and relevant members of the PIU, the Agricultural Officer's key responsibilities will include the following:

- 1 Study the agricultural conditions prevailing in Lake Tanganyika Basin and make recommendations for sustainable approaches to sustainable agriculture in the basin that take into account environmental protection and natural resources conservation;
- 2 Carry out on-farm demonstrations and training on mitigation measures for land degradation;
- 3 Establish on-farm demonstrations on sustainable low input agriculture in the catchment area;
- 4 Conduct training on improved small scale irrigation schemes for farmers in the project area;
- 5 Enhance the capacity of the staff at district level and local communities for sustainable farming activities that also protect the Lake Tanganyika biodiversity
- 6 Devise and implement appropriate measures to significantly reduce soil erosion in the Lake Basin;
- 7 Carry out information and sensitisation programmes on good farming practices;
- 8 Establish agricultural monitoring and evaluation systems for agricultural activities;
- 9 Make periodic work plans and budgets, financial and technical reports

Qualifications

- Zambian national with fluency in English;
- A master's degree in any of the agricultural sciences (agronomy, animal husbandry, horticulture, etc);
- A minimum of 5 years of post-qualification experience in agriculture in Zambia;
- Good understanding of the agricultural development issues in small-scale farmer sector in Zambia and in the Lake Tanganyika Basin particularly;
- Knowledge of water management / fishery issues will be an advantage;
- Computer literacy with knowledge of at least MS Excel and MS word;
- Experience in implementation of donor-supported projects.

Duration: 12 months renewable annually over 24 months period.

Annex 4 (e): Provisional Terms of Reference for the Administration Assistant (60wm)

Under the overall guidance of the Project Manager (PM), the Administrative Assistant (AA) will ensure effective delivery of the project's outputs by efficiently managing the administrative aspects project implementation consistent with the objectives of the project and its annual work plans and budgets.

Specifically, the AA will:

- (a) Compile, analyze, summarize, record and maintain information on project activities and financial data;
- (b) Assist in the preparation of project progress reports (financial and technical);
- (c) Prepare background material for use in discussions and briefing sessions.
- (d) Assist in the preparation of required budget revisions as well as drafting requests for disbursements of funds under the project in consultation with the MTENR's Procurement and Supplies Unit.
- (e) Present information for audit of the project, and support the implementation of audit recommendations;
- (f) Monitor project activities by previewing a variety of records, including control plans, progress reports, project inputs, budgets and financial expenditures as well as undertake field visits to project sites.
- (g) Help prepare, update and maintain project publicity materials such as brochures
- (h) Assist in the organization of workshops, seminars, and round tables;
- (i) Maintain local project stores, office equipment and buildings associated with the project;
- (j) Handle all general administrative matters of the project;
- (k) Make arrangements for:
 - All project meetings and bookings of venues;
 - Accommodation and transportation of all meeting participants;
 - Payment of per diems, and other legitimate payments related to project through the Accounting and Procurement Officer
 - Documentation of all project meetings and other activities as directed by the Project Manager;
 - Distribution of project literature to all interested parties; and
 - Travel for all project staff.

Qualification

University Degree in Business or Public Administration, Economics, Political Sciences and Social Sciences, preferably with specialized certification in Accounting and Finance.

5 to 6 years of progressively responsible administrative work with development projects

Experience in the usage of computers and office software packages (MS Word, Excel, etc) and advanced knowledge of spreadsheet and database packages, experience in handling of web based management systems.

Duration

12 months renewable annually over 60 months period.

Annex 4 (f): Provisional Terms of Reference for the Accounting and Procurement Officer (36 wm)

Under the general guidance and supervision of the Project Manager, the Accounting and Procurement Officer will be in charge of the financial management and procurement for the project.

Specifically, the key responsibilities of the Accounting and Procurement Officer will include the following:

- 1 Maintaining the accounting records according to UNDP/GEF guidelines and procedures;
- 2 Being responsible for the day-to-day PIU operational expenditures;
- 3 Disbursing funds to support the operations of the project and contracted agencies;
- 4 Disbursing funds against approved annual work plans and budgets;
- 5 Arranging for audits contracted to independent auditors and submitting the audited accounts through the Project Manager to the Project Steering Committee, MTENR and Lake Tanganyika Authority;
- 6 Assisting in the preparation of required budget revisions as well as drafting requests for disbursements of funds under the project in consultation with the Project Manager and the MTENR;
- 7 Monitoring project activities by previewing a variety of records, including work plans, progress reports, project inputs/assets, budgets and financial expenditures;
- 8 Preparing financial reports for use in discussing and briefing sessions and submitting the same to the MTENR through the Project Manager;
- 9 Procuring equipment, and all purchases on behalf of the project;

Qualifications

- Zambian national with fluency in English;
- Degree in Accounts or Business Administration;
- A minimum of 3 years of post-qualification experience in accounting work, especially managing accounts of donor-supported projects;
- Computer literacy with knowledge of MS Excel, MS word and/or other relevant accounting software

Duration: 12 months renewable annually over 36 months period.

Annex 4(g): Provisional Terms of Reference for the Project Implementation Unit (PIU).

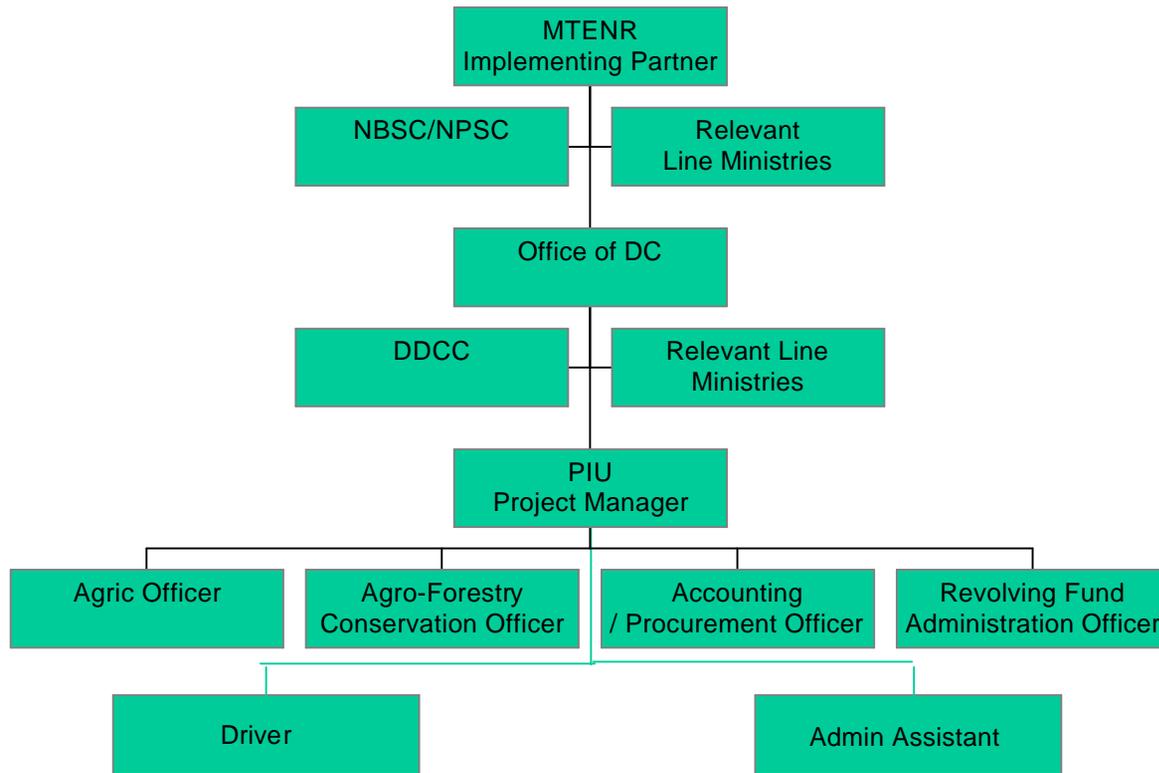
The PIU shall operate under the direct supervision of the DDCC/ LTCCC through the office of the District Commissioner as DDCC chairman and as head of government at the district level.

Specifically, the PIU shall perform the following functions:

1. Supporting the functions of the national project steering committee as required including serving as the secretariat of all project steering committee meetings;
2. Ensuring effective and efficient implementation of the Zambian component of the Lake Tanganyika Integrated Management Project;
3. Preparing an initial detailed work plan and budget, within the first month of operations, for approval of the national project steering committee;
4. Preparing quarterly work-plans and budgets as well as progress reports and submitting them to the DDCC and the national Project Steering Committee;
5. Developing a comprehensive monitoring and evaluation system complete with indicators.
6. Ensuring active participation of key national, provincial and district stakeholders in the project implementation;
7. Working closely with the national project steering committee to ensure that all planned activities are implemented on schedule and on budget.
8. Developing *modus operandi* and detailed work plans and for the national project steering committee;
9. Engaging suitably qualified consultants to undertake specific tasks in the implementation of the project in line with established UNDP and Zambian Government procurement procedures; the PIU will prepare clear, concise TORs for these consultants and supervise their work, ensuring the quality and timeliness of their outputs;
10. Supporting the national project steering committee in preparing and holding a national inception workshop, launching project with stakeholders;
11. Playing a lead role, or supporting national project steering committee in carrying out most of the major activities of the project related to the project as described in the Project Document and under the guidance of the national project steering committee.
12. Preparing progress reports and submitting them to the Regional Project HQ in Bujumbura as an input into the Regional Report. If a particular reporting format is prescribed by the Regional Office, the progress reporting by the PIU will have to comply accordingly.

Annex 5

Organisational Chart



Annex 6: Terms of reference for the DDCC

GOVERNMENT OF THE REPUBLIC OF ZAMBIA

**CABINET OFFICE CIRCULAR NO. 1 OF 1995
INSTITUTIONAL FRAMEWORK FOR PLANNING, CO-ORDINATING AND
MONITORING OF DEVELOPMENT IN DISTRICTS AND PROVINCES.**

SCHEDULE

A. DISTRICT DEVELOPMENT CO-ORDINATING COMMITTEE (DDCC)

The District Development Co-ordinating Committee will be a technical Advisory Committee and its overall aim will be to co-ordinate the implementation of District Development Programmes.

1. Functions of the DDCC

The functions of the DDCC are to:

- (a) Provide a forum for dialogue and co-ordination on development issues between the Local Authority, line Departments, Donors and NGOs in the District;
- (b) Receive project proposals from various development agencies in the District;
- (c) Recommend, on request, the commissioning of feasibility studies on projects relating to discretionary finance, e.g. constituency development funds;
- (d) Receive up-to date financial reports on capital projects relating to discretionary finance from the District Councils' finance departments;
- (e) Consolidate District draft plans for consideration and adoption by the Council;
- (f) Facilitate and co-ordinate the implementation of development plans at District levels;
- (g) Co-ordinate the provision of technical assistance, donor finance and national support to the district;
- (h) Co-ordinate implementation schedules for District plans;
- (i) Receive project implementation reports from members with up-to date information on expenditure, and to ensure that appropriate action is taken on these reports when necessary;
- (j) Monitor and co-ordinate sub-district community participatory planning activities and ensure that reports from these bodies reach the Councils;
- (k) Evaluate completed projects and review District development plans;
- (l) Prepare consolidated reports on implementation progress for the council with copies to PDCC and other relevant national institutions such as the Ministry of Local Government and Housing (MLGH);
- (m) Monitor progress of proposed action on resolutions.

2. Membership of the DDCC

Membership shall be as follows:-

- (a) Town Clerk or Council Secretary – Chairman;
- (b) Director of Planning or District Planning Officer – Secretary;
- (c) Director of Works/Engineering;
- (d) District Treasurer/Director of Finance;
- (e) District Works Department Officer;
- (f) District Roads Officer-in-Charge;
- (g) District Agricultural Officer;
- (h) District Health Inspector;
- (i) Health Board Representative;
- (j) Water Affairs, Officer-in-Charge;
- (k) District Fisheries Officer;
- (l) District Education Officer (representative of Education Board too);
- (m) District Natural Resources Officer;
- (n) District Forestry Officer;
- (o) District Social Development Officer;
- (p) Other relevant District Department Officers;
- (q) Donors/NGO representatives in the District;
- (r) PPU representative (ex-officio).

3. Meeting

The DDCC shall meet at least once per quarter. It may meet more regularly when plans are being made, or at other times as work demands.

4. Reporting

The DDCC shall report to the Council, through its Chairman, and to the PDCC.

5. Sub-Committees

The DDCC may set up Committees to undertake specific tasks on its behalf including the handling of special programmes.

6. Secretariat

The Council shall provide a secretariat to the DDCC.

7. Functions of the DDCC Secretariat

The functions of the Secretariat to the DDCC shall include:-

- (a) Liaison with all members of the DDCC and, as appropriate, with institutions at Provincial level, in regard to all planning and implementation matters;
- (b) Preparation and circulation of minutes of the DDCC Meetings;
- (c) In consultation with the Committee Chairman, determination of the Agenda for meetings of the DDCC and preparation of necessary papers for discussion or decision;
- (d) Ensure that reports and other documents from line Departments and Districts are received in time for proper analysis and circulation before DDCC meetings;
- (e) Advise the DDCC on policies and programmes with respect to District development;

- (f) Conducting any special studies required by the DDCC;
- (g) Arrange and monitor training for District staff and at Sub-District level, in planning and community participation techniques.

ANNEX 5

The Lake Tanganyika Integrated Management Project

Zambia Component

August 2004

SUMMARY

The Zambian GEF Intervention comes from a prioritisation of the SAP, in which the control of sediment inflows from the steep mountainous terrain bordering Lake Tanganyika in both Mpulungu and Kaputa Districts was seen as the most important area for support. The issues of over-fishing are addressed through co-finance from AfDB/FAO and other partners of the Integrated Programme.

Sediment inflows will be reduced through an increase in area of land brought under sustainable land use (agriculture and forest land-uses). Emphasis will be on institutional strengthening with support to community participation in both agriculture, in forestry and soil erosion prevention.

Best practice and innovation, as well as regional coordination and dissemination of lessons will be assured by linking to ICRAF's training and demonstration programmes as a regional activity.

Project Background / Context

I. Country Ownership

Eligibility

Zambia ratified the **Convention on Biological Diversity** (CBD) in 1993 and is eligible for technical assistance from UNDP/GEF. Zambia ratified the **Ramsar Convention** on Wetlands in 1991.

Country Driven-ness

Agreement, ratification and implementation of global conventions

Zambia developed a National Environmental Action Plan (NEAP) in 1994, which provides a strategy options for improving the quality of environment. Zambia developed a National Biodiversity Strategy and Action Plan (NBSAP) in 1999. The NBSAP outlined Zambia's vision, mission and guiding principles for the implementation of the Convention. This project, which aims to reduce erosion and sediment input into the Zambian waters of Lake Tanganyika, will contribute directly to the conservation of this globally important biodiversity hotspot and the sustainable use of biological resources, in line with Zambia's commitment to the CBD. Both the NBSAP and the NEAP stress the global and national value of Lake Tanganyika.

In 1991, Zambia ratified the Ramsar Convention an international treaty focusing on conservation of wetlands of international importance. As a follow-up to the ratification of the Convention, Zambia produced a National Wetland Status Report in 1994 that highlights the values, threats development and conservation issues of the Zambia's wetlands. A National Wetland Strategy and Action Plan was developed in 1999 This was followed by the development of a National Policy on Wetlands in 2001. This project aims to empower riparian communities in Zambia to plan and manage land and water resources in the Lake Tanganyika catchments.

Project integration with national sector development policy

The major policies that are relevant to the environment and biodiversity of Lake Tanganyika are the National Agricultural Policy (1998), the National Forestry Policy (1998), the National Water Policy (1994), the Wildlife Policy (1993) and the Land Policy (1995) which is currently under review.

The draft **National Agricultural Policy (1998)** is based on the Agricultural Sector Investment Programme, which was launched in 1996. One of the Agricultural Policy's objectives is to ensure that the existing agricultural resource base is maintained and improved upon. Enhanced agricultural productivity has been given highest priority under the Poverty Reduction Strategy Paper (PRSP) of 2002. This project will address soil erosion problems through promoting improved land-use and agricultural practices, as part of conserving downstream biodiversity, thus contributing to the realization of both the Agricultural Policy and the PRSP objectives.

Although Zambia does not have a specific fisheries policy, fisheries are currently located in the agriculture sector. A **Framework Fisheries Management Plan** has been developed as a result of the regional Lake Tanganyika cooperation process. The Plan constitutes a comprehensive framework for developing the sustainable and equitable management of fisheries in Lake Tanganyika waters of Zambia, with linkages to other partner countries.

A central objective of the **National Forestry Policy (1998)** relates to the sustainable management of forest ecosystems, including water flows and biodiversity conservation, based on scientific and indigenous technical knowledge. This Policy objective is to be achieved through the promotion of land use systems that ensure the protection of catchments, including headwaters, rivers and watershed resources. The Policy has been followed up by the Forest Act of 1999, which provides for the community management of natural resources. This project will contribute to the realization of this objective, and the Forestry Policy in general, through piloting innovative approaches to afforestation and terrestrial resource management.

The **National Water Policy (1994)** covers water resources management, water use, and water quality. The policy promotes the development of sustainable water resources with a view to facilitating adequate, equitable and good quality water for all users at acceptable cost as well as ensuring security of supply. The project will promote and strengthen the linkages between sustainable catchment management and water provision development.

The **Wildlife Policy (1993)** sets out how the conservation of biological diversity and the sustainable management of wildlife is to be achieved. The Policy has a significant linkage with the development and management of the water sector in relation to the conservation of water catchments and associated wildlife habitats. The sustainable catchment management outputs of the project will contribute towards the conservation of wildlife habitat out with the national protected areas network.

The **Land Policy (1995)** is currently under review, as the relative merits and utility of individual land titling are examined within a historical context of a country with strong communal land traditions.

The **Decentralisation Policy (2000)** now empowers decentralised levels of government – particularly districts – to take greater responsibility for civil service functions and provides for greater decision-making by the elected District Councils.

The **Poverty Reduction Strategy Paper (2002-4)** has environment as a cross-cutting issue. The PRSP is currently under revision and is expected to give greater emphasis to Environment - Poverty Linkages. The PRSP feeds into the Transitional National Development Plan (which will be followed by a more definitive plan later on).

Regional intergovernmental conventions

During the first phase of the UNDP/GEF intervention on Lake Tanganyika (UNDP/GEF/RAF/92/G32), and the recent PDF B process for this second phase, legal experts and representatives from the four countries met to negotiate the text for the draft '**Convention on the Sustainable Management of Lake Tanganyika**'. The Convention was signed on 12th June 2003, and is now undergoing ratification. The objective of the Convention is to ensure the protection and conservation of the biological diversity and sustainable use of the natural resources of Lake Tanganyika and its environment by the contracting states.

II. Environmental Context

Lake Tanganyika contains amongst the greatest biodiversity of any lake in the world, with more than 2,000 species of fish, invertebrates and plants that have been recorded in the lake basin, of which over 500 are endemic. More detailed information about the richness of Lake

Tanganyika in terms of biodiversity and other values is given to the Strategic Action Program document and in the Regional Component of this Project Brief.

The Zambian zone of the Lake is biodiverse and rich in endemic fish and mollusc species. For example, 37 percent of all fish species known to inhabit Lake Tanganyika were identified in the littoral lake zone of Nsumbu National Park that stretches for 80 km. The fourteen mollusc species identified in the Park represent 20% of the total number that have been recorded in Lake Tanganyika. All the 14 species are endemic to the Lake. The Zambian littoral zone and river mouths and associated wetlands provide important breeding grounds for economically important fish species. Nsumbu National Park provides considerable protection to lake biodiversity, but its aquatic habitats are under threat by increased levels of sedimentation. Outside the park fish resources are depleted by over-fishing and by deleterious fishing methods.

Whilst there are no urban settlements of the size of Bujumbura or Kigoma on the Zambian shores, Mpulungu is a rapidly growing township, with some secondary industries, and so waste-water treatment and point pollution are potential issues of concern².

III. Socio-economic, Institutional and Policy Context

Socio-economic Context

Lake Tanganyika has substantial and on-going livelihoods value to lakeshore communities. The lake is a source of fish for consumption and sale, it provides key transport and communication links and is a source of water for industrial and agricultural development as well as for domestic use. Several million people live in the Lake Tanganyika basin and the population continues to grow despite a legacy of prolonged and tragic ethnic conflict in Burundi and the Democratic Republic of Congo (DRC). About 300,000 people live around the Zambian part of the Lake, the majority of whom rely on small-scale agriculture, agricultural processing and fisheries for their livelihoods.

The main socio-economic constraint to ecosystem integrity and human well being in the Tanganyika basin is **poverty**. The main causes of poverty in the basin include:

- Limited choice of livelihood options and over-dependence on agriculture and fishing
- Inadequate access to land and capital, and limited access to credit by the poor
- Inadequate access to markets to sell/buy goods and services
- Shortage of labour and skills for productive enterprise
- Destruction of natural resources, leading to degradation and reduced productivity of resource base
- Lack of participation by the poor in the design of development programmes

Institutional and Policy Context

Past under-achievement in the conservation and sustainable utilization of natural resources in Zambia can be largely attributed to policies and accompanying institutional arrangements in the natural resource and other sectors that indirectly impact on biodiversity. While new policies and initiatives have begun to address the failures of previous policies, their legacy continues to heavily impact on current resource management regimes. The most important weaknesses in these institutional arrangements areas follows:

- At the community level, local institutions (e.g. traditional authorities) and government departments operate in a divergent and un-coordinated manner in natural resource

² Waste-water treatment for Mpulungu remains a priority under SAP, it is possible that other donor interventions may be leveraged by the Programme Partnership during this project lifetime.

management in general. Government imposed systems of resource management are frequently at odds with traditional practices of resource access and control. This situation has largely arisen as a result of government policies and regulations that have excluded community involvement and interests in the management of natural resources. This process has eroded traditional norms and rules that have modulated resource use.

- Natural resource management has generally tended to be carried out through a sectoral approach. For example, the fisheries department concentrates on fish conservation and utilization without involving other sectors which impact on the fish and its Lake habitat such as water, agriculture and forestry. It is now recognized that the application of a cross-sectoral approach to natural resource conservation and catchment management in particular is needed.
- Natural resource policy formulation has tended to be government-driven to the exclusion of intended beneficiaries, particularly local communities. Past policy, while addressing national interests, has often failed to take into account important local level economic and socio-cultural parameters resulting in the development of inequitable and under-achieving natural resource management institutions and practices.
- Legislation on natural resource management has failed to include tangible incentives for people who depend and impact on natural resources. The tendency has been the enactment of legislation entailing punitive disincentives for local resource users. Furthermore, the larger share of revenue (in taxes and/or levies) accrued from the natural resource sector has been collected by the central treasury, leaving no tangible incentives or sustainable system of funding for communities to conserve and sustainably utilize their resources.

Recent developments in the revision of Zambian natural resource management policies and accompanying institutional arrangements have made substantial headway in the sector's reform and its democratisation. Policy now recognizes the critical importance of community participation as well as the significance of developing viable benefit and cost sharing regimes among all stakeholders. A unique opportunity for developing and demonstrating transformed catchment management systems for the Lake is now possible, through the planned devolution of resource control to local lacustrine communities.

Baseline Situation: Threats, Root Causes and Activity

IV. Threats

The biodiversity of Lake Tanganyika faces major threats. With regard to the Zambian part of the Lake, over-fishing and damaging fishing methodologies, high rates of sedimentation into the Lake and its inflowing rivers, and growing pollution concerns were documented in detail in the Trans Boundary Diagnostic Analysis (TBDA), and were identified as major threats to the Lake's biodiversity. The focus of this project phase is controlling sedimentation, which was considered as the priority concern, by stakeholders as it causes deterioration in water quality of inflowing rivers and the Lake itself. Co-Finance Partners will address fishing issues (AfDB).

Local resource managers view deforestation, which occurs in many of the catchments, and unsustainable agricultural practices as the main contributors to sedimentation. The main

causes of deforestation are woodland clearing for agriculture and demands for fuelwood for domestic use, fish smoking and tobacco curing, poles for house construction and transportation of fish. Poor agricultural practices include river-bank cultivation, steep-slope cultivation and lack of manuring and mulch inputs.

The sediment deposited into the Lake destroys the habitats of fish and other aquatic species. In aquatic environments, sediment impairs the dissolved oxygen balance in the water and obscures light needed for primary production, both of which are detrimental to aquatic life. In addition, heavier sediment particles blanket fish spawning areas and cover food supplies for many species.

V. Root causes

The threats impacting on Lake Tanganyika are the product of a complex and inter-acting range of issues that can be usefully categorised thus:

- **Weak local natural resource management and tenure institutions** – natural resource management has long been the prerogative of central and district government without appropriate, popular and effective participation of local communities and resource-users. With a legacy of chronic under-resourcing in the natural resource sector, the capacity of government institutions and the effectiveness of their programmes have remained weak, leading to *de facto* open resource use situations. *De facto* open resource use situations have also occurred as resource use and tenure rights have remained contested and local communities continue to perceive resource management and law enforcement responsibilities as lying heavily with the state.
- **Poor governance and accountability** – reflective of a complex set of development and societal issues, poor governance and accountability have led to ineffective natural resource management, unsustainable resource use practices and have frequently compromised law enforcement.
- **Lack of regional cooperation** – Lake Tanganyika is a trans-boundary resource and natural resource management issues – particularly fishing – have, until recently, not been managed in an integrated manner between the four nations. This has resulted in the imminent prospect of the important pelagic fishery collapsing, with substantial implications for fisherfolk's dependency on littoral fisheries already showing signs of depletion. Other issues such as lake pollution and sedimentation are usually more localised but require a regionally coordinated effort to effect abatement and prevention measures.
- **Insufficient local and national institutional liaison** – catchment natural resource management is ideally a multi-sectoral undertaking involving water, agriculture, fisheries, forest, wildlife, land (tenure) and mining sectors. Each usually has its own district department and these departments may fall under entirely different ministries at national level. Creating and maintaining sufficient liaison and linkages between all these institutions is not easy and often receives inadequate attention. To date, insufficient coordination between all these sectors has led to disjointed and sometimes contradictory policies and programmes, resulting in poor catchment management. And underlying these institutional root-causes are the twin problems of:
 - √ **A growing human population** - in the Lake Tanganyika basin has led to increasing pressure on the resource base. While growing human populations may not necessarily lead to deleterious outcomes for the integrity of ecosystems and biodiversity, a range of complex factors, including those presented below, have

resulted in insufficient incentives for and the inability of people to successfully manage their relationship with the environment in an ecologically sustainable way.

- √ **Poverty** - is widespread in communities living around the lake, and heavily frames people's fishery and land (forest and soil) resource use rationales – which often maximise short-term benefits to the detriment of the natural resource-base. People farming the steep slopes of the lake's shores are amongst the poorest in local society and therefore are unable, for a variety of reasons, to invest sufficiently in sustainable farming and resource use practices. Underlying reasons include seasonal farm labour shortages, insufficient access to affordable credit, insecure land tenure, and a lack of knowledge about sustainable farming practices in a contemporary context.

VI. On-going Baseline Activities

Conservation Activity

Within the Zambian Lake Tanganyika catchment there are several natural resource protected areas, ranging from the relatively large Nsumbu National Park, to a number of smaller forest reserves and local reserves, and game management areas. Management of these areas is not very effective³, due to weak mandated agencies and little real participation from adjacent communities.

Natural resource management in Zambia is however starting a reform process following a set of new natural resource policies that were developed in the 1990s. As part of this process, a number of community and local level committees have been developed for managing particular resources – such as wildlife and fisheries. For example, there currently exist Chiefdom-based committees such as the Community Resource Boards under Zambia Wildlife Authority (ZAWA) and the Stratum Committees under the Fisheries Department. These committees need to be linked with Village Conservation Development Committees (VCDCs) where they do not already exist, and Area Conservation Development Committees (ACDCs) as appropriate – see section 3.5.1 However, other ongoing natural resource management developments have been less successful. Recent attempts by the government to re-enforce control in gazetted forests have consisted of developing laws and regulations including charges for extracting wood from the open forests. This approach has not been successful due to the poor law enforcement capacity of the Forestry Department and insufficient support and participation from local communities. The extension services are not strong.

Land-Use, Agriculture and Livelihoods Activity

Mpulungu and Kaputa Districts are a mixed farming area, where tsetse fly has traditionally prevented cattle keeping. The Districts rank at an intermediate level in national poverty indices. Population densities are medium and only rising slowly, in part due to HIV-AIDS. A key issue is that both districts have few livelihood options outside fishing and subsistence agriculture. Lack of livelihood options has led to over-fishing, and to illegal hunting in National Parks and Game Management Areas.

The topography is one of relatively steep hillsides dissected by several streams and rivers, rising from the lake at 900m asl. Slopes are covered with miombo (*Brachystegia*) woodland, with a fire prone tall grass ground layer. Main crops are beans (much exported to Lusaka and the copper-belt), sweet-potatoes and cassava. The area is not a major maize producer. Poor agricultural practices are increasingly common, in part due to insufficient land tenure security

³ A new GEF-UNDP Project to support the wildlife PA network in Zambia has just been approved.

and few incentives for soil conservation practices, rather than high human densities and land shortage.

Districts have functional District Officers for agriculture, forestry and fisheries, as well as for community development. There is a regional Agricultural Research Centre at Misamba, Kasama. In addition, the Ministry of Agriculture Extension Officer maintains extension staff at 'camp level' (with a camp covering two or more villages).

Districts maintain District Development Coordination Committees (DDCCs). Traditional leadership is still strong (although waning) and constitutes a competing local power base to council/civil-service governance, leading to conflicts of interest. The districts are further administrated through ward, section and village levels. Villages do not have formal village governments, but instead traditional chiefs/headmen. Villagers have a series of Committees (e.g. the Village Forestry and Natural Resources Committee), but it is currently considered that there are too many committees at this level.

Communities manage forest resources on community and state-land with guidance from Forestry. Northern Province is not included in the Provincial Forest Action Plans, and the CBNRM programmes are not active in these two northern districts. Whilst the Forest Act provides for CBNRM, requisite capacity has yet to be developed, appropriate frameworks and guidance have yet to be put in place.

On-going Support Programmes – The Baseline

There is currently an aid disparity in Zambia, with distant poor-access districts receiving proportionally less support. Northern Province and the two focal districts do not have a strong NGO presence – either international or national NGOs. Refugee camps in adjacent districts are supported by CARE/World-Vision. Major donors in the two districts have been NORAD (for district development), the AfDB for water infrastructure, and Irish Aid for social services (HIV-AIDS and water).

The Economic Expansion of Outlying Areas project grew into the present Agriculture Support Programme (ASP), (SIDA funded). ASP consolidates several earlier SIDA soil, agriculture conservation programmes. ASP is active in 4 Provinces and 20 districts. Whilst Northern Province is included, neither Mpulungu nor Kaputa Districts are included. Lessons earned can be gained from other Northern districts and applied in the project areas. This ASP is different from the WB funded national level Agriculture Sector Investment Programme (ASIP) that is coming to an end.

UNDP has just approved a micro-finance project on a pilot basis. This involves collaboration with the Graminee Bank Trust and United Nations Volunteers (UNV). The project is being piloted in Lusaka Province – and Mpulungu-Kaputa would be an appropriate area to which to expand. Also, the World Bank funded Zambia Small Investment Fund (ZAMBELE) has well developed micro-finance expertise. ZAMBELE has prepared District Profiles to help define best lending practice.

Conclusion

The biodiversity of Lake Tanganyika is threatened by rising levels of sedimentation into the lake caused by increasingly unsustainable land-use practices and a declining natural resource base. The root causes of these trends are weak natural resource governance, the lack of a multi-sectoral approach and coordination to wider ecosystem management, as well as insecure

and weak community-based resource tenure and management systems. This situation is further compounded by the effects of poverty and relatively low levels of external programme support at District level. Without the project's intervention, Mpulungu and Kaputa Districts will be unable to address the baseline situation as part of Zambia's commitment to conserving the bio-diversity of Lake Tanganyika.

Alternative Course of Action

VII. Introduction

The Alternative Course of Action is to develop interventions to fill the gaps left from the baseline scenario, so as to seek sustainable global and national benefits from rational use and management of the Lake Tanganyika resources. The environmental threat analysis identifies needs in improved fishing practice, in pollution control, and in catchment management. Co-finance deals with fisheries and pollution, as well as a suite of livelihood support options including infra-structural support, such as roads. The GEF intervention in Zambia addresses catchment management.

The catchment baseline consists of past experience with agricultural/soil projects designed to reduce erosion through soil conservation efforts, and projects aimed at afforestation. The past, largely top-down, sectoral, non-participatory processes did not lead to more than short-term isolated successes. This finding is true across much of sub-Saharan Africa, and is not a purely Zambian conclusion.

The innovation of this proposal is to seek cross-sectoral interventions that are rooted in participatory process, building new technologies onto traditional practice. "Ownership" of the project processes, of the land, and on the usufruct resources from the land, are key ingredients of the alternative. Success will come from a set of inputs including institutional support and capacities and coordinated linkages from upstream policy to downstream on-ground practices. In addition: awareness, demonstration, secure tenure, and a set of improved land-husbandry practices that are tested on-site with farmers, as well as alternative income generating practices to reduce pressures on land resources.

To ensure the use of best practice in catchment management, the project in Zambia (along with Tanzania and DRC catchment components) will use the International Centre for Agro-Forestry (ICRAF) in Nairobi to provide training, demonstration, learning experiences and their dissemination within the region.

The project will pilot these interventions in four sites within Mpulungu and Kaputa Districts, each within a different micro-catchment (Lunzua, Izi, Chisala and Lufuba Rivers). Further co-finance from AfDB will extend these pilot processes elsewhere in Mpulungu and Kaputa Districts.

The expected impacts of GEF support

Zambia is committed to fulfilling its international and regional commitments to biodiversity conservation and the sustainable management of the Zambian part of the Lake Tanganyika basin. GEF co-financing would enable Zambia to fast-track current implementation of recent natural resource policy reforms and to achieve milestone improvements in the management of Lake Tanganyika basin. The key impact resulting from GEF support of the project will be:

Tangible, growing and sustained reductions in sedimentation rates at project demonstration sites which lead to improved biodiversity habitats due to:

- Rising up-take by farmers of improved and sustainable agricultural practices that will be replicable throughout the Zambian portion of the Lake Tanganyika basin
- A decrease in deforestation resulting from more effective community-based natural resource management serving as a demonstrative model for the Lake catchment.
- The development and piloting of multi-sectoral institutions, linkages and relationships between community, local and national levels that successfully support participatory forms of natural resource management. The lessons and precedents set will enable similar initiatives in the Lake basin to be started, with potential for replication on a wider national scale.

VIII. Objective and Outcome

The **Immediate Objective** is as outlined in the Lake Tanganyika Strategic Action Plan (SAP) and is in line with the Transitional Development Plan (TDP) and the Poverty Reduction Strategy Paper (PRSP) of the Zambian Government and is defined as:

‘The protection and conservation of the biological diversity and the sustainable use of the natural resources of Lake Tanganyika’

The project’s single **Outcome** in Zambia is as follows:

‘Reduced levels of siltation into the lake resulting from improved management of the Lake’s catchments with sustainable use of agricultural and forest resources’.

IX. Outputs

To attain the outcome and hence contribute to the fulfilment of the overall objective, the stakeholders of this project have developed five tangible, specific outputs:

Table 1: Project Outputs

Output 1: Sustainable natural resource use practices established
Output 2: Sustainable alternative income generating activities developed
Output 3: Awareness of stakeholders of the importance of sustainable natural resource management raised
Output 4: Capacity of local governance structures for sustainable natural resource management enhanced
Output 5: Project efficiently and effectively managed to achieve outputs and immediate objective, with monitoring and evaluation process to show impact.

Output 1: Sustainable natural resource use practices established

The Strategic Action Programme (SAP) for the Sustainable Management of Lake Tanganyika calls for an integrated approach to addressing the sector-based and underlying causes and threats to biodiversity. In response to this call, this project will enhance the capacity of resource users and managers at catchment level to increase their ability to sustainably manage and utilize resources so that biodiversity is conserved and livelihoods are improved. To this effect the following are the proposed sub-outputs:

Sub-outputs/Activities

1.1 - Demonstrations on mitigation measures for land degradation established:

The Department of Agriculture will set up participatory on-farm demonstrations within the four priority areas to show-case technologies for abating land degradation, control soil erosion (contour ploughing, planting strips with vetiver grass), developing alternatives to slash and burn practices and planting fast growing agroforestry species to rejuvenate abandoned farmlands. These activities tend to take relatively long periods to show appreciable results and must therefore begin in the first year of project implementation so that their effects can be observed within the project's life. The technologies to be promoted must show tangible and reasonably immediate benefits for farmers. For example, the species used in contour bunds or improved fallows must be fast growing with good coppicing abilities that can be used or marketed for purposes such as fuelwood and poles. Misanfu Agricultural Research Centre based in Kasama (the provincial capital of Northern Province) has a menu of appropriate species available that the project will utilise.

1.2 - Demonstrations on sustainable low input agriculture established

Soils in the region are inherently low in fertility and, due to high rainfall, nutrient leaching (especially of bases) is very high. The pH tends to be very low with high levels of aluminium. Fertility management of these soils often requires the application of high levels of external inputs such as lime and inorganic fertilizers. These inputs are costly and not easily available in the area and it will be prudent for the project to promote low input systems. In this regard, organic / inorganic farming combinations will be promoted that reduce requirements for externally procured (inorganic) inputs. The Department of Agriculture will demonstrate green manure technologies, agroforestry techniques, minimum tillage and other adaptable conservation farming techniques. These demonstrations will be on farmer's fields and farmer managed.

1.3 - Sustainable forest management systems developed and adopted

The Forestry Department will work with communities to rehabilitate degraded forests establish woodlots and plantations, and encourage controlled early burning, formulating by-laws and promoting community-based law enforcement mechanisms. The approach for the establishment of these woodlots will need to take a business-orientated approach so as to offer profit incentives that encourage people to participate in this conservation effort. Three approaches are proposed:

1. Mobilization of villages to manage degraded village forests. In addition to allowing natural regeneration of degraded forests, selected areas would be additionally re-afforested with selected fast growing species – within the constraints and opportunities of local tree tenure practices.
2. Promotion and demonstration of individual farm woodlots.
3. Management of selected forest supply areas through a Joint Forest Management (JFM) framework between the Department of Forestry and user groups. The Forestry Department is currently piloting a JFM approach in line with the new Forestry Act and this project could complement these efforts in the context of the Lake catchment management. Part of the JFM development process will be the delivery of training for Community Resource Rangers. Communities will select Community Resource Rangers who will have the responsibility of resource monitoring (e.g. in a particular forest). Community Resource Rangers will require specialized training in basic resource management, resource-user relations, and law enforcement rights and obligations.

1.4 - Water quality monitoring and reporting system established and functional

The Department of Water Affairs will monitor water quality as an indicator of upstream activity. The measurements will include sediment levels, chemical pollution, ballast water monitoring and flow measurements. The resulting data analysis and reporting will provide important feedback for monitoring the impact of upstream human activity on the water quality and its likely impacts on aquatic life. (This feeds into the Regional M and E Process)

Output 2: Alternative Income Generating Activities (IGA) developed

The Lake Tanganyika catchment provides lacustrine communities with an array of goods and services upon which they depend for their livelihoods. In recognition of the legitimate need for people to sustainably exploit the catchment's natural resources to access economic benefits (goods and services), the project will develop and pilot alternative sustainable ways of utilising these resources. Project-mediated development of alternative income generating activities will reduce the pressure on, and demand for, fish as a source of income and livelihood.

Sub-outputs / Activities (This includes a range of possible options of potential IGA's)

2.1 - The IGA start-up revolving fund established

The success of IGAs will depend on the injection of initial start-up capital to finance interested and well-appraised entrepreneurs. It is therefore proposed that the project sets aside funds amounting to US\$ 200,000 to open a revolving fund to be managed by the Catchment Conservation Committee (CCC) under the supervision of the District Development Coordinating Committee (DDCC). The seed fund is relatively small but the scheme, if successful, is expected to grow from the interest paid by the borrowers and from bank interest. Entrepreneurs will then apply for funds through VDCs to start IGAs. The sub-output will link with AfDB co-finance, which is developing micro-credit for fisheries.

The **Project Implementation Unit** (PIU - see section 3.11.2) will coordinate the setting up of this fund drawing from the experiences of the ZAWA (Zambia Wildlife Authority) revolving fund and other successful revolving funds around the country like the Core Programme Village Revolving funds for IGAs under the IFAD (International Fund for Agricultural Development) funded by the Southern Province Household Food Security Programme.

The project will promote alternative income generating activities and enterprise development that reduce pressure on the natural resource base, rather than those that provide an additional economic activity, without promoting biodiversity conservation. ***IGAs will be community demand driven, facilitated through community training and awareness building, and contingent on project-mediated market assessments and cost benefit analyses.***

2.2 - Value-adding processing supported

The project will promote activities that increase the value of agricultural products as a means for increasing livelihood benefits. Potential initiatives will include promotion of appropriate processing technology such as hammer mills, small-scale fruit processing equipment, cassava chippers, sugarcane juice extractors and oil expellers. Care will need to be taken to ensure that successful value-adding initiatives do not in turn create an incentive for people to expand their enterprises to the extent that they harm natural forest conservation areas.

2.3 Community-based commercial woodlots established

The sale of poles (< 14cm butt diameter) is a lucrative business in Mpulungu. These are used to increase the carrying capacity of the trucks used for transporting fish to towns and to Congo. The business is a major contributor to deforestation but with woodlots planted with

fast growing tree species, this could be turned into a profitable yet sustainable income generating activity.

Appropriate land and tree tenure arrangements based on local norms and practices will be first examined to ensure the success of the initiative. Silvicultural management will involve first establishing tree nurseries by the Forestry Department that will later be handed over to community management when sufficient capacity has been built. Community members will purchase seedlings from the nurseries to raise their own woodlots. The Forest Department will then offer training in management of the woodlots. Upon the maturation of these woodlots, the Forest Department will then stop issuing licenses for trading in natural uncultivated forest poles. In addition to income generation the activities will relieve pressure on natural forests and help aid their regeneration.

2.4 - Bee-keeping promoted and product development supported

Beekeeping occurs at a very low scale in the lacustrine villages and most of the bee products are used locally. In other areas of Zambia commercial bee keeping is a vibrant business. The lakeshore, as an area where agrochemical usage has been low, would be particularly suited to the production of organic honey, which upon its certification, could be exported. The potential for export-orientated 'Fair Trade' bee products will be examined as part of project-mediated market investigations to maximise potential benefits for honey producers.

2.5 - NTFP processing and trading developed and expanded

The forests in the area are important sources of wild fruits, mushrooms and numerous types of valuable nuts. During the season most of these products are available in over-abundance and usually a high proportion goes to waste. Together with communities, the Departments of Agriculture and Forestry will explore preservation possibilities of these products for sale during the off-season when their availability is low and prices are higher.

2.6 - Small scale irrigation supported and improved

Currently communities are growing irrigated crops along the riverbanks, a practice which often leads to riverbank erosion and sedimentation. Through the Ministry of Agriculture and Cooperatives, the project will promote small-scale water lifting devices (e.g. treadle pumps) and community-based canal construction to move the gardens further away from the riverbanks where there will be more space and less impact on the riparian environment. Cultivation along riverbanks will be subsequently proscribed through by-laws. In addition, the potential for facilitating and promoting the cultivation of high value crops (paprika, green maize, green beans etc) under some organized contract farming or out growers scheme will be investigated.

2.7 - Capacity of communities in business management strengthened

Key to the success of the IGA initiative is the development of business skills and basic record keeping among participating local business people. A number of training manuals have been developed by previous or existing projects and could be adapted and used. The project will also consider the use of the ILO's 'Start and Improve Your Business' (SIYB) manuals and their subsequent adaptation to suit agro-based income generating activities (GTZ/ MACO-ASSP) as an appropriate starting point.

Output 3: Awareness of stakeholders of the importance of sustainable natural resource management raised

Wide scale buy-in to the principles of improved and participatory natural resource management and biodiversity conservation is critical to the sustainability of the project's outputs. All stakeholders must be aware of the important role each plays in this process. The communities and the private sector must know that they are key players in sustainable management and biodiversity conservation, and that the government not only accepts them as such, but also expects their active participation. Similarly, the line ministries must accept the communities and the private sector as equal partners in conservation and be willing to facilitate their effective participation in the process.

To promote this concept, the project will design and implement an awareness raising strategy aimed at informing, and therefore helping to empower, all stakeholders to actively and effectively participate in achieving improved resource management and biodiversity conservation. Awareness building will be achieved through meetings, seminars, study tours, panel discussions and locally available media.

To ensure effective and appropriate participation of all stakeholders in improved natural resource planning and management processes, both district staff and staff of respective line ministries will be trained in participatory resource planning rationale and techniques.

Sub-outputs / Activities

3.1 - Awareness programmes for co-management of natural resources enhanced

- Study tours for communities (exchange visits): VCDCs and resource-user groups as well as line ministry and district staff will be given opportunities to visit other communities developing participatory resource management in order to share ideas and experiences. Study tours are a well-known mechanism for building the confidence, commitment and capacity of local communities in participatory resource management development initiatives. They also provide an opportunity for communities to avoid the mistakes and problems encountered by other communities in developing participatory resource management.
- Joint training for stakeholders: An initial joint training for all stakeholders will be undertaken to ensure that all appreciate each others' roles and responsibilities.

3.2 - Leadership training for community leaders undertaken

- Elected local and traditional leaders will be invited to attend a workshop that introduces the project, its objectives and outputs as well as the underlying key processes of decentralisation of natural resource management and the creation of partnerships with civil society. Once they have begun to better understand the project's objectives and rationale, the councillors will be able to better represent their constituencies when they need to talk about or advocate community-based natural resource management issues.
- The leaders then will be invited to participate in leadership training so that they are better able to provide guidance and support for the VCDCs and ACDCs

3.3 – Community environmental management and awareness levels raised

The project will facilitate a youth environmental awareness programme on the premise that today's youth will be the future beneficiaries of the project's initiatives to conserve and sustainably utilise biodiversity. Training will target existing youth organizations such as

‘Chongololo’ clubs, young farmers clubs and youth skill training centres. In the event that these clubs do not exist in participating project communities, the project will facilitate the formation of conservation clubs by youth groups that will be linked to local VDCs and/or local schools. The project will work with youth and other interest groups to:

- Develop environmental education materials in local languages
- Facilitate the production of radio & TV programmes
- Encourage the development of drama for environmental education
- Carry out video shows and discussion groups in communities

Output 4: Capacity of local governance structures for sustainable natural resource management enhanced

Currently local communities and their committees have little control over external operatives (traders, transporters and refugees) who come into the catchments to extract natural resources. Reversing this situation will be key to helping empower communities to successfully manage their natural heritage and reduce sedimentation. In this regard, the systematic improvement and rationalization of the laws, policies, and institutions governing the use of communities’ natural resources will be necessary. The project will thus review, and where necessary, facilitate the consolidation of local level natural resource governance structures and processes through a participatory process. Where such structures and processes do not exist, the project will advocate their development. The project will also identify areas of conflict with local norms and rules, proposing appropriate solutions as feasible. This process will help harmonise local (and, if appropriate, national) policies so as to ensure that current and future potential for institutional and resource-use policy conflicts is minimised.

Sub-outputs / Activities

4.1 - Capacity of local NRM institutions strengthened

- An inventory of existing community-based natural resource management committees will be undertaken to identify institutional gaps.
- Currently there are separate committees for wildlife, fisheries, water, forestry and agriculture at village level. These will need to be rationalised in a participatory manner in order to create a single committee that will have overall mandate for all natural resources (VDC).
- A training programme for VDCs, drawn from the practices and experiences of successful community-based natural resource management initiatives in the wider region will be developed and carried out.
- District and line ministry personnel will be trained in participatory skills and technical aspects of CBNRM development. External trainers with regional experience in CBNRM will develop and conduct the training programme.
- Study tours will be carried out as detailed in Output 3.1.

4.2 - By-laws and enforcement mechanisms developed.

An initiative will be launched to develop stakeholders’ understanding of the importance and strength of community-based natural resource use compliance systems, and in particular by-law operation. Working together with the local (district) authorities, community level leadership, VDCs, resource-user groups and supporting line ministries, the following activities will be undertaken:

- An inventory of resources requiring protection and management through by-laws will be developed.

- The district councils currently have insufficient capacity to enforce by-laws due to over-stretched staff. It is currently proposed that the District council instead empowers or subcontracts the VCDCs, ACDCs and CCCs to enforce by-laws related to the conservation of biodiversity. In return the monetary proceeds arising from the licensing of natural resource use will be shared in agreed proportions between the council and communities. This will not only develop a growing sense of resource ownership by local communities but also promote the sustainability of by-law systems. Currently an assumption is that district by-laws are sufficiently accepted, supported and appropriate for local-resource users. The project will need to verify this assumption, and to facilitate remedial measures as required to ensure that the by-laws have a wide constituency among resource-user groups.
- Working with resource-user groups, a range of positive incentive resource use compliance systems will be developed in addition to more traditional deterrent measures. Positive incentive agreements (such as long-term access rights contingent on compliant resource use) between districts, VCDCs and resource-user groups will help promote long term and sustainable resource custodianship among resource-user groups.
- The project will monitor and technically support the enactment and implementation of by-laws, so as to measure their efficacy in biodiversity conservation and the facilitation sustainable livelihoods.

4.3 - Advocacy for political support of community-based natural resource management undertaken

Political interests in the pursuit of short-term gains can derail otherwise successful community initiatives. To avoid such unfortunate occurrences, the project will carry out a programme of advocacy to foster a sense of project ownership and support by local and national politicians through the CCC. Local members of parliament and constituency officials, will be brought on-board through a consultation and advocacy workshop during the initial stages of the project's implementation.

Output 5: Project efficiently and effectively managed, monitored and evaluated

The project will need to develop an effective and efficient Management Information System (MIS) that will be a key administrative tool for the project's implementation. The MIS will require the timely acquisition, analysis and dissemination of relevant information to the project's staff and stakeholders. An MIS is *an organized system, comprising of a sequence of processes that captures accurate and relevant information and processes it in a timely manner into the information that managers need to manage their project'*

The MIS will comprise a *Planning* and a *Monitoring & Evaluation* component. The project's log frame with its in-built targets will provide benchmarks against which actual performance will be monitored and evaluated. The findings of the M&E process will in turn be fed back and used to review and possibly modify the original log frame.

Sub-outputs / Activities

5.1 – Recruitment of project staff

5.2 – Management Information System (MIS) developed and implemented

The PIU will work together with the other stakeholders to identify information requirements for each level in the project's management structure and apportion responsibility for the capture of the information. The PIU will then develop reporting formats which capture the

required data in a way that best facilitates the provision of information in an appropriate and timely manner. The provision of information will be linked with developing an appropriate system of meetings

5.3 – Site-Specific baseline survey conducted

A resource and site specific catchment based baseline survey will be conducted at the beginning of the project to provide benchmarks for monitoring and evaluation. The baseline survey will need to be carefully designed so that it captures an appropriate and representative range of data parameters that remain robust and useful throughout and after the project's implementation. Data parameters will include: knowledge, attitudes and practices at community, district level; the overall institutional environment; key environmental indicators and; verification of current income generating activities.

5.4 Preparation and implementation of Annual Work plans and Budgets (AWPB) carried out

The PIU will ensure that the follow activities are carried out:

- Timely preparation of annual work plans and budgets
- Facilitation of regular committee meetings (VCDC, CCC, ACDC)
- Preparation and processing of requests for disbursement of funds.
- Preparation and timely submission of quarterly and annual reports
- Timely procurement of all goods and services at appropriate cost and quality.
- Monitoring the project implementation activities of stakeholders through the MIS

5.5 Mid-term review and end of project evaluation planned and conducted

There will be a mid-term review of the project by independent consultants to assess project progress - whether or not the project's planned activities are leading to the desired outputs and hence contributing to the overall goal. This will result in key recommendations on the direction the project should take in its latter period. The End of Project Evaluation and Impact Assessment will be conducted to ascertain the impact of the Project's interventions on the livelihoods of the communities and on the status of biodiversity.

X. Project Sites

The project activities are planned to cover the whole catchment range of the Zambian side of the lake from Mpulungu to Kaputa district with the exception of the catchment area that lies within the Nsumbu National Park. Both districts are part of Northern Province, with a Provincial HQ at Kasama. Both districts are similar in ecological and social criteria, with populations distinguished through minor language and ethnicity. The process of covering the proposed catchment area will be phased over the length of the project based on the assumption that additional financial resources will be made available through the Af ADB fund. Based on the work undertaken in the first phase of this project, and as a result of a stakeholder project development meeting held in Mpulungu, the following areas will be priority sites in Mpulungu District (see Annex 3):

Mpulungu District

Lunzua River Catchment and the Chituta Bay Area

Chituta Bay was identified as the first priority area. The area lies at the mouth of the Lunzua River. It was first settled as a fishing camp, which later became a permanent settlement. Slash and burn cultivation and also intensive gardening occur along the river's banks. Natural

forests are diminishing due to cultivation. There are three villages namely Chituta, Kapata and Ilata at this site which will be targeted. The area was selected on the basis that:

- The area is a breeding ground for a lot of fish species
- The lacustrine and riverine environment has high levels of sedimentation/ erosion
- High levels of human activity (agriculture, fishing, hunting) are ongoing
- The rate of deforestation is very high

Kasakalawe Bay Area

Kasakalawe, ranked second, is situated at the mouth of the Izi River and is accessed through the Mpulungu local forest number P45 covering 21,730 hectares. The farmers grow rice in the lake depression and vegetables along the banks of Izi River. The local Mpulungu forests have suffered from serious encroachment as settlers at Kasakalawe seek sources of fuelwood and new areas for cultivation. This area has been identified as a very important area for woodlot and plantation establishment. The area was chosen on the basis that:

- It is an important sardine breeding area
- It is the source for a substantial amount of (illicit) wood fuel and poles for Mpulungu.
- It is characterised by very poor land use practices
- The area suffers from high sedimentation levels (1.248 tonnes/day)
- Deforestation and forest encroachment continue to occur rapidly.

Munjela/ Nsumbu Game Management Area (GMA)

Munjela/Nsumbu GMA is situated on the Chisala River in Kaputa District and borders the Nsumbu National Park on one side and the open area and game management zone on the other contiguous with the lakeshore. This area is characterised by substantial population growth but because of its location, there is limited potential for expansion of the settled and farmed areas. The area was selected on the basis that it:

- Is an important Sardine breeding area
- Is an area of high agricultural activity with poor land use practices
- Possesses degraded forest areas
- Is a centre for high levels of illicit hunting

Kaputa District

Chisala River Catchment and Munjela-Nsumbu GMAs

Kabyolwe Bay lies in the open area of the Nsumbu National Park and marks an important entry point for illegal hunters. The settlement lies at the mouth of Lufubu River. The forested riverbanks are under serious pressure for land for cultivation as well as for fuelwood for home use and fish curing. The area was chosen on the basis that:

- There is a large amount of agricultural activity and poor land use practices
- The area is subject to high sedimentation levels (1,540 tonnes/ day)
- Deforestation is occurring at a high rate together with high levels of illicit hunting

XI. Global Environmental Benefits

Conserving Lake Tanganyika and its basin will lead to substantial global environmental benefits. With more than 2,000 species of plants and animals, Lake Tanganyika is among the richest freshwater ecosystems in the world. Together with the other African great lakes of Malawi and Victoria, Lake Tanganyika is famous for its endemic and highly diversified flocks of cichlid species. However, what distinguishes Lake Tanganyika from the other African great lakes is its comparatively far greater biodiversity that includes flocks of non-

cichlid fish as well as invertebrate organisms such as gastropods, bivalves, ostracodes, decapods, copepods, leeches and sponges. The level of biodiversity that has thus far been recorded for Lake Tanganyika is of particular significance. Much of the Tanganyikan coast has not been adequately explored and consequently invertebrate species numbers are probably currently significantly underestimated.

The catchment approach adopted by the Project, necessary to preserve Lake Tanganyika's aquatic and littoral biodiversity, will lead to further global environmental benefits as the basin's terrestrial biodiversity is conserved and becomes sustainably managed to reduce Lake sedimentation levels.

XII. Sustainability

In order to ensure its sustainability, the project will be implemented through a participatory approach, from village to national level. The sustainability of many of the project's outputs is particularly contingent on successfully working with local communities and engendering their sense of ownership of, and commitment to, the project. However, mainstreaming project outputs with local and national government institutions will be as important for the successful implementation of the Project and the sustainability of its outputs.

The project activities planned are central to the livelihoods of the communities, and will enhance the environmentally positive aspects of their livelihood strategies. In essence, this complementarity underpins the project's sustainability strategy.

XIII. Institutional sustainability

For the purpose of the continuity of the programme at the end of the Project period, the Project will be implemented through existing administrative structures or appropriate adaptations thereof as presented in Table 2. Zambia's biodiversity portfolio is largely the responsibility of the Ministry of Tourism, Environment and Natural Resources (MTENR). The MTENR works in close collaboration with the Environmental Council of Zambia (ECZ), the Ministry of Agriculture and Cooperatives (MACO), Ministry of Energy and Water Development (MEWD) and non-governmental organizations active in biodiversity issues. In allocating responsibilities to implement various components of this project, recognition will be given to the specific roles which these sector ministries and NGOs are best suited to undertake given their technical comparative advantage. The Ministry of Agriculture and Cooperatives District Office at Mpulungu will host the Project Implementing Unit and will provide office space and, together with the other three line ministries (Environment, Water and Energy and Local Government) appropriate partner staff. These staff will constitute the core implementation team under the guidance of the PIU.

Overall the project will be implemented and guided as follows:

At **national level**, MTENR will chair the **National Project Advisory Committee** (Lake Tanganyika biodiversity sub-committee of the National Biodiversity Committee). The National Biodiversity Committee through the MTENR has been given a mandate by the government to co-ordinate national biodiversity programmes. The committee will provide a pathway for project result absorption into mainstream government programmes and policies. MTENR will serve as the principle focal point for official engagement with government.

The **local level** project management structure and approach will be deliberately designed to ensure sustainability of project activities and results. At district level the project will work

through existing government and non-governmental institutions within the framework of the existing DDCC to ensure ownership and integration of project activities into the mainstream of district development plans.

At **community level**, the village and area development committees, as endorsed by traditional leadership and proposed under the decentralization programme of the government, provide for project activities to be incorporated as an integral part of the village and area level development efforts driven by the communities.

Financial sustainability

The financial sustainability of the project's outputs at village and district level will rely, in substantial part, on the levies, taxes and licensing fees to be generated from natural resource use in the project area - as will be possible within institutional and policy frameworks.

Assumptions and risks potentially impacting on the sustainability of project outputs

The success of the proposed interventions is based on several assumptions, the risks of which have been identified as follows:

- Inadequate government commitment to devolve a reasonable and sufficient level of authority to local level traditional/community based structures.
- Inadequate practical government commitment to support co-management regimes for natural resource management.
- Inadequate community commitment and ability to maintain conservation efforts that include conservation initiatives with delayed but long-term benefits.
- Inadequate commitment by line ministries to support the project's efforts without expecting the project to cover their substantial overhead costs.
- Inadequate commitment by traditional authorities to support and respect elected local government leaders and their decisions on natural resource management in areas under traditional jurisdiction.
- Inadequate post-project revenues generated from licensing local natural resource use that result in the constrained and poor functioning of VCDCs and ACDCs leading to an erosion of the environmental gains achieved during the project.

XIV. Replicability

The project will be carried out in pilot villages at four demonstration sites. Through the Catchment's Steering Committee, to be established during the project, and the DDCC, it is expected that these experiences will be transferred to other lakeshore villages in the Lake basin.

XV. Stakeholder Involvement

Stakeholder involvement in project proposal development

More than 100 Zambians participated in the process of planning for the Strategic Action Programme (SAP) for Lake Tanganyika Biodiversity Project (UNDP/GEF/RAF/G32/92). The planning process, over the course of three years, brought scientists, researchers, local communities, government departments, NGOs and the private sector together to discuss environmental management priorities. The national priorities for Zambia are listed in the SAP (available on the internet at - <http://www.ltbp.org>).

The SAP priorities include, sustainable fishing practices, sedimentation control, pollution control and habitat destruction. Sustainable fishing will be addressed under the African Development Bank sister-project to the GEF LTBP Phase II. In light of this, Zambian stakeholders from Lusaka and the Lake basin met in August 2002 and in April 2003 to discuss

the remaining priorities. The second meeting agreed that sedimentation control through catchment management would be the subject of this GEF project proposal and that additional donor funds would be sought to address the remaining SAP priorities in Zambia. The Project proposal's development was carried out through consultations with key stakeholders and institutions, that took place in Lusaka, and later in Kasama (the Provincial Headquarters), as well as in the Lake Tanganyika project area towns of Mpulungu and Mbala.

Stakeholder involvement in further project development and implementation

The project design incorporates provision for the further participation of all major Zambian communities that have interests vested in the conservation and management of the biodiversity of Lake Tanganyika including government, local authorities, local communities the private sector, and international communities as is indicated in the description of the Project's implementation strategy.

XVI. Lessons from Similar Projects

An assessment of the lessons learned from other Community Based Natural Resource Management (CBNRM) projects in Zambia, reveals a number of common factors relevant to the Lake Tanganyika Biodiversity Project. The following are the CBNRM projects to which priority was given in assessing the critical lessons relevant for the success of the proposed Lake Tanganyika Biodiversity Project.

- Barotse Royal Establishment in Western Province
- Zambezi Basin Resource Conservation and Utilization Project (ECZ/IUCN)
- Liangati Joint Forestry Management project in Western Province- Senanga (Keepers Zambia Foundation and SNV)
- Administrative Management Design (ADMADe) - community-based wildlife management projects operating across the country (Zambia Wildlife Authority)
- Cooperative League of the United States of America (CLUSA/USAID) community-based agricultural and forestry management project in Eastern Province.
- Fisheries co-management in the Bangweulu swamps (WWF, SNV)
- Fisheries co-management on Lake Kariba (Fisheries department)

XVII. Monitoring and Evaluation

Monitoring and evaluation system

The National Biodiversity Steering Committee will oversee the project. Its role will be to review annual progress in the achievement of the project's outputs and objective and to provide the Project Implementation unit (PIU) with feedback for project implementation improvement. In addition, the Committee may request, as it deems appropriate, an interim project evaluation. Towards the end of the project, the Committee will prepare a report synthesizing lessons learned and how these could be scaled up and replicated more widely. The Lake Tanganyika Catchment's Steering Committee, proposed by the stakeholders as a sub-committee of the DDCC, will be responsible for monitoring the expected outcomes against the achievements of the Project's outputs. This Committee will report to the National Biodiversity Steering Committee on the relationships and achievements of outputs using the **Key Performance Indicators (KPIs)** agreed to at the initial Project Inception Meeting.

The PIU will be responsible for tracking implementation progress and project milestones. The Unit will prepare Quarterly Progress Reports on the basis of project implementation. An overall progress report will be prepared under the guidance of the Lake Tanganyika Catchment Committee every year and an additional report will be prepared three months prior to the mid-term review, which will assess overall progress in project implementation and make recommendations for adaptive management.

The Area and Village development committees proposed in the national decentralization policy under the operations of District Councils will be responsible for the mobilization of community planning, implementation, monitoring and policy advocacy for community driven conservation and livelihood diversification in the project sites. These committees will report to and be represented in the Lake Tanganyika Catchment Committee. Stakeholder representatives through project implementation workshops will review the KPIs annually. The outputs of these workshops will serve as a basis for monitoring and evaluating project impact.

The Project will be subject to the evaluation and review mechanisms of the UNDP such as the Project Performance and Evaluation Review, Tri-Partite Review and External Evaluation and Final Report prior to termination of the Project.

XVIII. Financing

Project cost

The total GEF grant requested is US\$ 2,440,000. The direct baseline activities described above are estimated as \$1.5 US Million over the 4/5 year life of the project.

The project cost estimates and timing of disbursements are given in Table 2 below. Zambia's estimated contribution of 652,000\$ to the project is given in Table 3. In deriving project cost estimates, the necessary requirements for each activity were considered and the project overheads factored in such as the cost of equipment, motor vehicles, insurance, reviews/evaluations, as well as expenditure for operational funds, and the proposed revolving fund. A 2% cross cutting issues allocation has been set aside to cater for such issues as gender mainstreaming, advocacy for HIV/AIDS and a facility for supporting a limited number of special initiatives which, when conducted, would add value to the attainment of the project's immediate objective.

Table 2: Project Cost Estimates by Outcome⁴

Outcome	GEF resources required by outcome and year (USD)				
	Year 1	Year 2	Year 3	Year 4	TOTAL
Outcome 1: Reducing levels of siltation into the lake resulting from improved management of the Lake's catchments through sustainable use of agricultural and forest resources	375,000	655,000	754,000	452,000	2,236,000
Project Management	61,000	52,000	39,000	52,000	204,000
TOTAL	436,000	707,000	793,000	504,000	2,440,000

⁴ These estimates are based on incremental contributions from GEF and a baseline contribution from the Government of Zambia. An assumption is that additional resources will be made available from the ADB to extend project activities.

Table 3: Co-financing – Government of Zambia’s contribution *

<i>ITEM</i>	<i>DESCRIPTION</i>	<i>ESTIMATE US \$</i>
1. Services and staff support	Human resources: ministry, district and local government, at 150,000\$ per annum (central, local government). Less in year 1 due to start-up	582,000
2. Office / Miscellaneous	Office rentals/utility service 20,000\$ per annum	80,000
<i>TOTAL</i>		<i>652,000</i>

* This is in kind support, broken down into two categories per year.

XIX. Institutional Coordination and Support

Core commitments and linkages. Project linkages with national/regional/global sector programs: UNDP Zambia is starting the implementation of a major GEF initiative looking at the sustainability of wildlife Protected Areas at system level. (This will include the National Parks near Lake Tanganyika). There will be much complementarity between projects, with considerable scope for lessons learned and sharing experiences.

Whilst the north-west districts have not attracted much donor intervention in the past years, there is considerable scope for this project to learn lessons from NRM projects elsewhere in the country. This includes projects looking at participatory forest management, and improved agricultural practice and land-use planning. The ICRAF connection will link into the agricultural research process in Zambia.

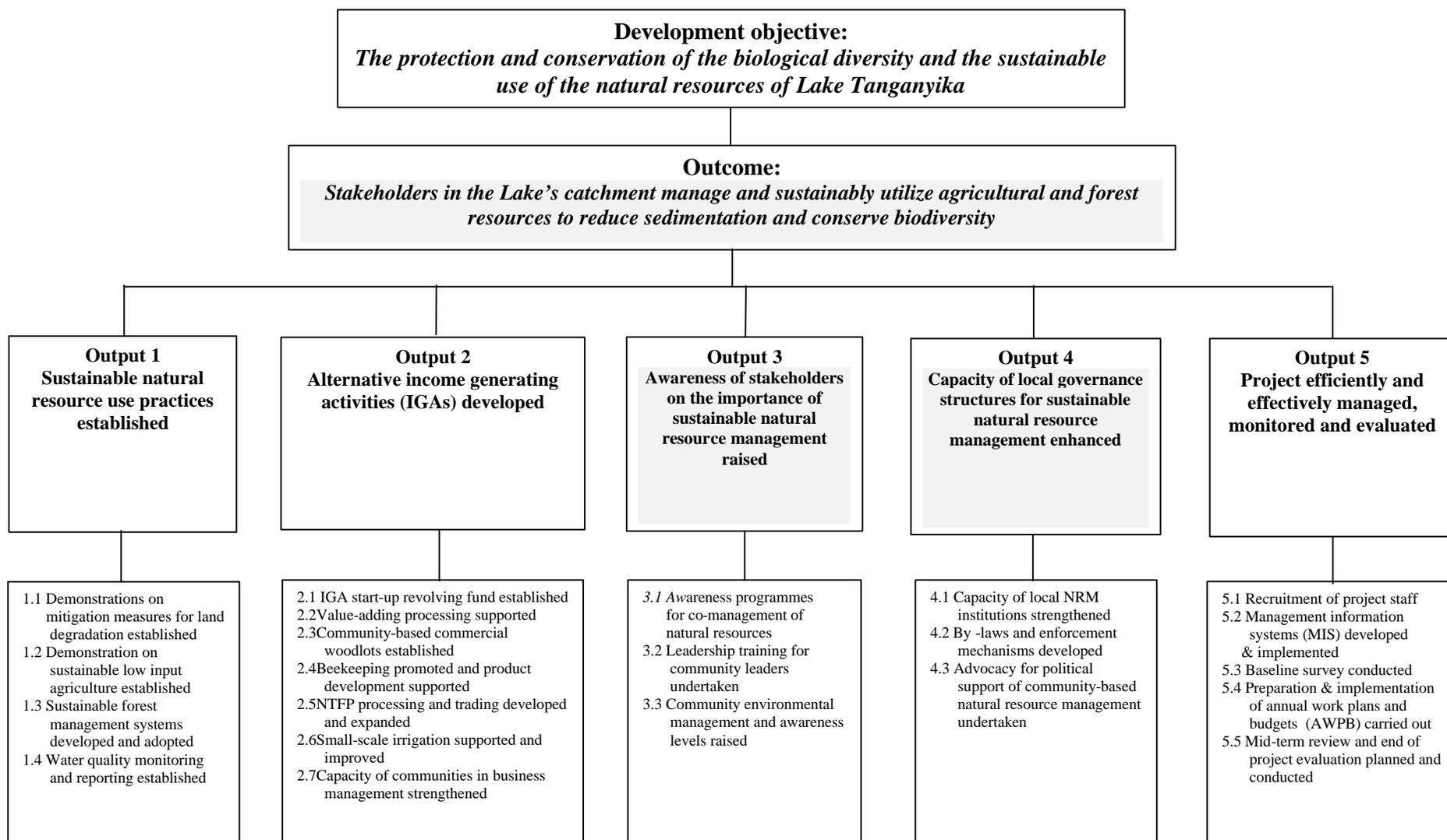
Consultation, coordination and collaboration between Implementing Agencies (IAs)

UNDP in Zambia has programmes (and expertise, knowledge and lessons learned) in the broad fields of decentralised governance, empowerment and poverty alleviation. UNDP promotes democratisation and local level civil society capacity building. All of these have relevance to the on-ground project interventions. UNDP through its role in the UNDAF will also build linkages to other programmes including through the World Bank. Of especial interest here are the agricultural support activities.

Coordination and Collaboration

The programme implementation process will be co-ordinated by the **Programme Implementation Unit (PIU)** that will be based at the Ministry of Agriculture in the Department of Fisheries in Mpulungu. The PIU will comprise of: a Project Manager; three Technical Officers - one from each of the MTENR, MEWD and MACO; an accountant/procurement officer; secretary; office orderly and a driver. The Project Manager will be the head of the PIU and will be responsible for the day-to-day running of the PIU as well as co-ordinating participating sectors’ inputs with the assistance of the technical officers. The PIU will be linked to the National Biodiversity Committee through the local level project coordination committee, the Lake Tanganyika Catchments Conservation Committee. A memorandum of understanding is proposed between the MTENR and MACO to guide the reporting and roles of each ministry in relation to the PIU. The MTENR will have overall responsibility for monitoring project progress.

Annex 1: Project Outcome, Output and Activity Matrix



Annex 2: Project Logical Framework Matrix

<i>Narrative Summary</i>	<i>Indicators</i>	<i>Means of verification</i>	<i>Assumptions</i>
<p>Immediate Objective:</p> <p>The protection and conservation of the biological diversity and the sustainable use of the natural resources of Lake Tanganyika</p>	<p>√ Significant improvements in biodiversity (land and water) indices within and offshore selected catchments (as measured by project supported Lake Management processes – using TBDA / SAP baseline).</p>	<p>√ Project & Post-project evaluation reports.</p> <p>√ Reports from continued M & E processes for the Lake</p> <p>√ Annual reports of line Ministries</p>	<p>√ The policy environment supporting community involvement in NRM continues to be favourable.</p> <p>√ The M and E process (see Regional Proposal) is implemented.</p> <p>√ Security in the Region allows trans boundary cooperation</p>
<p>Outcome:</p> <p>Stakeholders in the Lake's catchment manage and sustainably utilize agricultural and forest resources to reduce sedimentation and conserve biodiversity</p>	<p>√ % of target communities and line ministry staff using the CBNRM approach for conservation of biodiversity increases by 70% from year 1 baseline.</p> <p>√ 30 % increase in household income arising from non-fishing sources for households engaging in enterprises.</p> <p>√ 30 % improvement in sedimentation rates in target catchments</p>	<p>√ Project evaluation reports</p> <p>√ DDCC reports</p> <p>√ Community minutes and records on implementation of CBNRM</p> <p>√ Impact assessment studies</p>	

Narrative Summary	Indicators	Means of verification	Assumptions
Output 1: Sustainable natural resource use practices established			
<p>1.1 Demonstrations on mitigation measures for land degradation established</p> <p>1.2 Demonstrations on sustainable low input agriculture established</p> <p>1.3 Sustainable forest management systems developed and adopted</p> <p>1.4 Water quality monitoring and reporting established</p>	<p>√ 50% of HH practicing improved land use practices demonstrated in the project target areas.</p> <p>√ 40% of households practicing low input sustainable agricultural techniques.</p> <p>√ PFM type of forest management regimes developed and utilized in target forests.</p> <p>√ 30 % improvement in water quality measures in targeted demonstration sites.</p> <p>√ The number of HH in non project sites emulating the practices in project sites starts to increase in final year.</p>	<p>√ Project and community reports.</p> <p>√ Annual reports of line Ministries (Tourism, Environment and Natural Resources, Agriculture and Cooperatives, Energy and Water resources).</p> <p>√ Impact Assessment reports.</p>	<p>√ That the current enthusiasm by communities for participation in CBNRM continues.</p> <p>√ The policy environment can allow meaningful CBNRM.</p> <p>√ That all partners continue to meet commitments to the project.</p>
Output 2: Alternative income generating activities (IGAs) developed			
<p>2.1 IGA start-up revolving fund established</p> <p>2.2 Value adding processing supported</p> <p>2.3 Community-based commercial woodlots established</p> <p>2.4 Bee-keeping promoted and product development supported</p> <p>2.5 NTFP processing and trading developed and expanded</p> <p>2.6 Small scale irrigation supported and</p>	<p>√ 30 percentage change in household income arising from alternative IGAs.</p> <p>√ Number of the HH in the target sites involved in alternative income generating activities.</p> <p>√ Number of households/or population benefiting from alternative income generating activities</p>	<p>√ Project and community reports and records</p> <p>√ Records of sales from entrepreneurs</p>	<p>√ That there is enough entrepreneurial social capital in existence</p> <p>√ That markets can be found that will sustain commercial exploitation of resources</p> <p>√ Availability of infrastructure to support marketing</p>

<i>Narrative Summary</i>	<i>Indicators</i>	<i>Means of verification</i>	<i>Assumptions</i>
improved 2.7 Capacity of communities in business management strengthened			
<i>Output 3: Awareness of stakeholders on the importance of sustainable natural resource management raised</i>			
3.1 Awareness programmes for co-management of natural resources enhanced	√ Number of local level programmes for natural resource co-management established and functional.	√ Project records	√ The current supportive political cli for local level governance continu
3.2 Leadership training for community leaders undertaken	√ Number of local leaders trained	√ Annual reports of line Ministries (Tourism, Environment and Natural Resources, Agriculture and Cooperatives, Energy and Water resources)	√ That enough social capital exists to build local level governance struct on
3.3 Community environmental management and awareness levels raised	√ Number of environmental management awareness materials and dissemination mechanisms developed. √ Number of stakeholders reached by the environmental management campaigns	√ Council Resolutions	√ That the current mainstream policy accommodate local level governan structures √ Traditional leaders accept CBNRM
<i>Output 4: Capacity of local governance structures for sustainable natural resource management enhanced</i>			
4.1 Capacity of local NRM institutions strengthened	√ Number of functional Community Conservation Committees.	√ Project records	√ Availability of non project related means of communication
4.2 By-laws and their enforcement mechanisms developed	√ Number of By-laws enacted on CBNRM as a result of community lobbying	√ DDCC reports	√ Critical mass of literacy levels ava
4.3 Advocacy for political support of community-based natural resource management undertaken	√ Number of political leaders supporting enactment of by-laws for catchments conservation.	√ Minutes of Committee meeting √ Council Minutes	
<i>Output 5: Project efficiently and effectively managed, monitored and evaluated</i>			

<i>Narrative Summary</i>	<i>Indicators</i>	<i>Means of verification</i>	<i>Assumptions</i>
<p>5.1 Recruitment of Project staff</p> <p>5.2 Management Information System (MIS) developed and implemented</p> <p>5.3 Baseline survey conducted</p> <p>5.4 Preparation and implementation of Annual Work plans and Budgets (AWPB) carried out</p> <p>5.5 Mid-term review and end of project evaluation planned and conducted</p>	<p>√ Appropriate of Project staff in place by Project year</p> <p>√ Key information requirements and reporting formats developed for the project.</p> <p>√ Appropriate Project baseline and benchmark outputs developed for monitoring project's planned results</p> <p>√ Appropriate number of project plans and reports available in a timely manner at different management levels</p> <p>Number of useful lessons learnt, disseminated and corrective measures taken</p> <p>√ Number of milestones achieved at mid term of the project</p> <p>√ Number of milestones achieved by year 5 of the project</p>	<p>√ Project records</p> <p>√ Copies of Reporting formats</p> <p>√ Baseline Survey Reports</p> <p>√ Mid- term Review Report</p> <p>√ Impact Assessment Report</p> <p>√ Copies of AWPB</p>	<p>√ All partners meet their commitment the project</p> <p>√ Timely disbursement of funds from donor for project implementation activities</p>

SIGNATURE PAGE

Country: Zambia

UNDAF Outcome(s)/Indicator(s): “National strategies for sustainable development for integrating of economic, social, and environmental issues adopted and implemented”.

(Link to UNDAF outcome., If no UNDAF, leave blank)

Expected Outcome(s)/Indicator (s): Lake Tanganyika’s biological and other natural resources protected and sustainably utilised

“Global environmental concerns and commitments integrated in national development planning and policies”,

(CP outcomes linked to the SRF/MYFF goal and service line)

Expected Output(s)/Indicator(s):

- 1 Sustainable natural resource use practices established;
- 2 Alternative income generating activities developed;
- 3 Awareness of stakeholders of the importance of sustainable natural resource management raised;
- 4 Capacity of local governance structures for sustainable natural resource management enhanced

Implementing partner: Ministry of Tourism, Environment and Natural Resources

(designated institution/Executing agency)

Other Partners:

Programme Period: 2008-2013
 Programme Component:
 Project Title: Lake Tanganyika Integrated Management Programme
 Project ID: PIMS 1941
 Atlas project ID: 00048202/Proposal ID: 00042111
 Project Duration: 5 years
 Management Arrangement: NEX

Total budget: **3,092,000** US\$

Allocated resources: **3,092,000** US\$

- GEF **2,440,000** US\$
- In kind contributions 652,000 US\$ (Government)

On Behalf of	Signature	Date	Name/Title
Government of Zambia			Permanent Secretary Ministry of Finance and Planning
UNDP-Zambia			Resident Representative